7.02: continued

1. Coating or Solvent Usage.
   a. A list of process related coatings, solvents, inks and adhesives in use. This list shall include: information on the VOC and HAPs content in lbs per gallon as applied;
   b. A description of production equipment including type, make and model; maximum design process rate or throughput; control device(s) type and description (if any); and a description of the coating/solvent application/drying method(s) employed;
   c. A monthly log of the gallons consumed of each production solvent (including solvents used in clean-up and surface preparation), coating, ink and adhesive used;
   d. All purchase orders, invoices, and other documents to support information in the monthly log; and
   e. The emissions of VOC from any coating used in small amounts are exempt from the emission limitations provided the amount of all coatings exempted does not exceed 55 gallons on a rolling 12 month period. A list of coatings used in small amounts shall be established and records of the consumption of these coatings shall be maintained.
2. Organic Liquid Storage.
   a. A monthly log identifying the liquid stored and monthly throughput;
   b. Information on the tank design and specifications including control equipment; and
   c. The emissions of VOC from any coating used in small amounts are exempt from the emission limitations provided the amount of all coatings exempted does not exceed 55 gallons on a rolling 12 month period. A list of coatings used in small amounts shall be established and records of the consumption of these coatings shall be maintained.
3. Fuel Utilization Facility.
   a. Information on equipment type, make and model, maximum power input/output, minimum operating temperature and capacity, control equipment and all source test information;
   b. A monthly log of hours of operation, fuel type, fuel usage in gallons or tons as appropriate, fuel heating value, percent sulfur for fuel oil and coal; and
   c. All purchase orders, invoices, and other documents to support information in the monthly log.
4. Air Pollution Control Equipment.
   a. Information on equipment type and description, make and model, and emission units served by the control unit;
   b. Information on equipment design including where applicable: pollutants(s) controlled; control effectiveness; maximum design or rated capacity; inlet and outlet temperatures, and concentrations for each pollutant controlled; catalyst data (type, material, life, volume, space velocity, ammonia injection rate and temperature); baghouse data (design, cleaning method, fabric material, flow rate, air/cloth ratio); electrostatic precipitator data (number of fields, cleaning method, and power input); scrubber data (type, design, sorbent type, pressure drop); other design data as appropriate; all source test information; and
   c. A monthly log of hours of operation including notation of any control equipment breakdowns, upsets, repairs, maintenance and any other deviations from design parameters.
5. Not Otherwise Classified Process.
   a. Information on the process and equipment including the following: equipment type, description, make and model, maximum design process rate or throughput, control device(s) type and description (if any);
   b. Any additional information requested in writing by the Department;
   c. A monthly log of operating hours, each raw material used and its amount; and
   d. Purchase orders, invoices, and other documents to support information in the monthly log.

(i) Reporting. In order to document compliance and maintain an emissions inventory, the Department may require reporting from any owner or operator of a facility with an emissions cap established at 310 CMR 7.02(11)(e) or (f).

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(12) U Consolidation of Applicable Requirements.

(a) General. Any person who owns, leases, operates or controls a facility may apply to the Department to consolidate the facility's applicable requirements into a single plan approval to streamline the emission limitations, monitoring, emission testing, recordkeeping and reporting and other requirements as contained in the facility's plan approval(s), emission control plan(s) or other document(s) issued by the Department pursuant to any regulation under 310 CMR 7.00.

(b) 310 CMR 7.02(12) is only for use when the facility is not subject to the Department's operating permit and compliance program, 310 CMR 7.00: *Appendix C*. If the facility subsequently becomes subject to the operating permit and compliance program, the requirements of the consolidated plan approval will be incorporated into the facility's operating permit.

(c) When a consolidation application is made in conjunction with an application to construct, substantially reconstruct or alter the facility under 310 CMR 7.02(4) or (5), the decision concerning consolidation will be made under 310 CMR 7.02(12) following issuance of the plan approval.

(d) Application Requirements. An application to consolidate the applicable requirements shall, at a minimum:

1. Be made on form(s) obtained from the Department or by other means prescribed by the Department.
2. Be submitted in duplicate and signed by a responsible official.
3. Contain the following information for each emission unit in the application:
   a. an emission-unit-by-emission-unit, side-by-side comparison of all requirements to which the emission unit is subject;
   b. A determination of the most stringent emission limitations and/or performance standards and the documentation relied upon to make this determination;
   c. A set of proposed terms and conditions which detail the most stringent emissions limitations and/or standards, appropriate monitoring and its associated recordkeeping and reporting, and such other proposed conditions as are necessary to assure compliance with all applicable requirements; and
   d. A proposed schedule to implement any new monitoring/compliance approach relevant to a consolidated plan approval if the owner/operator of the facility requires additional time to implement the streamlined terms and conditions. The current record keeping, monitoring, and reporting requirements (applicable requirements) shall continue to apply until the new monitoring/compliance approach is operational.

(e) Form of Approval. Any consolidated plan approval issued by the Department shall be in writing.

(f) Conditions of Approval. A consolidated plan approval shall include:

1. A combination of production and/or operational limitations to ensure that emissions are limited by quantifiable and enforceable means.
2. Emissions limitations and control requirements that are at least as stringent as those imposed by the facility's applicable requirements.
3. A requirement to maintain records and conduct monitoring sufficient to demonstrate that emissions limitations and other applicable requirements are being achieved;
4. Reporting on a schedule as determined by the Department;
5. A list of previously issued plan approvals, emission control plans and other documents addressing the applicable requirements of the emission units covered by the consolidated plan approval; and
6. Other conditions as deemed necessary by the Department based on the applicable requirements.

(13) U Administrative Amendment to Plan Approval.

(a) An administrative amendment to a plan approval is required for the following:

1. A change in the business name, facility name, mailing address, telephone number or name of the facility contact; or
2. A change in the ownership of the facility that is subject to the plan approval; or
3. An increase in the frequency of recordkeeping, monitoring, reporting or testing above that previously specified in the plan approval; or

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4. Where the Department or the owner/operator of the facility determines that a plan approval has typographical errors; or

5. Other changes the Department determines are necessary for the effective administration of the Commonwealth's air pollution control program.

(b) The Department or the owner/operator may propose an administrative amendment to a plan approval on Department forms or in a format provided by the Department.

1. If the Department determines a plan approval should be amended, the Department will provide the owner/operator with a draft amended plan approval for review.

2. If the owner/operator determines a plan approval should be amended, the owner/operator shall submit an application for an administrative amendment to the Department within 60 days of the change described in 310 CMR 7.02(13)(a).

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(c) The administrative amendment shall take effect 30 days after receipt by the owner/operator or the Department respectively, unless prior to the expiration of the 30 days:

1. The owner or operator contests the administrative amendment in writing, or
2. The Department disapproves the proposed amendment in writing.

(d) In addition to complying with 310 CMR 7.02(13)(a) and (b), the owner/operator of a facility for which a final operating permit has been issued in accordance with the provisions of 310 CMR 7.00: *Appendix C*, shall comply with the Administrative Amendment procedures contained in 310 CMR 7.00: *Appendix C*(8).

(14) Cumulative Impact Analysis.

(a) Purpose and Applicability.

1. The purpose of 310 CMR 7.02(14) is to protect environmental justice populations from the harms of air pollution by requiring a cumulative impact analysis that includes meaningful public involvement of environmental justice populations, assessment of existing community conditions, and analysis of the cumulative impacts of new or modified sources of air pollution that may affect environmental justice populations.

2. The provisions of 310 CMR 7.02(14) apply to any person who submits a comprehensive plan application to the Department on or after July 1, 2024.

3. A cumulative impact analysis shall be required for a comprehensive plan application for a proposed new facility or emission unit that is in an environmental justice population or within:

a. one mile of an environmental justice population if the facility or emission unit will not be a major source as defined in 310 CMR 7.00: *Appendix C*; or

b. five miles of an environmental justice population if the facility or emission unit will be a major source as defined in 310 CMR 7.00: *Appendix C*.

4. A cumulative impact analysis shall be required for a comprehensive plan application for an existing facility or emission unit that already has a comprehensive plan approval if the applicant proposes in a new comprehensive plan application to increase facility-wide potential emissions of criteria pollutants, hazardous air pollutants, or air toxics, excluding CO_{2e}, individually or in the aggregate, by an amount equal to or greater than one ton per year, and the existing facility or emission unit is located in an environmental justice population or within:

a. one mile of an environmental justice population if the facility or emission unit will not be a major source as defined in 310 CMR 7.00: *Appendix C*; or

b. five miles of an environmental justice population if the facility or emission unit will be a major source as defined in 310 CMR 7.00: *Appendix C*.

5. Notwithstanding 310 CMR 7.02(14)(a)4. a cumulative impact analysis shall not be required under 310 CMR 7.02(14)(a)4. for a comprehensive plan application for an existing facility or emission unit that proposes to decrease the existing facility's facility-wide potential emissions within two years of Department approval but will increase facility-wide potential emissions during that period.

6. Prior to submitting a comprehensive plan application, the owner or operator of a proposed project for which a cumulative impact analysis is required under 310 CMR 7.02(14) shall conduct a cumulative impact analysis and submit the cumulative impact analysis report that complies with the requirements in 310 CMR 7.02(14)(b) through (g).

(b) Public Notice and Involvement.

1. At least 60 days prior to filing a comprehensive plan application for which a cumulative impact analysis is required pursuant to 310 CMR 7.02(14)(a), the applicant shall provide notice of the proposed project to the following via electronic or regular mail or both, and maintain copies of all such notices:

a. The appropriate Department Regional Office;

b. The Department's Environmental Justice Director;

c. The chief executive of the municipality in which the facility or emission unit is or will be located; and

d. Representatives of nearby environmental justice populations that include organizations and individuals recommended by the Department's Environmental Justice Director and relevant Department Regional Office. The applicant shall contact the Department to obtain the list of organizations and individuals prior to providing the 60-day notice required by 310 CMR 7.02(14)(b)1.

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2. The notice required by 310 CMR 7.02(14)(b)1. shall include a fact sheet using a template provided by the Department that describes the proposed project, nearby environmental justice populations, and applicant contact information for submitting comments or requesting additional information or public involvement activities. The notice and Fact Sheet shall use plain language and be translated into any non-English language spoken by a significant percentage of nearby environmental justice populations.

3. After providing the notice required by 310 CMR 7.02(14)(b)1., the applicant shall participate in a meeting with the appropriate Department Regional Office to discuss public outreach and involvement measures and development of the cumulative impact analysis.

4. After providing the notice required by 310 CMR 7.02(14)(b)1., the applicant shall undertake measures to provide outreach and meaningful public involvement opportunities for nearby environmental justice populations. Such measures may include, but are not limited to, holding one or more community meetings, meeting with existing community-based organizations, creating a project webpage, and disseminating information through social media channels. The Department may require specific measures to ensure meaningful public involvement for environmental justice populations. The public shall be given the opportunity to provide comments to the applicant and the Department on the proposed project during the public involvement opportunities.

(c) Assessment of Existing Community Conditions.

1. As part of the cumulative impact analysis, the applicant shall assess existing conditions in nearby environmental justice populations by collecting and summarizing data on the environmental, public health, and socioeconomic indicators listed in 310 CMR 7.02(14)(c)4. *Table 1*. The Department shall make this data available on its website.

2. In addition to its assessment of indicators in 310 CMR 7.02(14)(c)1., the applicant shall document relevant comments received regarding air quality and public health made by municipal officials, organizations, representatives and residents in nearby environmental justice populations, and other parties during the public involvement opportunities required in 310 CMR 7.02(14)(b).

3. The results of the assessment of existing community conditions and indicators shall include information about each indicator listed in Table 1, maps showing indicators in relation to the proposed project location and nearby environmental justice populations, and an overall narrative describing existing community conditions, including public comments documented pursuant to 310 CMR 7.02(14)(c)2., and shall be included in the cumulative impact analysis report required under 310 CMR 7.02(14)((g).

4. Table 1 Indicators.

310 CMR 7.02(14)(c)4. Table 1: Indicators
AIR QUALITY / CLIMATE [1]
Particulate Matter 2.5 (PM2.5) levels in air in microgram per cubic meter ($\mu g/m^3$), annual average and state percentile
Ozone summer seasonal average of daily maximum eight-hour concentration in air in parts per billion (ppb) and state percentile
Traffic proximity by block group and state percentile
Diesel particulate matter level in air in $\mu g/m^3$ and state percentile
Air Toxics Cancer Risk per million and state percentile
Air Toxics Respiratory Hazard Index (HI) and state percentile
Impervious Surface percent and state percentile

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NEARBY REGULATED FACILITIES [2]
Facilities with DEP air permits
Facilities reporting under the EPA Toxics Release Inventory program
Facilities reporting under the Toxics Use Reduction Act (*i.e.*, Large Quantity Toxic Users)
Hazardous waste treatment, storage and disposal facilities
Solid waste diversion and disposal facilities3
Large quantity hazardous waste generators
Wastewater treatment plants
Airports
Freight rail yards
Port facilities
HEALTH [1]
Asthma prevalence in schools per 100 students total both sexes for each individual school (k-8),[2,4] public and private averaged for the most recent three school years available and percent of state rate
Elevated blood lead levels prevalence (rate per 1,000 screened of confirmed blood lead levels above five micrograms per deciliter (µg/dL) for ages nine months to 47 months) averaged for three years and percent of state rate
Low birth weight (rate per 1,000 of full-term singleton births (µg/dL) 2500 grams) averaged for five years and percent of state rate
Premature deaths per 100,000 before age 75 years averaged for five years and percent of state rate
Chronic obstructive pulmonary disease (COPD) among adults aged 18 years or older, crude prevalence (percentage) and percent of state rate
Coronary heart disease among adults aged 18 years or older, crude prevalence (percentage) and percent of state rate
SOCIOECONOMIC [1]
Median household income and percent of state median for each EJ block group
Minority population percent for each EJ block group
English language isolation household percent for each EJ block group
Young (<5 years old) (percent and state percentile)
Older (>65 years old) (percent and state percentile)
NEARBY SENSITIVE RECEPTORS [2]
Schools (k-12)[4]
Long-term care residences
Public housing
Childcare facilities
Prisons

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[1] Report indicator data for most recent year or years available, for each census tract with an EJ block group (unless otherwise stated) within one or five miles of proposed project and the state rate or average and percent of state rate or average for comparison.
[2] Identify name, type of site or facility within one mile (for non-major source) or five miles (for major source) of the proposed project. Provide distance from proposed project to nearby sensitive receptors. Provide map of nearby facilities and sensitive receptors within one or five miles of proposed project.
[3] Include transfer stations by type, active waste combustors, active landfills, and recycling operations. Include map of points and landfill polygons as available.
[4] Schools in or within ½ mile of the boundary of any nearby environmental justice population.

(d) Air Quality Dispersion Modeling

1. As part of the cumulative impact analysis, the applicant shall conduct air quality dispersion modeling of criteria pollutants that will be emitted by the proposed project, in accordance with Department guidance.

2. The applicant shall submit a modeling protocol to the Department for review and approval prior to completing the modeling.

3. The modeling shall account for facility-wide existing criteria pollutant potential emissions and criteria pollutant potential emissions associated with the proposed project, including significant added criteria pollutant emissions from motor vehicles owned or leased by the facility, and existing criteria pollutant actual emissions from nearby significant sources as appropriate. The modeling shall account for background concentrations of criteria pollutants based on data from ambient air monitoring stations.

4. Modeled concentrations of criteria pollutants shall be compared to Ambient Air Quality Standards for the Commonwealth of Massachusetts at 310 CMR 6.00: *Ambient Air Quality Standards for the Commonwealth of Massachusetts* and National Ambient Air Quality Standards.

5. The air quality modeling results shall be included in the cumulative impact analysis report required under 310 CMR 7.02(14)(g) and describe modeled concentrations of criteria air pollutants in nearby environmental justice populations, including graphical display of concentration levels between the applicant's facility and nearby environmental justice populations for modeled criteria air pollutants.

(e) Risk Characterization of Air Toxics

1. As part of the cumulative impact analysis, the applicant shall characterize risk of harm to health from air toxics emissions using a risk characterization spreadsheet tool made available by the Department and in accordance with Department guidance. The risk characterization spreadsheet tool has two options:

a. The applicant may use the default air dispersion factor values embedded in risk characterization spreadsheet to calculate cumulative risk; or

b. The applicant may conduct air dispersion modeling to generate air dispersion factor values to enter into the risk characterization spreadsheet tool. In this case the applicant shall submit an air dispersion modeling protocol to the Department for review and approval prior to completing the air dispersion modeling.

2. The inputs to the risk characterization spreadsheet tool shall account for facility-wide existing air toxics potential emissions and air toxics potential emissions associated with the proposed project, and existing air toxics actual emissions from nearby significant sources as appropriate and where information is available.

3. In lieu of using the risk characterization spreadsheet tool, the applicant may conduct a refined risk characterization based on air dispersion modeling. The Department may require that the applicant conduct air quality dispersion modeling of air toxics and a refined risk characterization. In this case the applicant shall submit air dispersion modeling and risk characterization protocols to the Department for review and approval prior to completing the air dispersion modeling and risk characterization in accordance with such protocols.

4. In conducting the risk characterization, the applicant shall calculate cumulative cancer risks and cumulative non-cancer risks using chemical-specific toxicity information published by the Department or otherwise approved for use by the Department.

5. The cumulative cancer risks shall be compared to a cumulative cancer risk limit, which is an excess lifetime cancer risk equal to ten in one million.

7.02: continued

6. Cumulative non-cancer risks shall be compared to a cumulative non-cancer risk limit which is a hazard index equal to one.

7. The risk characterization results shall be included in the cumulative impact analysis report required under 310 CMR 7.02(14)(g) and describe the potential risk of harm from air toxics to nearby environmental justice populations, including a graphical display of calculated risk levels for air toxics of particular concern.

(f) Evaluation of Proposed Project Cumulative Impacts

1. As part of the cumulative impact analysis, the applicant shall evaluate and describe how criteria air pollutant and air toxics emissions from the proposed project could affect existing environmental and public health conditions in nearby environmental justice populations.

2. The applicant shall describe any mitigation measures that it will implement to reduce or minimize the cumulative impacts of the proposed project.

3. If the applicant was required to file an environmental impact report pursuant to 301 CMR 11.06(7)(b) for any aspect of the proposed project, the applicant shall summarize the environmental impact report's conclusions regarding any existing unfair or inequitable environmental burden and related public health consequences and any potential disproportionate adverse impacts on nearby environmental justice populations, and measures that it will take to avoid, minimize, or mitigate such impacts.

4. The applicant shall summarize in its cumulative impact analysis report required under 310 CMR 7.02(14)(g) its evaluation of the project's cumulative impacts and any mitigation measures it will take.

(g) Cumulative Impact Analysis Report

1. The applicant shall submit to the Department a cumulative impact analysis report with the comprehensive plan application required under 310 CMR 7.02(5).

2. The cumulative impact analysis report shall contain the following:

a. a description of the notice and public involvement measures conducted pursuant to 310 CMR 7.02(14)(b), including supporting documentation, and a summary of public comments received and the applicant's written responses to the public comments;

b. the assessment of existing community conditions conducted pursuant to 310 CMR 7.02(14)(c);

c. the air quality dispersion modeling conducted pursuant to 310 CMR 7.02(14)(d);

d. the risk characterization conducted pursuant to 310 CMR 7.02(14)(e); and

e. the evaluation of project cumulative impacts conducted pursuant to 310 CMR 7.02(14)(f).

3. Within three days of submittal to the Department of the cumulative impact analysis report and the comprehensive plan application, the applicant shall notify the parties listed in 310 CMR 7.02(14)(b)1. of the availability for public review of the cumulative impact analysis report and the comprehensive plan application and how the public can submit questions and informal comments to the applicant and the Department prior to the start of the formal public comment period required by 310 CMR 7.02(3)(i)1.

(h) Department Review and Decision

1. The Department shall review the cumulative impact analysis report as part of its review of the comprehensive plan application under 310 CMR 7.02(5) and consider any comments submitted to the Department during its review.

2. The Department shall not propose to approve a comprehensive plan application for which a cumulative impact analysis was conducted pursuant to 310 CMR 7.02(14) unless:

a. the requirements of 310 CMR 7.02(3)(j) and 310 CMR 7.02(14)(b)-(g) are met;

b. any cumulative cancer risk calculated does not exceed the cumulative cancer risk limit in 310 CMR 7.02(14)(e)5.; and

c. any cumulative non-cancer risk calculated does not exceed the cumulative non-cancer risk limit in 310 CMR 7.02(14)(e)6.

3. After completing its review of the cumulative impact analysis report and the comprehensive plan application, the Department shall issue a proposed decision approving the comprehensive plan application or denying the comprehensive plan application and hold a 60-day comment period pursuant to 310 CMR 7.02(3)(I).

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4. After reviewing all public comments received on the Department's proposed decision, the Department shall issue a final decision approving or denying the application for comprehensive plan application.

(i) Cumulative Impact Analysis Regulation Review. Not later than December 31, 2025, the Department shall complete a review of the requirements in 310 CMR 7.02(14) and provide an opportunity for public comment to determine whether the program should be amended. This review shall evaluate the state of the science in cumulative impact analysis, the adequacy of the regulations to address cumulative impacts of air pollution through air permitting, program costs, and any other information relevant to review of the program.

7.03: U Plan Approval Exemption: Construction Requirements

(1) General.

(a) Any person who constructs, substantially reconstructs or alters, and subsequently operates an emission unit listed in 310 CMR 7.03(1)(a), may comply with the specific requirements of 310 CMR 7.03(5) through (7) in *lieu* of filing either a Comprehensive Plan Application (CPA) required by 310 CMR 7.02(5)(a) or a Limited Plan Application (LPA) required by 310 CMR 7.02(4)(a), except as provided in 310 CMR 7.03(2).

(b) Under 310 CMR 7.03, VOC shall include Volatile Organic Compounds (VOC) and Halogenated Organic Compounds (HOC) as defined in 310 CMR 7.00.

(c) Nothing in 310 CMR 7.03 relieves a person who owns, operates, leases or controls a facility from having to comply with other applicable requirements of 310 CMR 7.00 including, but not limited to, applicable 310 CMR 7.18 and 7.19 Reasonably Available Control Technology (RACT) requirements that come into effect after a person constructs, substantially reconstructs or alters, or operates an emission unit under 310 CMR 7.03.

(d) 1. Any person who constructs, substantially reconstructs, or alters and subsequently operates an emission unit in accordance with 310 CMR 7.03(8), (15), (16) or (19) shall limit the facility-wide emission of any individual hazardous air pollutant (HAP) to less than ten tons in each consecutive 12-month time period, and all combined HAPs to less than 25 tons in each consecutive 12-month time period.

2. The limits specified in 310 CMR 7.03(1)(d)1. do not apply to an owner or operator subject to 310 CMR 7.00 *Appendix C*: *Operating Permit and Compliance Program*.

(2) Prohibition. 310 CMR 7.03 is not an alternative to obtaining a plan approval pursuant to 310 CMR 7.02 if construction, substantial reconstruction or alteration would violate requirements of:

(a) 310 CMR 7.02(5)(a)7. relating to Prevention of Significant Deterioration (PSD) requirements or the need for Non-attainment Review;

(b) 310 CMR 7.02(5)(a)8. and 9. relating to plan approvals, Nonattainment Review approval or PSD permits, or MACT requirements at 40 CFR 63.40 through 63.44;

(c) 310 CMR 7.02(5)(a)10. relating to Department determinations of a potential condition of air pollution;

(d) 310 CMR 7.02(5)(a)5. relating to any incinerator;

(e) 310 CMR 7.02(4)(a)3. relating to plan approvals; or

(f) 310 CMR 7.02(4)(a)4. relating to significant increase in federal potential emissions.

(3) Including Emission Units in Calculation of Net Emission Increase. Persons who construct, substantially reconstruct or alter an emission unit that complies with the requirements of 310 CMR 7.03 must include said emission unit in calculating significant net emission increase and determining applicability of Non-attainment New Source Review, 310 CMR 7.00: *Appendix A*, PSD (40 CFR 52.21) or Case-by-case MACT (310 CMR 7.02(5)(e)).

(4) Emission Units Constructed or Altered Since 1970.

(a) Persons who construct, substantially reconstruct, alter, or subsequently operate an emission unit after July 1, 1970 in the Metropolitan Boston Air Pollution Control District and after September 15, 1970 in all other districts are not required to obtain plan approval if said emission unit complies with the requirements of 310 CMR 7.03(5) through (7), and is not prohibited by 310 CMR 7.03(2).

(b) Persons who already have plan approval for emission units that might otherwise be subject to 310 CMR 7.03 must continue to comply with the terms and conditions of the plan approval and are not subject to the requirements of 310 CMR 7.03.

7.03: continued

(5) Reporting. Any construction, substantial reconstruction or alteration, as described in 310 CMR 7.03, at a facility subject to the reporting requirements of 310 CMR 7.12, shall be reported to the Department on the next required source registration.

(6) Record-keeping. A record-keeping system shall be established and continued in sufficient detail to document the date of construction, substantial reconstruction or alteration and that the respective emission rates, operational limitations, equipment specifications and other requirements pursuant to 310 CMR 7.03 are met. All records shall be maintained up-to-date such that year-to-date information is readily available for Department examination.

(7) Operation. No person shall operate a facility constructed, substantially reconstructed or altered pursuant to 310 CMR 7.03 except in conformance with the requirements established herein. This exemption from the requirements of 310 CMR 7.02(4) and (5) shall not affect the responsibility of the owner or operator to comply with other provisions of 310 CMR 7.00, other applicable regulations or any plan approval, notice of noncompliance order, PSD permit or other approval issued to said facility.

(8) Degreaser. Construction, substantial reconstruction or alteration of any degreaser in compliance with the criteria established in 310 CMR 7.18(8), regardless of the item being degreased, with a solvent consumption rate of less than 100 gallons per month. Consumption rate is the amount of solvent added into the unit less any documented solvent waste disposal or recycling amounts, each in gallons per month.

(9) Wave Solder. Construction, substantial reconstruction or alteration of an oil-less wave solder operation or any wave solder operation with a flux consumption rate, including any thinner, of less than 200 gallons per month, either equipped with an electrostatic precipitator capable of maintaining a particulate control efficiency of greater than 90% or emitting visible emissions with 0% opacity.

(10) Emergency or Standby Engine.

(a) On or after June 1, 1990, but prior to March 23, 2006, construction, substantial reconstruction or alteration of any emergency or standby engine shall comply with 310 CMR 7.03(10)(a) through (c). All such emergency or standby engines shall:

1. Have an energy input capacity of equal to or greater than 3,000,000 Btu per hour and less than or equal to 10,000,000 Btu per hour; and
2. Be equipped with an exhaust gas silencer so that sound emissions from the generator will not cause or contribute to a condition of air pollution; and
3. Utilize an exhaust stack that discharges so as to not cause or contribute to a condition of air pollution; and
4. Operate only:
   a. for up to 100 hours per calendar year, or as otherwise approved by EPA, for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine;
   b. as part of the 100 hours, for up to 50 hours per calendar year for non-emergency situations; and
   c. during periods of electric power outage due to failure of the electrical supply, in whole or in part, onsite disaster, local equipment failure, flood, fire or natural disaster, or when the imminent threat of a power outage is likely due to failure of the electrical supply.

   Additional limitations and conditions may apply, including but not limited to, 40 CFR Part 63, Subpart ZZZZ; 40 CFR Part 60, Subpart IIII; and 40 CFR Part 60, Subpart JJJJ.

(b) No person shall accept for delivery for burning in any engine subject to 310 CMR 7.03(10), diesel or any other fuel that does not meet the sulfur content limit for fuel in 310 CMR 7.05.

(c) Reporting and record keeping requirements for 310 CMR 7.03(10), as required by 310 CMR 7.03(5) and (6), shall be in accordance with 310 CMR 7.02(8)(i)3. through 4.

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(11) Lead Melt Pots. Construction, substantial reconstruction or alteration of any lead melt pot(s) equipped with fabric filter control capable of maintaining 99.5% control efficiency of particulate matter.

(12) Dry Material Storage Silo. Construction, substantial reconstruction or alteration of any storage silo equipped with fabric filter control capable of maintaining 99.5% control efficiency.

(13) Motor Vehicle Fuel Dispensing Facility. Construction, substantial reconstruction or alteration of a Stage I or Stage II system at a motor vehicle fuel dispensing facility, provided that such system meets the requirements of 310 CMR 7.24(3) and (6), and the Department is notified of said installation.

((14) Reserved))

(15) Non-heatset Offset Lithographic Printing. On or after July 1, 1992, construction, substantial reconstruction or alteration of any non-heatset offset lithographic printing press, except such presses present at a facility subject to 310 CMR 7.26(20), utilizing materials containing VOCs or organic material including, but not limited to, printing inks, overprint coatings, makeup solvents, fountain solution additives, adhesives, alcohol and cleanup solutions, complying with the applicable performance standards set forth in 310 CMR 7.03(15)(b) and (c) shall be subject to the requirements in either 310 CMR 7.03(15)(a)1. or 2. and in 310 CMR 7.03(15)(d) and (f), and to the recordkeeping requirements in 310 CMR 7.03(15)(e).

(a)1. The total facility, including the new or modified printing press, shall use less than 670 gallons per month of all materials containing VOCs, or alternatively, its emission rate shall be less than 2.5 tons of VOC per calendar month. This emission rate shall include emissions from all printing and non-printing operations at the facility including, but not limited to, non-heatset offset lithographic printing presses. The owner/operator is subject to the reporting requirements of 310 CMR 7.12.

2. The total facility, including the new or modified printing press, shall use less than 2,000 gallons per 12-month rolling period of all materials containing organic material (includes VOC), or, alternatively, shall emit less than ten tons of organic material (includes VOC), per 12-month rolling period. This emission rate shall include emissions from all printing and non-printing operations at the facility including, but not limited to, non-heatset offset lithographic printing presses. The owner/operator is not subject to the reporting requirements of 310 CMR 7.12 unless otherwise required.

(b) Non-heatset offset lithographic printing presses subject to 310 CMR 7.03(15) and employing a fountain solution containing VOC shall meet the following as applied specifications:

1. For web presses installed on or after May 1, 1998, the fountain solution shall not contain any alcohol.

2. For sheet-fed presses with cylinder widths greater than 21 inches installed on or after July 1, 1992:

a. The fountain solution shall be maintained at 3% by weight or less of alcohol; or

b. The fountain solution shall be maintained at 5% by weight or less of alcohol and the fountain solution refrigerated to a temperature of less than 60°F.

3. For sheet-fed presses with cylinder widths of less than or equal to 21 inches, installed on or after July 1, 1992, the fountain solution shall be maintained at 5% by weight or less of alcohol.

4. For newspaper printing, the fountain shall contain 0% alcohol.

5. Any VOC-containing fountain additive other than alcohol shall be limited to a mix ratio that will result in a VOC concentration in the fountain solution, excluding alcohol, equal to or less than 2.5% by weight.

(c) Cleanup solution containing VOC shall meet the following criteria:

1. Cleanup solution as used at the press shall either:

a. not exceed 70% by weight VOC; or

b. have a VOC composite partial pressure of 10 mmHg or less at 20°C (68°F).

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2. Cleanup solution shall be kept in tightly covered containers during transport and storage; and

3. The used cleaning rags used in conjunction with the cleanup solution shall be placed, when not in use, in closed containers and collected for proper disposal or recycle.

(d) Adhesives shall meet a VOC content Limit of 300 grams VOC per liter of product as applied (2.5 pounds per gallon), less water.

(e) Any person subject to 310 CMR 7.03(15) shall maintain records sufficient to demonstrate compliance. Records kept to demonstrate compliance shall be kept on-site for five years and shall be made available to representatives of the Department upon request. Such records shall include, but are not limited to:

1. Identity, formulation (percent VOC by weight as determined by the manufacturer's formulation data or EPA Method 24 or 24A test), and quantity (gallons per calendar month) for each VOC-containing compound used at the facility including, but not limited to:

a. Alcohol;
b. Makeup solvent;
c. Fountain additives, including fountain solution alcohol substitute;
d. Fountain solution concentrate;
e. Printing Ink;
f. Cleanup solution;
g. Adhesives; and
h. Overprint coatings.

2. The percent by weight of alcohol in the fountain solution as determined each time alcohol or alcohol mix is added to the system;

3. The weight percent of VOC-containing fountain additives other than alcohol in the fountain solution;

4. For fountain solutions subject to refrigeration requirements of 310 CMR 7.03(15)(b), the temperature of the fountain solution, as recorded on a once per shift basis; and

5. Total VOC emissions (tons per calendar month) for all printing presses combined at the facility, as described in 310 CMR 7.03(15)(a).

(f) Any person who complies with 310 CMR 7.03(15) in *lieu* of obtaining a plan approval for a press under 310 CMR 7.02 shall comply with applicable RACT requirements of 310 CMR 7.18(25) when such requirements become more stringent than those in 310 CMR 7.03(15).

(16) Paint Spray Booths. Construction, substantial reconstruction or alteration of any paint spray booth utilizing coatings, thinners, reducers and cleanup solutions, and complying with the applicable performance standard of 310 CMR 7.03(16)(b) through (l) shall be subject to the requirements in 310 CMR 7.03(16)(m) and either 310 CMR 7.03(16)(a)1. or 2.

(a) 1. The total facility, including the new or modified paint spray booth, shall use less than 670 gallons per calendar month of all materials containing VOCs, or alternatively, has an emission rate of less than 2.5 tons of VOC per calendar month. This emission rate includes all coating operations at the facility. The owner/operator is subject to the reporting requirements of 310 CMR 7.12.

2. The total facility, including the new or modified paint spray booth, shall use less than 2,000 gallons per 12-month rolling period of any material containing organic material (includes VOC), or alternatively, has an emission rate less than ten tons of organic material (includes VOC) per 12-month rolling period. This emission rate includes all coating operations at the facility. The owner/operator is not subject to the reporting requirements of 310 CMR 7.12 unless otherwise required.

(b) The coating operation shall be of a type described in 310 CMR 7.18, regardless of annual or potential emission applicability criteria contained in 310 CMR 7.18. These operations are:

310 CMR 7.18(3) Metal Furniture Surface Coating;
310 CMR 7.18(4) Metal Can Surface Coating;
310 CMR 7.18(5) Large Appliance Surface Coating;
310 CMR 7.18(6) Magnetic Wire Insulation Surface Coating;
310 CMR 7.18(10) Metal Coil Coating;
310 CMR 7.18(11) Surface Coating of Miscellaneous Metal Parts and Products;
310 CMR 7.18(21) Plastic Parts Surface Coating;

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310 CMR 7.18(22) Leather Surface Coating;
310 CMR 7.18(23) Wood Products Surface Coating;
310 CMR 7.18(24) Flat Wood Paneling Surface Coating; and
310 CMR 7.18(28) Automotive Refinishing.

Operations not listed in 310 CMR 7.03(16)(b) are not covered by this exemption and require either a Limited Plans Application (LPA) or Comprehensive Plans Application (CPA) as required by 310 CMR 7.02.

(c) All coatings used in the new or modified spray booth shall comply with the as-applied formulations contained in 310 CMR 7.18 for the spray coating of material described by the relevant subsection. Notwithstanding the previous statement, for any person who owns, leases, operates or controls a facility with coating operation(s) subject to 310 CMR 7.03(16), the emissions of VOC from any coatings used in small amounts at the facility are exempt from the emission limitations of the relevant subsection, provided the person satisfies the following conditions:

1. the total amount of all coatings exempted does not exceed 55 gallons during any rolling 12 month period at the facility; and,
2. the person identifies and tracks the usage of the coatings covered by this exemption; and,
3. the person complies with the record keeping and testing requirements of the applicable section(s) of 310 CMR 7.03(16)(b).

(d) Spray guns shall utilize one of the following methods of spray application and be maintained and operated in accordance with the recommendations of the manufacturer:

1. Electrostatic spray application; or
2. High Volume Low Pressure (HVLP) spray application; or
3. Any other coating application method that achieves a transfer efficiency equivalent to electrostatic or HVLP spray application and is approved by the Department in writing.

(e) Each paint spray booth shall utilize two or more layers of dry fiber mat filter with a total thickness of at least two inches or an equivalent system as determined in writing by the Department and that achieves particulate control efficiency of at least 97% by weight. Filter material shall be disposed in accordance with all applicable DEP regulations.

(f) Face velocity of air at filter shall not exceed 200 feet per minute.

(g) For surface preparation, prior to coating, the VOC content of any surface preparation solution shall not exceed 1.67 pounds per gallon. However, for surface preparation of plastic parts the VOC content of the surface preparation solution shall not exceed 6.5 pounds of VOC per gallon.

(h) Spray guns shall be cleaned in a device that:

1. minimizes solvent evaporation during the cleaning, rinsing, and draining operations;
2. recirculates solvent during the cleaning operation so that the solvent is reused; and,
3. collects spent solvent in a container with a tight-fitting cover so that it is available for proper disposal or recycling.

(i) The paint spray booth shall have a stack conforming to the following criteria:

1. The stack shall discharge vertically upwards;
2. The stack shall not have rain protection of a type that restricts the vertical exhaust flow;
3. The stack gas exit velocity shall be greater than 40 feet per second; and
4. The minimum stack exit height shall be 35 feet above the ground or ten feet above roof level.

(j) Emissions from stack shall have 0% opacity.

(k) Sufficient records shall be prepared and maintained to demonstrate compliance for each calendar month. Such records shall include, but are not limited to:

1. For each coating, as applied:
   a. Gallons of coating used;
   b. Coating density (Pounds per gallon);
   c. Pounds of VOC per gallon of coating;
   d. Pounds of solids per gallon of coating;
   e. Pounds of water per gallon of coating;
   f. Pounds of other non-VOC liquid per gallon of coating; and
   g. Pounds of VOC per gallon of solids as applied.
2. Gallons of exempt/non-compliance coatings used; and
3. Gallons of cleanup solution used and pounds VOC per gallon; and

7.03: continued

4. Maintenance records of filter pad replacement and disposal.

(l) As an alternative to 310 CMR 7.03(16)(k)1. and (k)2., persons subject to 310 CMR 7.18(28): *Automotive Refinishing* shall maintain purchase records of coatings and surface preparation products on a monthly basis. The purchase records shall be summarized and include coating category, coating or coating component, and surface preparation product as identified on the container, the quantity of each coating or component, and surface preparation product, and the VOC content (in pounds per gallon) of each coating and surface preparation product, after mixing according to the manufacturer's instructions. Records shall be kept for three years, and be made available to representatives of the Department upon request.

(m) Any person who complies with 310 CMR 7.03(16), in *lieu* of obtaining a plan approval for a spray booth under 310 CMR 7.02, shall comply with applicable RACT requirements of 310 CMR 7.18(3) through (6), (10), (11), (21) through (24), and (28) when such requirements become more stringent than those in 310 CMR 7.03(16).

(17) Groundwater/Soil Venting Systems. Construction, substantial reconstruction or alteration of any Contaminated Groundwater Treatment System (CGTS) or contaminated soil venting system complying with the following criteria:

(a) CGTS or contaminated soil venting systems shall be equipped and operated such that the system continuously reduces VOC in air effluent stream by at least 95% (by weight). Such systems include, but are not limited to, the following:

1. CGTS followed by carbon adsorber, incinerator or equivalent air pollution control device; or
2. Contaminated soil venting followed by carbon adsorber, incinerator or equivalent air pollution control device.

(b) Systems shall be equipped and operated with the necessary procedures and instrumentation to assure operation in compliance with this standard including, but not limited to:

1. Interlock to prevent operation of the entire system without proper control device operation including, but not limited to, automatic shutoff if incinerator drops below normal operating temperature;
2. Inlet/outlet incinerator temperature indicators;
3. For a CGTS, flowmeter(s) indicating rate and total amount of groundwater being treated, if applicable; and
4. On-site regeneration of carbon or regularly scheduled replacement of carbon, if used.

(d) Sufficient records shall be prepared and maintained to demonstrate emissions compliance for each month. Records shall include, but are not limited to the following, as applicable:

1. Once per month, measurement of water flow rate and total flow to date for the month;
2. For a CGTS, once per month measurement of inlet and effluent water VOC concentration;
3. Once per month, measurement of VOC concentration in air prior to control, and VOC concentrations after control;
4. Once per month, measurement of overall VOC reduction efficiency of the air pollution control system in percent by weight;
5. Maintenance records of the system;
6. Monthly operating hours of the system;
7. Once per month, measurement of incinerator outlet temperatures; and
8. Carbon regeneration/replacement records.

(18) Fuel Cells. Construction, substantial reconstruction or alteration of any fuel cell(s) complying with the following criteria:

(a) The emissions from the fuel cell will not exceed the following standards based upon a one hour averaging time:

1. NO_x - 0.03 pounds per megawatt hour.
2. Carbon Monoxide - 0.05 pounds per megawatt hour.
3. Non methane organic compounds - 0.008 pounds per megawatt hour.

(b) Any person subject to 310 CMR 7.03(18) shall keep records of monthly electric generation.

7.03: continued

(19) Flexographic, Gravure, Letterpress and Screen Printing. On and after May 1, 1998, construction, substantial reconstruction, or alteration of any flexographic, gravure, letterpress, or screen printing press at a facility that is not subject to 310 CMR 7.26(20) through (29), but that is utilizing materials containing VOC or organic material including, but not limited to, printing inks and overprint coating, alcohol, makeup solvents, and cleanup solutions complying with the applicable performance standards in 310 CMR 7.26(25) and 310 CMR 7.26(26), shall be subject to the limits and reporting requirements in either 310 CMR 7.03(19)(a)1. or 2. and shall also be subject to the requirements in 310 CMR 7.03(19)(c) and to the recordkeeping requirements in 310 CMR 7.03(19)(b).

(a) 1. The total facility including, but not limited to, the new or modified printing press, and non-printing operations at the facility, shall use less than 670 gallons per calendar month of all materials containing VOCs or, alternatively, the total facility emission rate shall be less than 2.5 tons of VOC per calendar month. The owner/operator is subject to the reporting requirements of 310 CMR 7.12; or

2. The total facility including, but not limited to, the new or modified printing press, and non-printing operations at the facility, shall use less than 2,000 gallons per 12-month rolling period of all materials containing organic material (includes VOC) or, alternatively, the total facility emission rate shall be less than ten tons of organic material (includes VOC) per 12-month rolling period. The owner/operator is not subject to the reporting requirements of 310 CMR 7.12 unless otherwise required.

(b) Any person subject to 310 CMR 7.03(19) shall maintain records sufficient to demonstrate compliance. Such records shall include, but are not limited to, records demonstrating that cleanup solutions, inks, coatings, and adhesives are in compliance with applicable standards set forth in 310 CMR 7.26(20) through (29) and that the usage rate or the emissions rate do not exceed the rates set forth in 310 CMR 7.03(19)(a). Records kept to demonstrate compliance shall be kept on site for five years and shall be made available to representatives of the Department upon request.

(c) Any person who complies with 310 CMR 7.03(19), in *lieu* of obtaining a plan approval for a press under 310 CMR 7.02, shall comply with applicable RACT requirements of 310 CMR 7.18(12) and (25) and 310 CMR 7.26(20) through (29) when such requirements become more stringent than those in 310 CMR 7.03(19).

(21) Corona Surface Treatment Devices. Construction, substantial reconstruction or alteration of any bare-roll or covered-roll corona surface treatment device equipped with a catalytic ozone decomposer designed to reduce ozone emissions by 99.9% or to an emission limit of 0.1 ppm at the catalytic device outlet.

(22) Conveyors, and Dry Material Storage (Except Silos). Construction, substantial reconstruction or alteration of equipment used exclusively to convey or store dry solid materials in an enclosed system or equipped with a fabric filter or equivalent particulate control device capable of maintaining 99.5% control efficiency for particulate emissions. In addition, said operation shall not generate any visible emissions and shall comply with provisions of 310 CMR 7.10: *U Noise*. This standard is not applicable to conveyors and dry material storage associated with Standard Industrial Classification Code Major Group 1400 (Mining), Major Group 2900 (Petroleum and Coal products) and Major Group 3200 (Stone, Clay and Glass Products).

(23) Temporary Boilers. Construction or installation of a temporary boiler at a facility where a boiler is no longer available for use. A boiler is considered unavailable for use if it has been shut down for repair or inspection or is no longer available or operating due to circumstances beyond the control of the person who owns or operates the facility. Temporary boilers must meet the following conditions:

(a) Have a maximum heat input capacity less than or equal to the boiler it is replacing;
(b) Be installed for a period not to exceed 120 days;
(c) Use the same or lower sulfur content fuel as the boiler it is replacing; and
(d) Comply with all other applicable requirements for the boiler that it replaced.

The Department may grant an extension to operate the temporary boiler beyond 120 days. Such an extension shall be considered upon receiving a written request for an extension. Approval of an extension will be issued in writing.

(24) Welding. Construction, substantial reconstruction, alteration or operation of welding equipment provided that:

(a) The facility uses ten tons or less of welding rod per year; and

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(b) Each welding station is equipped with a ventilation system designed to vent fumes and particulate to a particulate collection device having a control efficiency of 90% or greater.

(25) Biotechnology Surface Disinfection Processes.

(a) Construction, substantial reconstruction, or alteration of any surface disinfection process used in making any of the following medical device, drug, or biologic products:

1. a product derived in whole or in part from biotechnology, and
2. one of the following applications or notices has been filed with U.S. Food and Drug Administration (FDA) for such product: an Investigational New Drug Application, an Investigational Device Exemption Notice, a New Drug Application, a premarket approval application, or a premarket notification pursuant to section 510(k) of the federal Food, Drug and Cosmetic Act (510(k)) (including an FDA-approved exemption from the 510(k) premarket notification requirement).

(b) Surface disinfection processes shall comply with the following criteria:

1. The total facility-wide actual emissions, including new or modified surface disinfection processes, shall comply with the requirements in either 310 CMR 7.03(25)(b)1.a. or b.
   a. 15 tons of volatile organic compounds (VOC) per 12-month rolling period. This VOC emission limitation includes all process operations at the facility. In addition, facility-wide actual emissions of VOC shall not exceed 2.5 tons per calendar month. The owner/operator is subject to the reporting requirements of 310 CMR 7.12.
   b. Less than ten tons of materials containing organic material (includes VOC) per 12-month rolling period. This organic material emission limitation includes all process operations at the facility. The owner/operator is not subject to the reporting requirements of 310 CMR 7.12 unless otherwise required.
2. The total facility-wide actual emissions, shall not exceed nine tons of any single Hazardous Air Pollutants (HAP as defined at 40 CFR Part 63) per 12-month rolling period, and shall not exceed 15 tons of any combination of (total) HAP per 12-month rolling period. In addition, facility-wide actual emissions of any individual HAP shall not exceed two tons per calendar month, and any combination of (total) HAP shall not exceed three tons per calendar month.
3. Processes that emit or will emit VOCs or HAPs in exceedance of limitations for VOCs and HAPs established in 310 CMR 7.02(25)(b)1. or 2., are subject to 310 CMR 7.02(5), and a person shall obtain written Department plan approval prior to commencement of construction, installation and operation of said processes.
4. Combustion processes that support processes subject to 310 CMR 7.03(25) are subject to regulatory standards found at 310 CMR 7.02, 310 CMR 7.03, or 310 CMR 7.26.
5. Cleaning, sterilization, disinfection, and other operations:
   a. Cleaning, sterilization, disinfection, and other solutions which contain VOC shall be kept in tightly closed containers when not in active use and during transport and storage, and
   b. The spent cleaning cloths and/or wipes used in conjunction with the cleaning and sterilization solutions shall be placed, after use, in tightly closed containers and collected for proper recycling or disposal.
6. Any person subject to this regulatory standard shall maintain records sufficient to demonstrate compliance with 310 CMR 7.03(25) for each calendar month. Records kept to demonstrate compliance with 310 CMR 7.03(25) shall be maintained on-site for five years and shall be made available to representatives of the Department upon request. For each process and operation, such records shall include, but not be limited to:
   a. Gallons of VOC used;
   b. Pounds of VOC used;
   c. Gallons of individual and total HAP used; and
   d. Pounds of individual and total HAP used.

(26) Rock Crushing and Processing Operations - Existing Equipment Replacement.

(a) Applicability on and after July 24, 2009. 310 CMR 7.03(26) shall apply to the replacement of equipment at a rock crushing and processing facility operating with a written plan approval from the Department under the provisions of 310 CMR 7.02.

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(b) Definitions. When used in 310 CMR 7.03(26) the following terms shall mean:

1. Conveying Systems means a device for transporting materials from one piece of equipment or location to another piece of equipment or location.

2. Crusher means a machine used to crush nonmetallic minerals into smaller pieces, and includes, but is not limited to, the following types: jaw, gyratory, cone, roll, rod mill, hammermill, and impactor.

3. Dust Suppression System means a water spray system designed to minimize fugitive emissions throughout the rock crushing and processing operation.

4. Rock Crushing and Processing Equipment means a combination of equipment that is used to crush and sort nonmetallic minerals including, but not limited to, crushers, screening operators, conveying systems, dust suppression systems, feeders, and wash systems.

5. Screening Operation means a device for separating material according to size by passing undersized material through one or more mesh surfaces (screens) in series, and retaining oversized material on the mesh surfaces.

(c) Equipment Replacement. An owner or operator may replace rock crushing and processing equipment under the provisions of 310 CMR 7.03(26) provided that:

1. The rock crushing and processing equipment was previously approved by the Department in writing under the provisions of 310 CMR 7.02 and said approval is valid at the time of equipment replacement, and

2. Equipment replacement will not increase overall processing capacity or emissions (including noise) from the rock crushing and processing operation, and

3. The owner or operator complies with the provisions of 310 CMR 7.03(26) in its entirety, and

4. The rock crushing and processing operation shall be equipped with a dust suppression system that will limit opacity to less than 10% at all time, and

5. The rock crushing and processing operation will be operated in accordance with all applicable conditions and limitations contained in the Department's plan approval for the original equipment.

(d) Testing. Within seven days of recommencement of operation after completion of equipment replacement, visible emission observations shall be conducted for the rock crushing and processing operations in accordance with 40 CFR 60: *Appendix A Method 9* to verify compliance with 310 CMR 7.03(26)(c)4.

(e) Record Keeping. Records documenting any equipment replacement as provided in 310 CMR 7.03(26) and of visible emission observations as required by 310 CMR 7.03(26)(d) shall be maintained on-site in accordance with the provisions of 310 CMR 7.03(6).

(f) Reporting. Replacement of equipment shall be reported to the Department in accordance with the provisions of 310 CMR 7.03(5).

(g) Duty to Comply. Compliance with the provisions of 310 CMR 7.03(26) does not obviate the need to comply with 40 CFR 60 Subpart OOO if applicable.

7.04: U Fossil Fuel Utilization Facilities

((1) Reserved)

(2) U Smoke Density Indicator.

(a) on or after June 1, 1990, no person shall cause, suffer, allow, or permit the burning of any grade oil or solid fuel in any fuel utilization facility having an energy input capacity rated by the Department equal to or greater than 40,000,000 Btu per hour, unless such facility is equipped with a smoke density sensing instrument and recorder which are properly maintained in an accurate operating condition, operates continuously and is equipped with an audible alarm to signal the need for combustion equipment adjustment or repair when the smoke density is equal to or greater than No. 1 of the Chart. Such smoke density equipment shall be available for inspection at reasonable times by a representative of the Department. Such inspection may include the review of recording charts which must be retained and made available for a period of one year from the date of use.

(b) the Department may require any fuel utilization facility, other than those specified under the provision of 310 CMR 7.04 (2)(a) to be equipped with smoke density sensing devices and appurtenances if, in the opinion of the Department, such are deemed necessary.

7.04: continued

(c) On or after July 1, 2000 any person owning or operating a fuel utilization facility with an energy input capacity equal to or greater than 10,000,000 Btu per hour but less than 40,000,000 Btu per hour is no longer required to install or maintain a smoke density sensing instrument and recorder even if required in a previous plan approval. Applicability is based on the size of an individual fuel utilization emission unit.

(d) Notwithstanding the requirements of 310 CMR 7.04(2)(a) and (c), a new or modified fuel utilization facility may be required to install instrumentation to monitor opacity should it be subject to New Source Performance Standards contained at 40 CFR Part 60, Subparts D, Da, Db or Dc.

((3) Reserved)

(4) U Inspection, Maintenance and Testing.

(a) On and after December 31, 1977, no person shall cause, suffer, allow, or permit the operation of any fossil fuel utilization facility rated by the Department as having an energy input capacity equal to or greater than 3,000,000 Btu per hour unless said facility has been inspected and maintained in accordance with the manufacturers recommendations and tested for efficient operation at least once in each calendar year. The results of said inspection, maintenance, and testing and the date upon which it was performed shall be recorded and posted conspicuously on or near the facility. Unless otherwise required, 310 CMR 7.04(4)(a) shall not apply to stationary combustion turbines and stationary reciprocating engines.

(b) No person shall cause, suffer, allow, or permit the removal, alteration or shall otherwise render inoperative any air pollution control equipment which has been installed as a requirement of 310 CMR 7.00, other than for reasonable maintenance periods or unexpected and unavoidable failure of equipment.

(5) U Fuel Oil Viscosity. On or after July 1, 1978, no person shall cause, suffer, allow, or permit the burning of any grade residual oil in any fossil fuel utilization facility with an energy input capacity rated by the Department as equal to or greater than 250,000,000 Btu per hour unless said facility is equipped with an automatic viscosity controller that shall control the viscosity of the fuel oil to the burners. The automatic controller shall be of a type approved by the Department.

The Department may require a fossil fuel utilization facility with an energy input capacity rated by the Department as equal to or greater than 100,000,000 Btu per hour but less than 250,000,000 Btu per hour to be equipped with an automatic viscosity controller if, in the opinion of the Department, such is deemed necessary.

(6) U. No person shall cause, suffer, allow, or permit the installation or use of any material, article, machine, equipment, or contrivance which conceals an emission without reducing the total weight of emissions where such emission would constitute a violation of any applicable regulation.

(7) CM Prohibition of Unapproved Burners in the City of Worcester.

(a) Upon receipt of written notification from the Department, no person shall cause, suffer, allow, or permit the operation of a fossil fuel utilization facility having an energy input capacity greater than 3,000,000 Btu per hour located in the City of Worcester utilizing a burner or burners of a design not approved by the Department, without the approval of the Department pursuant to 310 CMR 7.00.

(b) 310 CMR 7.04(7)(a) shall not apply to those facilities having met any one of the following conditions:

1. demonstrated an ability to maintain compliance with applicable regulations;
2. demonstrated to the satisfaction of the Department that the fossil fuel utilization facility is used only as an emergency or standby unit; or
3. demonstrated to the satisfaction of the Department that utilization of distillate fuel oil in the fossil fuel utilization facility will not cause a violation 310 CMR 7.00.

(c) No person shall cause, suffer, allow, or permit the operation of any fossil fuel utilization facility subject to the provisions of 310 CMR 7.04(7)(a) unless said person has submitted a schedule to the Department on a form provided by the Department specifying the dates by which compliance with 310 CMR 7.04(7)(a) will be achieved. Compliance in all instances shall be achieved as expeditiously as practicable but in no case later than September 1, 1980.

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(8) CM Prohibition of Natural Draft in Fossil Fuel Utilization Facilities in the City of Worcester.

(a) Upon receipt of written notification from the Department, no person shall cause, suffer, allow, or permit the use of natural draft as a secondary air supply in a fossil fuel utilization facility having an energy input capacity greater than 3,000,000 Btu per hour located in the City of Worcester, without the approval of the Department pursuant to 310 CMR 7.00

(b) 310 CMR 7.04(8)(a) shall not apply to those facilities having met either of the following conditions:

1. demonstrated an ability to maintain compliance with applicable regulations; or
2. demonstrated to the satisfaction of the Department that the fossil fuel utilization facility is used only as an emergency or standby unit.

(c) No person shall cause, suffer, allow, or permit the operation of any fossil fuel utilization facility subject to the provisions of 310 CMR 7.04(8)(a) unless said person has submitted a schedule to the Department specifying the dates by which compliance with 310 CMR 7.04(8)(a) will be achieved. Compliance in all instances shall be achieved as expeditiously as practicable, but in no case later than September 1, 1980.

(9) Used Oil Fuel.

(a) Except as provided for in 310 CMR 7.04(9)(b) through (d), no person having control of a fossil fuel utilization facility shall cause, suffer, allow, or permit the burning therein of used oil fuel unless:

1. the Department has in writing approved the plans, specifications, Standard Operating Procedure, and maintenance procedure for the facility in which the used oil fuel is to be burned, and
2. the used oil fuel is burned in said facility in accordance with the plans, specifications, Standard Operating Procedure, and maintenance procedure as approved in writing by the Department, including all terms and conditions which the Department may include in such approval, and
3. a minimum combustion efficiency of 99.5% is achieved, and
4. the energy input capacity for each individual facility is equal to or greater than 3,000,000 Btu per hour.

(b) A person who, on July 1, 1986, was lawfully burning used oil fuel in a fossil fuel utilization facility other than a used oil fuel fired space heater may continue to do so

1. between that date and December 31, 1986 only if
   a. a minimum combustion efficiency of 99.5% is achieved, and
   b. the energy input capacity for each individual facility is equal to or greater than 3,000,000 Btu per hour, and
   c. the activity is in compliance with all applicable provisions of 310 CMR 7.00, except that specific approval by the Department to burn used oil fuel in the fossil fuel utilization facility shall not be required during that time, and
   d. the activity is in compliance with all applicable provisions of 310 CMR 30.099(16) and 310 CMR 30.200, including but not limited to the conditions set forth in 310 CMR 30.205, except that a recycling permit shall not be required during that time, and
2. after December 31, 1986 only if
   a. such person has applied in writing to the Department for the Department's approval of the plans, specifications, Standard Operating Procedure, and maintenance procedure for the fossil fuel utilization facility in which the used oil fuel is to be burned, and
   b. such application was received by the Department by no later than December 31, 1986, and
   c. such application has not been denied by the Department, and
   d. the activity is in compliance with all applicable provisions of 310 CMR 7.00, except that specific approval by the Department to burn used oil fuel in the fossil fuel utilization facility shall not be required while such application is pending, and
   e. the activity is in compliance with all applicable provisions of 310 CMR 30.099(16) and 310 CMR 30.200, including but not limited to the conditions set forth in 310 CMR 30.205, except that a recycling permit shall not be required while the application referred to in 310 CMR 30.099(16) is pending, and

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f. a minimum combustion efficiency of 99.5% is achieved, and

g. the energy input capacity for each individual facility is equal to or greater than 3,000,000 Btu per hour.

(c) No person shall sell or distribute, or offer for sale or distribution, any used oil fuel fired space heater unless the energy input capacity of the space heater is equal to or less than 500,000 Btu per hour.

(d) No person shall cause, suffer, allow, or permit the burning of used oil fuel in any space heater unless:

1. the energy input capacity of the space heater is equal to or less than 500,000 Btu per hour,

2. the combustion gases are vented vertically to the ambient air so as to not cause or contribute to a condition of air pollution,

3. the used oil fired space heater is integrally connected to a tank that supplies the used oil fuel to the space heater,

4. the used oil fired space heater is operated and maintained in accordance with the manufacturers recommended operating and maintenance procedures, and the used oil fired space heater is not operated during the period from June 15th through September 15th,

5. the used oil fuel is burned at the site of generation, or off the site of generation as a supplemental fuel source, which may include used oil fuel generated and transported by a very small quantity generator pursuant to 310 CMR 30.353, or used oil fuel generated by a household as described in 310 CMR 30.104(6);

6. the used oil fuel is hazardous waste only because it is waste oil pursuant to 310 CMR 30.131, and has a flash point of 100°F or higher; and

7. the burning of the used oil fuel in the used oil fuel fired space heater is done in compliance with all other applicable regulations and requirements of the Department, the local fire department and the Office of the Massachusetts State Fire Marshall.

7.05: U Fuels All Districts

(1) Sulfur Content of Fuels. (except natural gas)

(a) Maximum Sulfur Content of Fuel.

1. No person owning, leasing or controlling the operation of a fossil fuel utilization facility shall cause, suffer, allow or permit the burning therein of any liquid fossil fuel having a sulfur content in excess of that listed in 310 CMR 7.05(1)(a)1.: *Table 1* and in accordance with the timelines listed in 310 CMR 7.05(1)(a)1.: *Table 1*, and/or of any solid fossil fuel having a sulfur content in excess of that listed in 310 CMR 7.05(1)(a)1.: *Table 2*, except as provided in 310 CMR 7.05(1)(b).

2. On and after July 1, 2014, no person owning, leasing or controlling the operation of an indirect heat exchanger with an energy input capacity equal to or greater than 250 MMBtu per hour providing steam to a steam-electric generator that produces electrical energy for sale shall cause, suffer, allow or permit the burning therein of any residual fuel oil having a sulfur content in excess of 0.28 pounds per million Btu heat release potential (*i.e.*, 0.5% sulfur content by weight), except as provided in 310 CMR 7.05(1)(b).

3. Stationary Engines and Turbines. On and after July 1, 2007, no person owning, leasing or controlling a stationary engine or turbine subject to the requirements of 310 CMR 7.02(8)(i), 310 CMR 7.03(10), or 310 CMR 7.26(40) through (44) shall accept for delivery for burning any diesel or other fuel unless said fuel complies with the applicable U.S. Environmental Protection Agency sulfur limits for fuel pursuant to 40 CFR 80.29, 40 CFR 80.500, and 40 CFR 80.520(a) and (b) as in effect January 18, 2001.

7.05: continued

310 CMR 7.05(1)(a)1.: *Table 1*: Sulfur Content Limit of Liquid Fossil Fuel				
District/Area	Fuel	Heat Release Potential, lb/MMBtu	Percent by Weight (parts per million, ppm)	Applicability Date
Statewide	Distillate Oil	0.17	0.3% (3,000)	Prior to July 1, 2014
Statewide	Distillate Oil	Not Applicable	0.05% (500)	July 1, 2014 through June 30, 2018
Statewide	Distillate Oil	Not Applicable	0.0015% (15)	on and after July 1, 2018
Berkshire APCD	Residual Oil	1.21	2.2%	June 23, 1975
Cities and Towns of Arlington, Belmont, Boston, Brookline, Cambridge, Chelsea, Everett, Malden, Medford, Newton Somerville, Waltham, and Watertown	Residual Oil	0.28	0.5%	October 1, 1970
Merrimack Valley APCD, (Except City of Lawrence and Towns of Andover, North Andover, and Methuen)	Residual Oil	1.21	2.2% (1.0%)	Prior to July 1, 2014
Merrimack Valley APCD	Residual Oil	0.55	1.0%	July 1, 2014 through June 30, 2018
Remainder of State	Residual Oil	0.55	1.0%	Prior to July 1, 2018
Statewide except Berkshire APCD	Residual Oil	0.28	0.5%	On and after July 1, 2018

7.05: continued

310 CMR 7.05(1)(a)1.: *Table 2*: Sulfur Content Limit of Solid Fossil Fuel			
District/Area	Fuel	Heat Release Potential, lb/MMBtu	Percent by Weight
Berkshire APCD and Merrimack Valley APCD, except City of Lawrence and Towns of Andover, North Andover, and Methuen	Coal	1.21	1.57%
Cities and Towns of Arlington, Belmont, Boston, Brookline, Cambridge, Chelsea, Everett, Malden, Medford, Newton Somerville, Waltham, and Watertown	Coal	0.28	0.36%
Remainder of State, including City of Lawrence and Towns of Andover, North Andover, and Methuen	Coal	0.55	0.72%

(b) Exceptions.

1. Any person with an existing approval issued by the Department that allows the burning of fossil fuel oil with a sulfur content in excess of the limits in 310 CMR 7.05(1)(a)1.: *Table 1* may burn such fuel in compliance with the Department's approval until July 1, 2014. Beginning on July 1, 2014, such person shall comply with the fuel oil sulfur content limits in 310 CMR 7.05(1)(a)1.: *Table 1*, except as provided in 310 CMR 7.05(1)(b)2. or 3.

2. Any person owning, leasing or controlling the operation of a fossil fuel utilization facility may burn any existing stock of fossil fuel oil at the facility, but shall not accept delivery of fuel with a sulfur content in excess of the limits in 310 CMR 7.05(1)(a)1.: *Table 1* on or after the applicable date(s) in 310 CMR 7.05(1)(a)1.: *Table 1*, except as provided in 310 CMR 7.05(1)(b)3.

3. The sulfur content limits in 310 CMR 7.05(1)(a)1.: *Table 1* and *Table 2* shall not apply to a facility whose owner or operator has applied for and received approval from the Department and EPA of a plan whereby use of a fuel with a sulfur content in excess of the limits in 310 CMR 7.05(1)(a)1.: *Table 1* and *Table 2* would cause no greater emissions of sulfur compounds into the ambient air than if the applicable sulfur content fuel in 310 CMR 7.05(1)(a)1.: *Table 1* and *Table 2* were used. The plan must be approved by the Department, in writing, and any conditions attached to the Department's approval must be agreed to by the applicant, in writing.

4. Approval granted under the provisions of 310 CMR 7.05(1)(b)1. or 3. may be revoked by the Department for cause or when in its opinion revocation is necessary to prevent or abate a condition of air pollution.

(2) U Use of Residual Fuel Oil or Hazardous Waste Fuel. No person owning, leasing or controlling an individual fuel utilization emission unit rated by the Department as having an energy input capacity of less than 3,000,000 Btu per hour shall cause, suffer, allow or permit the burning of any residual fuel oil or hazardous waste fuel therein.

7.05: continued

(3) Ash Content of Fuels (Except Natural Gas).

(a) No person shall cause, suffer, allow or permit the burning in the Commonwealth of any solid or solid/liquid mixture fossil fuel containing an ash content in excess of 4% by dry weight, except as provided in 310 CMR 7.05(3)(b) and (c).

(b) In CM, MV, and SM, fossil fuel utilization facilities having an energy input capacity rated by the Department of 250,000,000 or greater Btu per hour, may burn solid or solid/liquid mixture fossil fuel with an ash content in excess of 9% by dry weight, provided that:

1. An application is made to the Department in writing to use such fuel and any information as the Department may require is submitted;
2. The Department determines that the use of such fuel would not cause other applicable air pollution control regulations or ambient air quality standards to be violated; and
3. The use of such fuel has been approved, in writing, by the Department and the conditions of approval have been agreed to by the applicant, in writing. Such conditions of approval may include the installation, operation and maintenance of ambient air monitoring equipment by the applicant, in a manner specified by the Department.

(c) In MB, B and PV, all fossil fuel utilization facilities may burn solid or solid/liquid mixture fossil fuel with an ash content in excess of 9% by dry weight, provided that:

1. An application is made to the Department in writing to use such fuel and any information as the Department may require is submitted;
2. The Department determines that the use of such fuel would not cause other applicable air pollution control regulations or ambient air quality standards to be violated; and
3. The use of such fuel has been approved, in writing, by the Department and the conditions of approval have been agreed to by the applicant, in writing. Such conditions of approval may include the installation, operation and maintenance of ambient air monitoring equipment by the applicant, in a manner specified by the Department.

(4) Fuel Additives. No person owning, leasing or controlling a fuel utilization facility shall cause, suffer, allow or permit the use therein of any fuel additive except in accordance with the manufacturer's recommended specifications.

(5) Fuel Suppliers.

(a) No person shall ship or deliver in intrastate commerce to any person for burning or reshipment for burning, any fuels with a sulfur content in excess of those specified in 310 CMR 7.05(1)(a)1., except that such shipment may be provided when:

1. Use of such fuel has been approved by the Department in writing;
2. Such approval has been verified by the shipper; and
3. Record of such shipment shall be retained for two years and the record shall be made available to the Department for its review and inspection during customary business hours.

(b) Any person supplying in intrastate commerce for burning or for reshipment for burning, fuel oil of a grade No. 2 or greater or coal shall keep and maintain records showing the quantities of the fuels handled and analyses showing the Btu value, sulfur content, nitrogen content (required only for residual fuel oils), viscosity, and ash content of said fuels and make such records available to the Department for its review and inspection during customary business hours.

(c) Any person supplying residual fuel oil in intrastate commerce shall provide certification of the nitrogen content of the oil to its customers as determined by the applicable ASTM method or any other method approved by the Department and EPA.

(d) Shippers and distributors of fossil fuels shall provide evidence, to the satisfaction of customer-users, of the ash content of fuels supplied.

(6) All fuel analyses to be performed by or for distributors, suppliers or users of fuels, for purposes of 310 CMR 7.00, shall be performed in accordance with the applicable ASTM method or any other method approved by the Department and EPA.

(7) No person owning, leasing, or controlling the operation of a fossil fuel utilization facility shall cause, suffer, allow, or permit the burning therein of any quantity, batch, or lot of used oil fuel unless:

7.05: continued

(a) that quantity, batch, or lot of used oil fuel was generated and mixed at the site of said fossil fuel utilization facility by the person owning, leasing, or controlling the operation of said fossil fuel utilization facility in compliance with 310 CMR 30.201, or

(b) both of the following requirements are met:

1. said quantity, batch, or lot of used oil fuel was mixed in compliance with 310 CMR 30.201; and

2. the person owning, leasing, or controlling the operation of the fossil fuel utilization facility complied with 310 CMR 30.250.

(8) Except as provided in 310 CMR 7.05(9), no person owning, leasing, or controlling the operation of a fossil fuel utilization facility shall cause, suffer, allow, or permit the burning therein of any used oil fuel that does not meet the specifications set forth in 310 CMR 7.05(8): *Table 3*.

310 CMR 7.05(8): TABLE 3
STANDARDS FOR USED OIL FUEL

Constituent/Property	Allowable
Sulfur	As allowed pursuant to 310 CMR 7.05(1) for residual fuel oil
Total Halogens	4000 ppm or less
PCBs	Less than 50 ppm*
Higher Heating Value	120,000 or more Btu per gallon
Flash Point	100°F or more
Lead **	Less than 100 ppm
Arsenic **	5 ppm or less
Cadmium **	2 ppm or less
Chromium **	10 ppm or less

* The burning of PCBs in concentrations of 50 or more parts per million is prohibited unless done in compliance with 310 CMR 30.000.

** Does not apply to any facility equipped with air pollution control equipment that the Department determines, in writing: (1) is Best Available Control Technology (BACT) and (2) reduces emissions to a level equal to or less than would be emitted if a used oil fuel meeting the standard set forth in 310 CMR 7.05(8): *Table 3* were to be burned in compliance with 310 CMR 7.00 in a facility without BACT.

(9) 310 CMR 7.05(8) shall not apply to the burning of used oil fuel in a used oil fuel fired space heater provided that the requirements set forth in 310 CMR 7.04(9), 310 CMR 7.05(7)(a), and 310 CMR 30.250 are complied with.

7.06: U Visible Emissions

(1) U Stationary Sources Other than Incinerators.

(a) Smoke. No person shall cause, suffer, allow, or permit the emission of smoke which has a shade, density, or appearance equal to or greater than No. 1 of the Chart for a period, or aggregate period of time in excess of six minutes during any one hour, provided that at no time during the said six minutes shall the shade, density, or appearance be equal to or greater than No. 2 of the Chart.

7.06: continued

(b) Opacity. No person shall cause, suffer, allow or permit the operation of a facility so as to emit contaminant(s), exclusive of uncombined water or smoke subject to 310 CMR 7.06(1)(a) of such opacity which, in the opinion of the Department, could be reasonably controlled through the application of modern technology of control and a good Standard Operating Procedure, and in no case, shall exceed 20% opacity for a period or aggregate period of time in excess of two minutes during any one hour provided that, at no time during the said two minutes shall the opacity exceed 40%.

(c) Exception.

1. Visible Emission Limits. In *lieu* of the requirements of 310 CMR 7.06(1)(a) and 310 CMR 7.06(1)(b), a facility subject to 310 CMR 7.00: *Appendix C - Operating Permits* with boilers rated less than 500 million Btu per hour energy input capacity, may elect to comply with the following:

a. Except as provided in 310 CMR 7.06(1)(c)1.b.; 310 CMR 7.06(1)(c)1.c. and 310 CMR 7.06(1)(c)1.g., visible emissions shall not exceed 15 percent opacity during any six-minute block average.

b. During periods of start-up, shutdown, soot blowing, and other specified operating conditions, visible emissions from any boiler shall not exceed 27% opacity during any six-minute block average except that visible emissions may exceed 27% opacity for up to two six-minute block averages during the calendar quarter.

c. For a boiler equipped with a visible emission monitor with a numeric data reduction system that can printout individual block averages or output individual block averages to an electronic file, the Department will make a determination to approve or deny visible emissions during periods of startup, shutdown, soot blowing and other specified operating conditions to exceed 27% opacity for one-tenth of one percent of the total six-minute block averages during any calendar quarter, or six block averages per boiler per quarter, whichever is greater, provided visible emissions do not exceed 60% opacity during any six-minute block average.

i. At no time can visible emissions exceed 27% opacity for more than two six-minute block averages during a one-hour period and the one-hour block average opacity shall not exceed 27% opacity during the one-hour block period when a six-minute block averages exceeds 27% opacity.

ii. The one-hour average shall be based on a clock hour.

iii. Boilers may be approved to operate in accordance with the visible emission limitations provided by 310 CMR 7.06(1)(c)1.b. and 310 CMR 7.06(1)(c)1.c. during the same calendar quarter.

d. Compliance with visible emission limits shall be based upon a six-minute block average determined either

i. by the procedures set forth in Method 9, (as described in 40 CFR Part 60, Appendix A-4), or

ii. by a visible emission monitor required under a Plan Approval issued by the Department under 310 CMR 7.02, or

iii. at the request of a facility, by a visible emission monitor required under the Operating Permit and specified as such in the Approval of the Plan of Good Operating Practices under 310 CMR 7.06(1)(c).

e. Before a facility may operate in accordance with 310 CMR 7.06(1)(c) the facility must notify the Department in writing of such intention, develop and submit to the Department a plan of good operating practices, and receive notification from the Department that the plan has been approved;

f. Any facility operating pursuant to 310 CMR 7.06(1)(c) shall comply with a good operating practices plan as approved; and

g. When notified in writing at least five business days prior to scheduled shakedown activities, testing, and calibrations for the purpose of improving boiler performance, the Department may allow exemptions to 310 CMR 7.06(1)(c)1.a., 310 CMR 7.06(1)(c)1.b. and 310 CMR 7.06(1)(c)1.c. Such notification shall include a brief description of the activity, and its start time and anticipated end time. The Department may allow a shorter notification period upon request. The Department may deny or limit the frequency of such activities.

7.06: continued

2. Plan of Good Operating Practices. The plan of good operating practices shall, at a minimum:

a. Be developed with recommendations from third party combustion systems experts:

b. Describe how the application of modern technology of control, and practices for operating and maintaining the equipment, will minimize visible emissions;

c. Describe any operating conditions other than startup, shutdown and soot blowing during which the facility proposes to take advantage of the exception in 310 CMR 7.06(1)(c);

d. Propose the duration and frequency of startup, shutdown, soot blowing and any other specified conditions;

e. Document the need for visible emission limitations greater than 15% opacity during startup, shutdown, soot blowing and any other specified operating conditions;

f. Propose visible emission limitations that the facility will comply with during startup, shutdown, soot blowing and other specified operating conditions;

g. Describe all necessary corrective action procedures and include schedules for implementing such procedures; and

h. Propose record keeping and monitoring procedures sufficient to enable the Department to determine that visible emissions comply with the plan.

7.06: continued

3. Department Action.
a. Upon completion of review, the Department shall either approve or disapprove the plan of good operating practices.
b. The terms and conditions of an approved plan shall be incorporated into the facility's Operating Permit.
c. A Department approval shall specify the visible emission limitations for each operating condition, (*i.e.* startup, shutdown, soot blowing and other specified operating conditions approved by the Department); and specify corresponding monitoring, record keeping and reporting requirements, and other conditions necessary to ensure compliance with the visible emission limitations contained in the approval.
d. Modifications to those portions of an approved plan that are not incorporated into the facility's Operating Permit shall be maintained on-site and made available to Department representatives upon request. Modifications to an approved plan shall be submitted to the Department for review with the facility's Operating Permit renewal application. The Department may require modification of an approved plan.

4. Notice of Exceedances. Any facility operating pursuant to a Department approval issued under this exception shall notify the Department of any exceedance of a visible emission limitation in the time and manner required by the relevant permit deviation provisions in the facility's Operating Permit. Opacity excursions greater than 27% that qualify as allowed under 310 CMR 7.06(1)(c)1.b. and 310 CMR 7.06(1)(c)1.c. shall not be considered deviations under the operating permit.

(2) From Incinerators.
(a) No person shall cause, suffer, allow, or permit the emission of smoke from any incinerator which has a shade, density, or appearance equal to or greater than No. 1 of the Chart or exceeding 20% opacity at any time.
(b) No person shall cause, suffer, allow or permit the operation of an incinerator so as to emit contaminant(s), exclusive of uncombined water or smoke subject to 310 CMR 7.06(2)(a) of such opacity which, in the opinion of the Department, could be reasonably controlled through the application of modern technology of control and a good Standard Operating Procedure.
(c) No person shall cause, suffer, allow, or permit emissions from any incinerator of any particles that have a dimension equal to or greater than 100 microns.

(3) From Marine Vessels. Marine vessels shall be subject to the provisions of 310 CMR 7.06(1)(a) and 7.06(1)(b). 310 CMR 7.06(3) shall apply only in the Merrimack Valley Air Pollution Control District, Metropolitan Boston Air Pollution Control District, and the Southeastern Massachusetts Air Pollution Control District.

(4) From Aircraft. After December 31, 1972, no person shall cause, suffer, allow, or permit the emission from an aircraft of smoke which has a shade, density, or appearance equal or greater than No. 2 of the Chart for a period of time in excess of ten seconds during landing, takeoff, or taxiing operations.

(5) From Spark-ignited Internal Combustion Engines.
(a) No person shall cause, suffer, allow, or permit emission of visible air contaminants, other than water, from internal combustion engines of:
1. portable or stationary equipment, other than motor vehicles, for longer than ten consecutive seconds; or
2. a motor vehicle after the vehicle has moved more than 100 feet from a place where the vehicle was stationary; or
3. a motor vehicle, for more than five consecutive seconds, under any condition of cruising or acceleration.

(6) From Non-stationary Source Diesel Engines. No person shall cause, suffer, allow, or permit excessive emission of visible air contaminants, other than water, from a diesel engine.

7.07: U Open Burning

(1) No person shall cause, suffer, allow or permit the open burning of any combustible material.

7.07: continued

(2) 310 CMR 7.07(1) shall not apply to:

(a) open burning for the purpose of combating or backfiring an existing fire by persons affiliated with an official fire fighting agency;

(b) open burning conducted primarily for cooking purposes, or

(c) open burning related to the operation of devices such as blowtorches and welding torches, for which no alternative source of heat can be used, provided that such devices do not cause a condition of air pollution.

(3) Except during periods of adverse meteorological conditions as may be determined by the Department when direct or public notice thereof has been made by the Department through the news media, 310 CMR 7.07(1) shall not apply to open burning conducted for:

(a) training or research in fire protection or prevention with specific approval by the Department;

(b) activities associated with the normal pursuit of agriculture which have been determined by the Department as necessary and which include but are not limited to, open burning of blueberry patches for pruning purposes, dead raspberry stalks, fruit tree prunings, and infected beehives for disease control;

(c) open burning of brush and trees resulting from agricultural land clearing operations;

7.07: continued

(d) the disposal of fungus-infected elm wood provided that no suitable alternative method of disposal is available;

(e) the disposal of brush, cane, driftwood, and forestry debris excluding grass, hay, leaves, and stumps from January 15th to May 1st of each year. All such open burning shall be conducted:

1. on land proximate to the place of generation,
2. at a location greater than 75 feet from any dwelling, and
3. between ten o'clock A.M. and four o'clock P.M.

No such open burning shall apply to commercial or institutional land clearing for non-agricultural purposes.

Open burning under 310 CMR 7.07(3)(e) shall not be permitted in the Cities and Towns of Arlington, Belmont, Boston, Brookline, Cambridge, Chelsea, Chicopee, Everett, Fall River, Holyoke, Lawrence, Lowell, Malden, Medford, New Bedford, Newton, Somerville, Springfield, Waltham, Watertown, West Springfield, and Worcester, or where the Department has notified a city or town that:

1. open burning under this provision may cause or contribute to non-attainment of federal or state ambient air quality standards for particulate matter,
2. open burning under this provision may cause or contribute to a condition of air pollution, or
3. open burning under this provision is not permitted due to continued violations of the provisions for the proper conduct of such open burning. (Such action shall be taken only after said city or town has been given written notification of such violations and has in the opinion of the Department failed to take appropriate actions to prevent the continuance of such violations.)

Upon request of the Department the permitting authority of any City or Town shall notify the Department of the number of permits issued during any burning period.

(f) the disposal of combustible material with the approval of the Department and after demonstration to the satisfaction of the Department that no alternative suitable method of disposal is available;

(g) open burning as described in 310 CMR 7.07(3)(a) through 310 CMR 7.07(3)(f) must be conducted:

1. during periods of good atmospheric ventilation,
2. without causing a nuisance,
3. with smoke minimizing starters if starters or starting aids are used, and
4. under the provisions of a properly executed permit issued under the provisions of M.G.L. c. 48, § 13*

(4) Except as may be incidental to compliance with the provisions contained in 310 CMR 7.07(2) and 310 CMR 7.07(3) no person shall stack, place, or store combustible material in such manner as to cause or allow presumption by the Department that such material may be subject to reduction by open burning.

(5) Notwithstanding the provisions of 310 CMR 7.07(3), no person shall cause, suffer, allow or permit open burning at any refuse disposal facility other than an incinerator as described in M.G.L. c. 111, § 150A.

(6) 310 CMR 7.07(1) through 7.07(5) are subject to the enforcement provisions specified in 310 CMR 7.52.

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* M.G.L. c. 48, § 13 provides in part:

1. such permits may not be granted for more than two days from the date of issue, and
2. a written record must be maintained for each permit including the date of permit issuance, name and address of the person receiving the permit including the location and type of materials to be burned, and
3. such records must be available for public inspection.

7.08: U Incinerators

(1) General.

(a) No person shall cause, suffer, allow, or permit the construction or substantial reconstruction or alteration of any incinerator for which:

1. the design for construction or substantial reconstruction or alteration thereof, and
2. the Standard Operating Procedure have not been approved by the Department in writing.

(b) No person shall sell or distribute for sale any special incinerator or modular incinerator, for installation or use within the District, the design and Standard Operating Procedure for which have not been approved in writing by the Department or certification of said approval has not been given by the person selling or distributing the incinerator to the person to whom the sale or distribution is made.

(c) No person shall cause, suffer, allow, or permit the burning of refuse or any other material in any incinerator in a manner that is not in conformance with a Standard Operating Procedure (for the incinerator) that has been approved by the Department in writing.

(d) No person shall cause, suffer, allow, or permit the burning of refuse or any other material in any incinerator, other than a municipal incinerator, which is of a design that has not been approved by the Department in writing.

(e) No person shall cause, suffer, allow, or permit the burning of refuse or any other material in an incinerator at a specific site location that, in the opinion of the Department, is likely to cause or contribute to a condition of air pollution and when the person responsible for the operation of the incinerator has been notified of said opinion.

(f) 310 CMR 7.08(1)(c) and 7.08(1)(d) are subject to the enforcement provisions specified in 310 CMR 7.52, insofar as they pertain to domestic incinerators.

(g) No person shall cause, suffer, allow, or permit emissions from any incinerator of any particles that have a dimension greater than 100 microns. (Be referred to 310 CMR 7.06(2).)

(h) The approval, referred to in 310 CMR 7.08(1)(a) through (d), shall be obtained pursuant to 310 CMR 7.02(3) and 7.02(5).

(2) Municipal Waste Combustors.

(a) Site Assignment. No person shall, allow, or permit the construction, substantial reconstruction, alteration or operation of a municipal waste combustor unit on a site which has not received a site assignment in accordance with M.G.L. c. 111, § 150A.

(b) Purpose. The purpose of 310 CMR 7.08(2) is to provide emission limitations and compliance schedules for the control of certain designated pollutants from Municipal Waste Combustors in accordance with sections 111(d) and 129 of the Clean Air Act.

(c) Definitions. The definitions found in 310 CMR 7.00 apply to 310 CMR 7.08(2) unless otherwise defined in 310 CMR 7.08(2). The following words and phrases shall have the following meanings as they appear in 310 CMR 7.08(2).

CALENDAR QUARTER means any consecutive three-month period (nonoverlapping) beginning on January 1st, April 1st, July 1st or October 1st.

CALENDAR YEAR means any period starting January 1st and ending on December 31st.

CHIEF FACILITY OPERATOR means the person in direct charge and control of the operation of a municipal waste combustor and who is responsible for daily on-site supervision, technical direction, management, and overall performance of the facility.

CLEAN WOOD means untreated wood or untreated wood products including clean untreated lumber, tree stumps (whole or chipped), and tree limbs (whole or chipped). Clean wood does not include yard waste, or construction, renovation, and demolition wastes (including, but not limited to, railroad ties and telephone poles).

CONTINUOUS BURNING means the continuous, semicontinuous, or batch feeding of municipal solid waste for purposes of waste disposal, energy production, or providing heat to the combustion system in preparation for waste disposal or energy production. The use of municipal solid waste solely to provide thermal protection of the grate or hearth during a startup period, when municipal solid waste is not being fed to the grate, is not considered to be continuous burning.

CONTINUOUS EMISSION MONITORING SYSTEM means a monitoring system for continuously measuring the emissions of a pollutant from a municipal waste combustor unit.

7.08: continued

DIOXIN/FURAN means tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans.

dscm means dry standard cubic meter.

FIRST CALENDAR HALF means the period starting on January 1st and ending on June 30th in any year.

FOUR-HOUR BLOCK AVERAGE or 4-HOUR BLOCK AVERAGE means the average of all hourly emission concentrations when the affected facility is operating and combusting municipal solid waste, measured over a four-hour period of time from 12:00 A.M. to 4:00 A.M., 4:00 A.M. to 8:00 A.M., 8:00 A.M. to 12:00 P.M., 12:00 P.M. to 4:00 P.M., 4:00 P.M. to 8:00 P.M., or 8:00 P.M. to 12:00 A.M.

LARGE MUNICIPAL WASTE COMBUSTOR UNIT means a municipal waste combustor unit with a capacity greater than 250 tons/day of municipal solid waste.

MASS BURN REFRACTORY MUNICIPAL WASTE COMBUSTOR means a field-erected combustor that combusts municipal solid waste in a refractory wall furnace. Unless otherwise specified, this includes combustors with a cylindrical rotary refractory wall furnace.

MASS BURN WATERWALL MUNICIPAL WASTE COMBUSTOR means a field-erected combustor that combusts municipal solid waste in a waterwall furnace.

MATERIALS SEPARATION PLAN means a plan that identifies a program within a given service area, to separate mercury, other toxic components or toxic precursors from municipal solid waste prior to combustion in order to make the separated materials available for recycling and/or remove the toxic components or their toxic precursors for proper management. A materials separation plan shall include goals and timetables for attaining the goals. It may include, but is not limited to, such elements as: centralized drop-off facilities, buy-back or deposit-return incentives, curbside collection programs, financial incentives to municipalities in the service area for collection programs, technical assistance programs for municipalities, institutions and/or businesses within the service area, and personnel to support any such programs.

MAXIMUM DEMONSTRATED MUNICIPAL WASTE COMBUSTOR UNIT LOAD means the highest 4-hour arithmetic average municipal waste combustor unit load achieved during four consecutive hours during the most recent dioxin/furan stack test demonstrating compliance with the applicable limit for municipal waste combustor organics specified under 310 CMR 7.08(2)(f)(2): *Table 2*.

MAXIMUM DEMONSTRATED PARTICULATE MATTER CONTROL DEVICE TEMPERATURE means the highest four-hour arithmetic average flue gas temperature measured at the particulate matter control device inlet during four consecutive hours during the most recent dioxin/furan stack test demonstrating compliance with the applicable limit for municipal waste combustor organics specified under 310 CMR 7.08(2)(f)(2): *Table 2*.

MODIFICATION or MODIFIED MUNICIPAL WASTE COMBUSTOR UNIT means a municipal waste combustor unit to which changes have been made if the cumulative cost of the changes, over the life of the unit, exceed 50% of the original cost of construction and installation of the unit (not including the cost of any land purchased in connection with such construction or installation) updated to current costs; or any physical change in the municipal waste combustor unit or change in the method of operation of the municipal waste combustor unit which increases the amount of any air pollutant emitted by the unit for which standards have been established under the Clean Air Act, § 129 or § 11. Whether there is an increase in the amount of any air pollutant emitted by the municipal waste combustor unit shall be determined at 100% physical load capability and downstream of all air pollution control devices, with no consideration given for load restrictions based on permits or other nonphysical operational restrictions.

7.08: continued

MUNICIPAL SOLID WASTE or MUNICIPAL TYPE SOLID WASTE means household, commercial/retail, and/or institutional waste. Household waste includes material discarded by single and multiple residential dwellings, hotels, motels, and other similar permanent or temporary housing establishments or facilities. Commercial/retail waste includes material discarded by stores, offices, restaurants, warehouses, nonmanufacturing activities at industrial facilities, and other similar establishments or facilities. Institutional waste includes material discarded by schools, nonmedical waste discarded by hospitals, material discarded by nonmanufacturing activities at prisons and government facilities, and material discarded by other similar establishments or facilities. Household, commercial/retail, and institutional waste does not include used oil; sewage sludge; wood pallets; construction, renovation, and demolition waste (which includes, but is not limited to, railroad ties and telephone poles); clean wood; industrial process or manufacturing waste; medical waste; or motor vehicles (including motor vehicle parts or vehicle fluff). Household, commercial/retail, and institutional waste includes:

(a) yard waste; and

(b) refuse-derived fuel.

MUNICIPAL WASTE COMBUSTOR or MUNICIPAL WASTE COMBUSTOR UNIT OR UNIT means any setting or equipment that combusts solid, liquid, or gasified municipal solid waste including, but not limited to, field-erected incinerators (with or without heat recovery), modular incinerators (starved-air or excess-air), boilers (*i.e.*, steam generating units), furnaces (whether suspension-fired, grate-fired, mass-fired, air curtain incinerators, or fluidized bed-fired), and pyrolysis/combustion units. Municipal waste combustors units do not include pyrolysis/combustion units located at a plastics/rubber recycling unit as specified in 310 CMR 7.08(2). Municipal waste combustors do not include internal combustion engines, gas turbines, or other combustion devices that combust landfill gases collected by landfill gas collection systems.

The boundaries of a municipal solid waste combustor are defined as follows. The municipal waste combustor unit includes, but is not limited to, the municipal solid waste fuel feed system, grate system, flue gas system, bottom ash system, and the combustor water system. The municipal waste combustor boundary starts at the municipal solid waste pit or hopper and extends through:

(a) The combustor flue gas system, which ends immediately following the heat recovery equipment or, if there is no heat recovery equipment, immediately following the combustion chamber;

(b) The combustor bottom ash system, which ends at the truck loading station or similar ash handling equipment that transfers the ash to final disposal, including all ash handling systems that are connected to the bottom ash handling system; and

(c) The combustor water system, which starts at the feed water pump and ends at the piping exiting the steam drum or superheater. The municipal waste combustor unit does not include air pollution control equipment, the stack, water treatment equipment, or the turbine generator set.

MUNICIPAL WASTE COMBUSTOR ACID GASES means all acid gases emitted in the exhaust gases from municipal waste combustor units including, but not limited to, sulfur dioxide and hydrogen chloride gases.

MUNICIPAL WASTE COMBUSTOR METALS means metals and metal compounds emitted in the exhaust gases from municipal waste combustor units.

MUNICIPAL WASTE COMBUSTOR ORGANICS means organic compounds emitted in the exhaust gases from municipal waste combustor units and includes tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans.

MUNICIPAL WASTE COMBUSTOR PLANT means one or more municipal waste combustor units at the same facility for which construction was commenced on or before September 20, 1994.

7.08: continued

MUNICIPAL WASTE COMBUSTOR UNIT CAPACITY means the maximum charging rate of a municipal waste combustor unit expressed in tons per day of municipal solid waste combusted, calculated according to the procedures under 40 CFR 60.58b(j) as last amended May 10, 2006. 40 CFR 60.58b(j) includes procedures for determining municipal waste combustor unit capacity for continuous and batch feed municipal waste combustors.

MUNICIPAL WASTE COMBUSTOR UNIT LOAD means the steam load of the municipal waste combustor unit measured as specified in 40 CFR 60.58b(i)(6) as last amended May 10, 2006.

PARTICULATE MATTER means total particulate matter emitted from municipal waste combustor units measured as specified in 40 CFR, Part 60: *Appendix A, Reference Method 5.*

PLASTICS/RUBBER RECYCLING UNIT means an integrated processing unit where plastics, rubber, and/or rubber tires are the only feed materials (incidental contaminants may be included in the feed materials) and they are processed into a chemical plant feedstock or petroleum refinery feedstock, where the feedstock is marketed to and used by a chemical plant or petroleum refinery as input feedstock. The combined weight of the chemical plant feedstock and petroleum refinery feedstock produced by the plastics/rubber recycling unit on a calendar quarter basis shall be more than 70% of the combined weight of the plastics, rubber, and rubber tires processed by the plastics/rubber recycling unit on a calendar quarter basis. The plastics, rubber, and/or rubber tire feed materials to the plastics/rubber recycling unit may originate from the separation or diversion of plastics, rubber, or rubber tires from MSW or industrial solid waste, and may include manufacturing scraps trimmings, and off-specification plastics, rubber, and rubber tire discards. The plastics, rubber, and rubber tire feed materials to the plastics/rubber recycling unit may contain incidental contaminants (*e.g.*, paper labels on plastic bottles, metal rings on plastic bottle caps, *etc.*)

POTENTIAL HYDROGEN CHLORIDE EMISSION CONCENTRATION means the hydrogen chloride emission concentration that would occur from combustion of municipal solid waste in the absence of any emission controls for municipal waste combustor acid gases.

POTENTIAL MERCURY EMISSION CONCENTRATION means the mercury emission concentration that would occur from combustion of municipal solid waste in the absence of any mercury emissions control.

POTENTIAL SULFUR DIOXIDE EMISSIONS means the sulfur dioxide emission concentration that would occur from combustion of municipal solid waste in the absence of any emission controls for municipal waste combustor acid gases.

RECONSTRUCTION means rebuilding a municipal waste combustor unit for which the reconstruction commenced after June 19, 1996, and the cumulative costs of the construction over the life of the unit exceed 50% of the original cost of construction and installation of the unit (not including any cost of land purchased in connection with such construction or installation) updated to current costs (current dollars).

REFRACTORY UNIT OR REFRACTORY WALL FURNACE means a combustion unit having no energy recovery (*e.g.*, *via* a waterwall) in the furnace (*i.e.*, radiant heat transfer section) of the combustor.

REFUSE-DERIVED FUEL means a type of municipal solid waste produced by processing municipal solid waste through shredding and size classification. This includes all classes of refuse-derived fuel including, but not limited to, low-density fluff refuse-derived fuel, densified refuse-derived fuel and pelletized refuse-derived fuel.

REFUSE-DERIVED FUEL STOKER means a steam generating unit that combusts refuse-derived fuel in a semisuspension firing mode using air-fed distributors.

SECOND CALENDAR HALF means the period starting July 1st and ending on December 31st in any year.

7.08: continued

SHIFT SUPERVISOR means the person who is in direct charge and control of the operation of a municipal waste combustor and who is responsible for onsite supervision, technical direction, management, and overall performance of the facility during an assigned shift.

SMALL MUNICIPAL WASTE COMBUSTOR UNIT means a municipal waste combustor unit with a municipal waste combustor unit capacity greater than 39 tons per day but equal to or less than 250 tons per day of municipal solid waste.

STANDARD CONDITIONS means a temperature of 20°C and a pressure of 101.3 kilopascals.

TOTAL MASS DIOXIN/FURAN OR TOTAL MASS means the total mass of tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans, as determined using 40 CFR, Part 60: *Appendix A, Reference Method 23*.

TWENTY FOUR-HOUR DAILY AVERAGE OR 24-HOUR DAILY AVERAGE means either the arithmetic mean or geometric mean (as specified) of all hourly emission concentrations when the affected unit is operating and combusting municipal solid waste measured over a 24-hour period between 12:00 A.M. and the 12:00 A.M.

UNTREATED LUMBER means wood or wood products that have been cut or shaped and include wet, air-dried, and kiln-dried wood products. Untreated lumber does not include wood products that have been painted, pigment-stained, or "pressure-treated". Pressure treating compounds include, but are not limited to, chromate copper arsenate, pentachlorophenol, and creosote.

WATERWALL FURNACE means a combustion unit having energy (heat) recovery in the furnace (*i.e.*, radiant heat transfer section) of the combustor.

YARD WASTE means grass, grass clippings, bushes, and shrubs that are generated by residential, commercial/retail, institutional, and/or industrial sources as part of maintenance activities associated with yards or other private or public lands. Yard waste does not include construction, renovation, and demolition wastes. Yard waste does not include clean wood.

(d) Designated Pollutants and Operating Practices. 310 CMR 7.08(2) establishes requirements for the following municipal waste combustor operating practices, pollutants, opacity and fugitive ash:

1. Operating Practices (Carbon Monoxide (CO), Flue Gas Temp., Load Level)
2. Metals (Mercury (Hg), Lead (Pb), Cadmium (Cd))
3. Particulate Matter (PM)
4. Opacity
5. Organics (Dioxin/Furan)
6. Acid Gases (Sulfur Dioxide (SO_2), Hydrogen Chloride (HCl))
7. Nitrogen Oxides (NO_x)
8. Fugitive Ash Emissions

(e) Applicability.

1. Large Municipal Waste Combustor Units. 310 CMR 7.08(2) applies in its entirety to any person who owns, leases, operates or controls a large municipal waste combustor unit. Applicable requirements and limitations contained in 310 CMR 7.08(2) shall not supersede, relax or eliminate any more stringent conditions or requirements (*e.g.*, emission limitation(s), testing, recordkeeping, reporting, or monitoring requirements) established by regulation or contained in a facility's previously issued source specific plan approval(s) or emission control plan(s).

2. Other Approvals or Permits - A plan approval under 310 CMR 7.02(2) is not required in order to implement the requirements for 310 CMR 7.08(2) unless construction, substantial reconstruction or alterations are planned at the facility which are not required under the requirements at 310 CMR 7.08(2). If the facility has a final operating permit pursuant to 310 CMR 7:00: *Appendix C*, the operating permit will be modified upon approval of the emission control plan, in accordance with the procedures in 310 CMR 7.00: *Appendix C*(8). No additional application or fee is necessary to modify the operating permit at the same time the emission control plan is approved. If the facility does not have a final operating permit, the facility must amend its operating permit application to include the approved emission control plan.

7.08: continued

(f) Applicable Requirements.

1. Operating Practices.

a. No person subject to 310 CMR 7.08(2) shall:

i. cause, suffer, allow or permit the discharge into the atmosphere from a municipal waste combustor unit any gases that contain carbon monoxide in excess of the emission limits specified in 310 CMR 7.08(2)(f)2.: *Table 1*;

ii. cause, suffer, allow or permit a municipal waste combustor unit to operate at a load level greater than 110% of the maximum demonstrated municipal waste combustor unit load calculated in four-hour block arithmetic averages, measured during the most recent dioxin/furan compliance test in which compliance is achieved; and

iii. cause, suffer, allow or permit a municipal waste combustor unit to operate at a temperature, measured at the particulate matter control device inlet, exceeding 17°C (30°F) above the maximum demonstrated particulate matter control device temperature, calculated in four-hour block arithmetic averages, measured during the most recent dioxin/furan compliance test in which compliance is achieved.

b. During any nine-month dioxin/furan compliance test, quarterly mercury compliance test, or nine-month mercury compliance test, and the two weeks preceding each nine-month dioxin/furan compliance test, quarterly mercury compliance test, or nine-month mercury compliance test, municipal waste combustor unit load limit, average mass carbon feed rate limit and particulate matter control device temperature limitations are not applicable.

c. The requirements of 310 CMR 7.08(2)(f)1.a.ii. and iii. may be waived, if prior approval is granted by the Department, for the purposes of evaluating system performance, testing new technology or control technologies, diagnostic testing, or related activities for the purpose of improving facility performance provided that there is an improvement in controlling air pollution, or advancing the state-of-the-art technology for controlling facility emissions.

2. Metals, Organics and Acid Gases. No person subject to 310 CMR 7.08(2) shall cause, suffer, allow or permit the discharge into the atmosphere from a municipal waste combustor unit any gases that contain metals, opacity, organics, particulate matter or acid gases in excess of the emission limits specified in 310 CMR 7.08(2)(f)2.: *Table 2*.

TABLE 1. MUNICIPAL WASTE COMBUSTOR OPERATING PRACTICES

Municipal Waste Combustor Technology	Carbon Monoxide Emissions Level (parts per million by volume)[a]	Averaging Time[b]
Mass Burn Waterwall	100	four-hour
Refuse-derived Fuel Stoker	200	24-hour

[a] Measured at the combustor outlet in conjunction with a measurement of oxygen concentration, corrected to 7% oxygen, dry basis. Calculated as an arithmetic average.

[b] Averaging times are four-hour block or 24-hour daily arithmetic averages.

7.08: continued

TABLE 2. EMISSION LIMITS FOR MUNICIPAL WASTE COMBUSTOR UNITS

	Emission Limits For Large MWC Units[a]
Particulate Matter (PM)	25 mg/dscm
Opacity	10% (six-minute average)
METALS:	
Cadmium (Cd)	0.035 mg/dscm
Lead (Pb)	0.400 mg/dscm
Mercury (Hg)	0.028 mg/dscm - average of compliance tests conducted in any rolling 12-month period 0.050 mg/dscm - average of test runs in any quarterly or 9-month compliance test
ACID GASES:	
Sulfur Dioxide (SO_2)	29 ppmv or 75% reduction by weight or volume, whichever is less stringent. Compliance is based on a 24-hour geometric mean.
Hydrogen Chloride (HCl)	29 ppmv or 95% reduction by weight or volume, whichever is less stringent.
ORGANICS: (Total Mass)	
Dioxin/Furan with Electrostatic precipitator (ESP)	35 ng/dscm
Dioxin/Furan with Fabric Filter (FF)	30 ng/dscm

[a] Corrected to 7% oxygen (dry basis).

3. Nitrogen Oxides. No person subject to 310 CMR 7.08(2) shall cause, suffer, allow or permit the discharge into the atmosphere from a municipal waste combustor unit any gases that contain nitrogen oxides in excess of the emission limits specified in 310 CMR 7.08(2)(f)3.: *Table 3*. Emission Reduction Credits (ERCs) generated under 310 CMR *7.00: Appendix B*(3) may be used to comply with the requirements contained in Table 3.

TABLE 3. NITROGEN OXIDES EMISSION LIMITS FOR LARGE MUNICIPAL WASTE COMBUSTOR UNITS

Municipal Waste Combustor Technology	NO_x Emission Limit (Parts per million by volume)[b]		Averaging Time[b]
	Until one year after issuance of ECP approval under 310 CMR 7.08(2)(j))1., but no later than March 9, 2020	Beginning one year after issuance of ECP approval under 310 CMR 7.08(2)(j)1., but no later than March 10, 2020	
Mass Burn Waterwall	205	150	24-hour
Refuse-derived Fuel Stoker	250	146	24-hour

[a] Corrected to 7% oxygen, dry basis.

[b] Averaging times are 24-hour daily arithmetic averages.

7.08: continued

4. Nitrogen Oxides Emission Averaging Plan. A person subject to 310 CMR 7.08(2) may elect to implement a nitrogen oxides emissions averaging plan for the units located at the same municipal waste combustor plant. Municipal waste combustor units subject to 40 CFR, Part 60, Subpart Ea or Eb shall not be included in the emissions averaging plan. The units included in the nitrogen oxides emissions averaging plan must be identified in the annual report specified in 310 CMR 7.08(2)(i), prior to implementing the averaging plan. The units at the plant included in the averaging plan may be redesignated each calendar year.

a. To implement an emissions averaging plan, the average daily (24-hour) nitrogen oxides emission concentration level for gases discharged from units included in the emissions averaging plan shall not exceed the limits specified in Table 4.

TABLE 4. NITROGEN OXIDES EMISSION LIMITS FOR UNITS INCLUDED IN AN EMISSIONS AVERAGING PLAN

Municipal Waste Combustor Technology	NO_x Emission Limit (Parts per million by volume)[a]	Averaging Time[b]
Mass Burn Waterwall	150	24-hour
Refuse-derived Fuel Stoker	146	24-hour

[a] Corrected to 7% oxygen, dry basis.
[b] Averaging times are 24-hour daily arithmetic averages.

b. Under an emissions averaging plan, the average daily nitrogen oxides emission limits specified in Table 4 shall be calculated using equation (1). Units that are offline shall not be included in calculating the average daily nitrogen oxides emission level.

$$No_{x24\text{-}hr} = \frac{\sum_{I=1}^{h} (NO_{xi})(S_i)}{\sum_{I=1}^{h} (S_i)} \qquad (1)$$

where:

$No_{x_{24\text{-}hr}}$ = 24-hour daily average nitrogen oxides emission concentration level for the emissions averaging plan (ppmv, corrected to 7% oxygen).

No_{xi} = 24-hour daily average nitrogen oxides emission concentration level for unit i (ppmv, corrected to 7% oxygen).

S_i = maximum demonstrated municipal waste combustor unit load for unit i (pounds per hour steam or feedwater flow as determined in the most recent dioxin/furan performance test).

h = total number of units included in the daily emissions average.

c. For any day in which any unit included in an emissions averaging plan is offline, the owner or operator of the municipal waste combustor plant must still demonstrate compliance with the applicable limits specified in Table 4 according to either 310 CMR 7.08(2)(f)4.d., or 310 CMR 7.08(2)(f)4.e., f. and g.

d. Compliance with the applicable limits specified in Table 4 shall be demonstrated using the averaging procedure specified in 310 CMR 7.08(2)(f)4.b.

7.08: continued

5. Ammonia. No later than the dates specified in the emission control plan approval issued by the Department under 310 CMR 7.08(2)(j), any person subject to 310 CMR 7.08(2) utilizing ammonia or urea for NO_x control shall:

a. conduct ammonia optimization testing;

b. submit a report to the Department correlating NOx emissions and ammonia slip;

c. propose an ammonia emissions limit that the Department will review and may modify before incorporating in the unit's approval, pursuant to the procedures in 310 CMR 7.08(2)(j)7.; and

d. if using an ammonia continuous emission monitoring system to demonstrate compliance, obtain, at a minimum, valid hourly averages based on at least two data points per hour, for at least 90% of the operating hours per calendar quarter and 95% of the operating hours per calendar year that the affected facility is combusting municipal solid waste.

6. Fugitive Ash. No person subject to 310 CMR 7.08(2) shall cause, suffer, allow or permit the discharge into the atmosphere of any visible emissions of combustion ash from an ash conveying system (including transfer points) in excess of 5% of the observation period (nine minutes per three-hour period). This emission limit does not cover visible emissions discharged inside buildings or enclosures of ash conveying systems; however the emission limit does apply to visible emissions discharged to the atmosphere from buildings or enclosures of ash conveying systems. 310 CMR 7.08(2)(f)6. does not apply during maintenance and repair of ash conveying systems. Maintenance and repair of the ash conveying systems must be done in accordance with best management practices.

7. Operator Training and Certification. Any person subject to 310 CMR 7.08(2) shall implement the following municipal waste combustor operator training and certification requirements.

a. shall have each chief facility operator and shift supervisor obtain and maintain an Operator Certificate issued by the American Society of Mechanical Engineers (ASME).

b. shall not allow the municipal waste combustor unit to be operated at any time unless one of the following persons is on duty: A chief facility operator or a shift supervisor who has obtained an Operator Certificate. (A Provisional Certificate is acceptable provided the shift supervisor is scheduled to obtain an Operator Certificate in accordance with 310 CMR 7.08(2)(f). A provisionally certified operator who is newly promoted or recently transferred to a shift supervisor position or a chief facility operator position at the municipal waste combustion unit may perform the duties of the certified chief facility operator or certified shift supervisor without notice to, or approval by, the Department for up to six months before taking the ASME QRO certification exam.) If one of the persons listed above must leave the municipal waste combustor plant during his or her operating shift, a provisionally certified control room operator who is onsite at the municipal waste combustor plant may fulfill these requirements. Depending on the length of time that a certified chief facility operator and certified shift supervisor are away, the owner or operator of the affected facility must meet the following criteria:

i. When the certified chief facility operator and certified shift supervisor are both off site for 12 hours or less, and no other certified operator is on site, the provisionally certified control room operator may perform the duties of the certified chief facility operator or certified shift supervisor.

ii. When the certified chief facility operator and certified shift supervisor are off site for more than 12 hours, but for two weeks or less, and no other certified operator is on site, the provisionally certified control room operator may perform the duties of the certified chief facility operator or certified shift supervisor without notice to, or approval by, the Department. However, the owner or operator of the affected facility must record the period when the certified chief facility operator and certified shift supervisor are off-site and include that information in the annual report as specified under 310 CMR 7.08(2)(i)1.h.

7.08: continued

iii. When the certified chief facility operator and certified shift supervisor are off site for more than two weeks, and no other certified operator is on site, the provisionally certified control room operator may perform the duties of the certified chief facility operator or certified shift supervisor without approval by the Department. However, the owner or operator of the affected facility shall notify the Department in writing no later than three working days after the two week period. This initial notification shall state the cause of the absence and the actions that are being taken by the owner or operator of the facility to ensure that a certified chief facility operator or certified shift supervisor is on site as expeditiously as practicable.

iv. When the certified chief facility operator and certified shift supervisor are off site for more than two weeks, and no other certified operator is on site, the owner or operator of the affected facility shall submit a status report and corrective action summary to the Department every four weeks, beginning four weeks following the initial notification, demonstrating that a good faith effort is being made to ensure that a certified chief facility operator or certified control room shift supervisor is on site. If the Department provides notice that the status report or corrective action summary is disapproved, the municipal waste combustion unit may continue operation for 90 days, but then must cease operation. If corrective actions are taken in the 90-day period such that the Department withdraws the disapproval, municipal waste combustion unit operation may continue.

c. shall have all chief facility operators, shift supervisors, and control room operators who have not obtained an Operator Certificate from ASME complete the National Technical Information Service - "EPA Municipal Waste Combustor Operating Course."

d. shall establish a training program to review the operating manual with each person who has responsibilities affecting the operation of an affected municipal waste combustor unit including, but not limited to, chief facility operators, shift supervisors, control room operators, ash handlers, maintenance personnel, and crane/load handlers. The operating manual shall address at a minimum the following:

i. A summary of all the applicable requirements in 310 CMR 7.08(2);

ii. Basic combustion theory applicable to a municipal waste combustor unit;

iii. Procedures for receiving, handling, and feeding municipal solid waste;

iv. Municipal waste combustor unit startup, shutdown, and malfunction procedures;

v. Procedures for maintaining proper combustion air supply levels;

vi. Procedures for operating the municipal waste combustor unit within the requirements established under 310 CMR 7.08(2);

vii. Procedures for responding to periodic upset or off-specification conditions;

viii. Procedures for minimizing particulate matter carryover;

ix. Procedures for handling ash;

x. Procedures for monitoring municipal waste combustor unit emissions; and

xi. Reporting and recordkeeping procedures.

e. shall make available to the Department for inspection upon request all the operating manual and records of training.

f. shall be in compliance with all training and certification requirements specified in 310 CMR 7.08(2)(f)7. by six months after the date of start up or August 21, 1999. whichever is later.

8. Materials Separation Plan.

a. within six months from the date that a Material Separation Plan Guidance Document ("guidance document") is provided by the Department, any person subject to 310 CMR 7.08(2) shall submit a materials separation plan for the removal of mercury-bearing products or other specific toxic components or toxic precursors as designated by the Department pursuant to 310 CMR 7.08(2)(f)8.e. The material separation plan shall be developed in accordance with the guidance document and shall detail the minimum requirements for compliance with the materials separation plan.

7.08: continued

b. Upon Department draft approval of the materials separation plan, the Department shall publish a notice of public comment in accordance with M.G.L. c. 30A detailing the proposed materials separation plan. The Department shall allow for a 30-day public comment period following the published notice. The Department will approve or deny the materials separation plan after the close of the public comment period. Following Department approval of the materials separation plan, the person subject to 310 CMR 7.08(2) must implement the materials separation plan.

c. Prior to the implementation of the materials separation plan, the person subject to 310 CMR 7.08(2) shall determine the uncontrolled mercury concentration in the flue gas for four consecutive quarters. The Department may require subsequent testing.

d. One year following the date of implementation of the materials separation plan and every year after, the person subject to 310 CMR 7.08(2) shall submit a progress report to the Department documenting the effective implementation of the materials separation plan. The Department may require modifications to the materials separation plan if necessary.

e. The Department may require that material separation plans address other specific toxic components or toxic precursors, provided that the Department first conducts a formal rulemaking pursuant to M.G.L. c. 30A to require persons subject to 310 CMR 7.08(2) to add such other toxic component or precursor to the material separation plan.

(g) Compliance and Performance Testing. Any person subject to 310 CMR 7.08(2) shall comply with the provisions of 40 CFR 60.58b: *Compliance and Performance Testing*, as last amended May 10, 2006, the provisions of which are hereby incorporated by reference. Compliance with the applicable requirements as set forth in 310 CMR 7.08(2)(f) shall be determined in accordance with 40 CFR 60.58b, except as provided under 310 CMR 7.08(2)(g)1., 2., 3., 5. and 6. The initial performance test must be completed within 180 days after the final compliance date.

1. Dioxin/Furan. Following the date of the initial performance test for dioxin/furans, any person subject to 310 CMR 7.08(2) shall conduct compliance tests for dioxin/furan emissions according to one of the schedules specified in 310 CMR 7.08(2)(g)1.a. through e.:

a. Following the date of the initial performance test, compliance testing for dioxin/furan emissions shall be conducted on all municipal waste combustor unit(s) on a nine-month basis; or

b. For municipal waste combustor unit(s) where all compliance tests for all unit(s) over a 27 month period indicate that dioxin/furan emissions are less than or equal to seven nanograms per dry standard cubic meter total mass (ng/dscm), corrected to 7% oxygen, the person subject to 310 CMR 7.08(2) may elect to conduct compliance tests for one unit every nine months. At a minimum, a compliance test for dioxin/furan emissions shall be conducted every nine months following the previous compliance test for one unit at the municipal waste combustor plant. Every nine months a different unit at the municipal waste combustor plant shall be tested, and the units at the plant shall be tested in sequence *(e.g.,* unit 1, unit 2, unit 3, as applicable). The person subject to 310 CMR 7.08(2) may continue to conduct compliance testing on only one unit per nine-month basis so long as the dioxin/furan emission limits remain less than or equal to 7 ng/dscm @ 7% 0_2. If any nine-month compliance test indicates dioxin/furan emissions greater than the specified limit, compliance tests shall thereafter be conducted on all units at the plant every nine months until and unless all nine-month compliance test for all units at the plant over a 27-month period indicate dioxin/furan emissions less than or equal to the 7 ng/dscm @ 7% O_2.

c. Any person subject to 310 CMR 7.08(2) who elects to follow the compliance testing schedule specified in 310 CMR 7.08(2)(g)l.b., shall follow the procedures specified in 310 CMR 7.08(2)(i)1. for reporting the selection of this schedule.

d. Municipal waste combustor units where carbon injection (or equivalent) is used to comply with the dioxin/furan emission limits specified in 310 CMR 7.08(2)(f)2. or the dioxin/furan emission limit specified in 310 CMR 7.08(2)(g)l.b. shall follow the procedures specified in 40 CFR 60.58b(m) as last amended May 10, 2006, for measuring and calculating the eight-hour block average carbon (or equivalent) usage rate.

7.08: continued

e. Any person subject to 310 CMR 7.08(2) electing continuous automated sampling of dioxin/furan emissions as an alternative to manual reference method sampling shall comply with the provisions of 40 CFR 60.58b(g)(10), 40 CFR 60.58b(p) and 40 CFR 60.58b(q), as last amended May 10, 2006.

2. Mercury. Following the date that the initial performance test for mercury is completed, compliance testing for mercury shall be conducted on all municipal waste combustor unit(s) on a quarterly basis. Compliance with the emissions limit specified in 310 CMR 7.08(2)(f)2. shall be based on the average of four quarterly compliance tests per rolling 12 months but shall not exceed 0.050 mg/dscm in any quarterly test. If compliance with the mercury emission limit has been achieved in each quarter for eight consecutive quarters, then the person subject to 310 CMR 7.08(2) may elect to perform compliance testing on a nine-month basis. Any municipal waste combustor unit(s) which cannot achieve compliance with the emission limitation in 310 CMR 7.08(2)(f)2. during the nine-month compliance test shall resume quarterly compliance testing as specified in 310 CMR 7.08(2)(g)2. Any person subject to 310 CMR 7.08(2) electing continuous monitoring of mercury emissions as an alternative to manual reference method sampling shall comply with the provisions of 40 CFR 60.58b(d)(4), 40 CFR 60.58b(n) and 40 CFR 60.58b(o) as last amended May 10, 2006. Any person subject to 310 CMR 7.08(2) electing continuous automated sampling of mercury emissions as an alternative to manual reference method sampling shall comply with the provisions of 40 CFR 60.58b(d)(4), 40 CFR 60.58b(p) and 40 CFR 60.58b(q) as last amended May 10, 2006.

3. Optimization Testing. Municipal waste combustor unit(s) which employ a carbon injection (or equivalent) mercury emission control system shall conduct optimization tests. These tests will determine the optimum feed rate for the mercury emissions control apparatus by determining the carbon (or equivalent) feed rate at which the emissions of mercury are equal to or less than the applicable limit at 310 CMR 7.08(2)(f)2. The optimization test shall be conducted as follows:

a. The optimization tests shall be performed during the initial performance test, after a change in carbon (or equivalent), upon request by the Department, upon request by the person subject to 310 CMR 7.08(2) or annually if required under 310 CMR 7.08(2)(g)4.

b. If there are identical municipal waste combustor units at the municipal waste combustor plant, then optimization tests may be performed on one unit, and the resulting parameters applied to the other unit(s) which are identical to that unit at that plant.

c. Within 30 calendar days of the conclusion of any optimization test, any person subject to 310 CMR 7.08(2) shall submit to the Department for approval a proposed optimized carbon (or equivalent) feed rate which minimizes mercury emissions. An approvable feed rate is the feed rate such that a higher feed rate achieves insignificant additional reductions in mercury emissions compared to the amount of carbon (or equivalent) added. The carbon (or equivalent) feed rate approved by the Department shall be used to operate the carbon injection (or equivalent) mercury control system until the next optimization test is performed and the feed rate approved.

d. Any person owning or operating a municipal waste combustor unit where carbon injection (or equivalent) is used to comply with the mercury emission limits specified in 310 CMR 7.08(2)(f)2. or 310 CMR 7.08(2)(g)2. shall follow the procedures specified in 40 CFR 60.58b(m) as last amended May 10, 2006, for measuring and calculating the eight-hour block average carbon (or equivalent) usage rate.

4. (Reserved).

5. Continuous Emissions Monitoring Systems Data.

a. (Reserved)

b. Carbon monoxide CEMS in accordance with 40 CFR Part 60: *Appendix B*, Performance Specification 4 will satisfy the requirements in 310 CMR 7.08(2)(g).

6. Compliance Testing Schedule. Any person subject to 310 CMR 7.08(2) shall conduct compliance testing for all designated pollutants every nine months for each municipal waste combustor unit(s). Compliance testing for dioxin/furan and mercury shall be as specified in 310 CMR 7.08(2)(g)1. and 2.

7.08: continued

7. Continuous Emissions Monitoring for Particulate Matter. In place of particulate matter testing with EPA Reference Method 5, any person subject to 310 CMR 7.08(2) may elect to install, calibrate, maintain, and operate a continuous emission monitoring system for monitoring particulate matter emissions discharged to the atmosphere and record the output of the system. Any person subject to 310 CMR 7.08(2) who elects to continuously monitor particulate matter emissions in place of testing shall comply with the requirements specified in 40 CFR 60.58b(c)(10)(i) through (xiv) as last amended May 10, 2006. Any person subject to 310 CMR 7.08(2) who elects to continuously monitor particulate matter emissions in place of testing is not required to complete performance testing for particulate matter and is not required to continuously monitor opacity as specified in 40 CFR 60.58b(c)(9) and (c)(8) as last amended May 10, 2006.

8. Continuous Emissions Monitoring for Cadmium and Lead. In place of cadmium and lead testing with EPA Reference Method 29, any person subject to 310 CMR 7.08(2) may elect to install, calibrate, maintain, and operate a continuous emission monitoring system for monitoring cadmium and lead emissions discharged to the atmosphere and record the output of the system according to the provisions of 40 CFR 60.58b(n) and (o) as last amended May 10, 2006.

9. Continuous Emissions Monitoring for Hydrogen Chloride. In place of hydrogen chloride testing with EPA Reference Method 26 or 26A, any person subject to 310 CMR 7.08(2) may elect to install, calibrate, maintain, and operate a continuous emission monitoring system for monitoring hydrogen chloride emissions discharged to the atmosphere and record the output of the system according to the provisions of 40 CFR 60.58b(n) and (o) as last amended May 10, 2006.

(h) Recordkeeping. Any person subject to 310 CMR 7.08(2) shall comply with the recordkeeping requirements of 40 CFR 60.59b(d) as last amended May 10, 2006, the provisions of which are hereby incorporated by reference, and maintain records including, but not limited to, the information specified in 310 CMR 7.08(2)(h), as applicable, for each municipal waste combustor unit. All records shall be retained at the facility for at least five years.

1. The calendar date of each record.

2. The emission concentrations and operating parameters measured using continuous monitoring systems. The measurements specified below shall be recorded and shall be available for submittal to the Department or for onsite review by an inspector:

a. All six-minute average opacity levels as specified under 40 CFR 60.58b(c) as last amended May 10, 2006, including the highest level measured.

b. All one hour average sulfur dioxide emission concentrations as specified under 40 CFR 60.58b(e) as last amended May 10, 2006.

c. All one hour average nitrogen oxides emission concentrations as specified under 40 CFR 60.58b(h) as last amended May 10, 2006.

d. All one hour average carbon monoxide emission concentrations, municipal waste combustor unit load measurements, and particulate matter control device inlet temperatures as specified under 40 CFR 60.58b(i) as last amended May 10, 2006.

e. All 24-hour daily geometric average sulfur dioxide emission concentrations and all 24-hour daily geometric average percent reductions in sulfur dioxide emissions as applicable, as specified under 40 CFR 60.58b(e) as last amended May 10, 2006, including the highest sulfur dioxide emission concentration level recorded.

f. All 24-hour daily arithmetic average nitrogen oxides emission concentrations, as specified under 40 CFR 60.58b(h) as last amended May 10, 2006, including the highest level recorded.

g. All four-hour block or 24-hour daily arithmetic average carbon monoxide emission concentrations, as applicable, as specified under 40 CFR 60.58b(I) as last amended May 10, 2006, including the highest level recorded.

h. All four-hour block arithmetic average municipal waste combustor unit load levels and particulate matter control device inlet temperature, as specified under 40 CFR 60.58b(i) as last amended May 10, 2006, including the highest level recorded.

i. As applicable, all one hour average and 24-hour daily (block) average particulate matter emissions concentrations, as specified under 40 CFR 60.58b(c) as last amended May 10, 2006, including the highest level recorded.

7.08: continued

j. As applicable, all one hour average and 24-hour daily arithmetic average mercury, cadmium, lead or hydrogen chloride emissions concentrations, as specified under 40 CFR 60.58b(n), as last amended May 10, 2006, including the highest level recorded.

k. As applicable, all integrated two-week dioxin/furan and integrated 24-hour mercury emissions concentrations, as specified under 40 CFR 60.58b(p), as last amended May 10, 2006, including the highest level recorded.

3. Identification of the calendar dates when any of the average emission concentrations or emission percent reductions, opacity levels, or operating parameters recorded under 310 CMR 7.08(2)(h)2. exceed the applicable limits, with detailed specific reasons for such exceedances and a description of corrective actions taken.

4. For municipal waste combustor unites) that apply carbon (or equivalent) for mercury or dioxin/furan control, the following records:

a. The average carbon (or equivalent) mass feed rate (in lbs/hr) estimated as required under 40 CFR 60.58b(m)(1)(i) as last amended May 10, 2006, during the initial mercury performance test and all subsequent mercury compliance tests, with supporting calculations.

b. The average carbon (or equivalent) mass feed rate (in lbs/hr) estimated for each hour of operation as required under 40 CFR 60.58b(m)(1)(ii) as last amended May 10, 2006, during the initial dioxin/furan performance test and all subsequent dioxin/furan compliance tests, with supporting calculations.

c. The average carbon (or equivalent) mass feed rate (in lbs/hr) estimated for each hour of operation as required under 40 CFR 60.58b(m)(3)(ii) as last amended May 10, 2006, with supporting calculations.

d. The total carbon (or equivalent) usage for each calendar quarter estimated as specified under 40 CFR 60.58b(m)(3) as last amended May 10, 2006, with supporting calculations.

e. The carbon (or equivalent) injection system operating parameter data for the parameter(s) that are the primary indicator(s) of carbon (or equivalent) feed rate, calculated as specified in 40 CFR 60.58b(m)(2) as last amended May 10, 2006.

5. Identification of the calendar dates and time penods for which the minimum number of hours of any of the data specified below have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken:

a. Sulfur dioxide emissions data.

b. Nitrogen oxides emissions data.

c. Carbon monoxide emissions data.

d. Municipal waste combustor unit load data, including particulate matter control device inlet temperature data.

e. For any person subject to 310 CMR 7.08(2) who elects to continuously monitor particulate matter, cadmium, lead, mercury or hydrogen chloride emissions instead of using EPA manual test methods, particulate matter, cadmium, lead, mercury or hydrogen chloride emissions data.

f. For any person subject to 310 CMR 7.08(2) who elects to use continuous automated sampling systems for dioxins/furans or mercury instead of EPA manual test methods, dates and times when the sampling systems were not operating or were not collecting a valid sample.

6. Identification of each occurrence that sulfur dioxide, nitrogen oxides and, as applicable, particulate matter, cadmium, lead, mercury, hydrogen chloride or dioxin/furan emissions data, or operational data *(e.g.,* carbon monoxide emissions, unit load, and particulate matter control device temperature) have been excluded from the calculation of average emission concentrations or parameters, along with detailed and specific reasons for excluding the data.

7.08: continued

7. The results of daily drift tests and quarterly accuracy determinations for sulfur dioxide, nitrogen oxides, and carbon monoxide continuous emission monitoring systems, as required under 40 CFR, Part 60: *Appendix F*, Procedure 1. For any person who elects to continuously monitor or sample instead of using EPA manual test methods, the results of daily drift tests and quarterly accuracy determinations for particulate matter as required under 40 CFR 60: *Appendix F*, Procedure 2, the results of all quality evaluations, such as daily drift tests and periodic accuracy determinations for cadmium, lead, mercury or hydrogen chloride, specified in the approved site-specific performance evaluation test plan required by 40 CFR 60.58b(o)(5) as last amended May 10, 2006, and all continuous automated dioxin/furan or mercury sampling systems quality evaluations specified in the approved site-specific performance evaluation test plan required by 40 CFR 60.58b(q)(5) as last amended May 10, 2006.

8. Identification of each occurrence of a start-up, shut-down or malfunction, including the specific reasons for each occurrence, date, time, and unit involved. Average emissions concentrations or percent reductions, or operating parameters recorded under 310 CMR 7.08(2)(h)2., shall be recorded during start-up, shut-down or malfunction.

9. The results of the initial performance tests and all subsequent compliance tests conducted to determine compliance with the particulate matter, opacity, cadmium, lead, mercury, dioxin/furan, hydrogen chloride, and fugitive ash emission limits shall be recorded along with supporting calculations and submitted to the Department within 90 days after each such test.

10. For the initial dioxin/furan performance test and all subsequent dioxin/furan compliance tests recorded under 310 CMR 7.08(2)(h)9., the maximum demonstrated municipal waste combustor load and maximum particulate matter control device temperature (for each particulate matter control device) shall be recorded along with supporting calculations.

11. Records showing the names of the municipal waste combustor chief facility operator, shift supervisors, and control room operators who are certified by ASME (Operator Certification and Provisional Certification), including the dates of initial and renewal certifications and documentation of current certification. Records showing the names of the municipal waste combustor chief facility operator, shift supervisors, and control room operators who have completed the EPA municipal waste combustor operator training course if required. Records of when a certified operator is temporarily off site, pursuant to 310 CMR 7.08(2)(h)11.a. and b.

a. If the certified chief facility operator and certified shift supervisor are off-site for more than 12 hours, but for two weeks or less, and no other certified operator is on-site, record the dates that the certified chief facility operator and certified shift supervisor were off-site.

b. When all certified chief facility operators and certified shift supervisors are off-site for more than two weeks and no other certified operator is on-site, keep records of:

i. Time of day that all certified persons are off-site.

ii. The conditions that cause those people to be off-site.

iii. The corrective actions taken by the owner or operator of the affected facility to ensure a certified chief facility operator or certified shift supervisor is on-site as soon as practicable.

iv. Copies ofthe written reports submitted every four weeks that summarize the actions taken by the owner or operator of the affected facility to ensure that a certified chief facility operator or certified shift supervisor will be on-site as soon as practicable.

12. Records showing the names of the persons who have completed a review of the operating manual as required by 310 CMR 7.08(2)(f)7.d., including the date of the initial review and subsequent annual reviews.

13. For municipal waste combustor units that apply carbon (or equivalent) for mercury or dioxin/furan control:

7.08: continued

a. Identification of the calendar dates when the average carbon (or equivalent) mass feed rates recorded under 310 CMR 7.08(2)(h)4.c. were less than either of the hourly carbon feed rates estimated during compliance tests for mercury or dioxin/furan emissions and recorded under 310 CMR 7.08(2)(h)4.a. or b., with reasons for such feed rates and a description of corrective actions taken.

b. Identification of the calendar dates when the carbon injection (or equivalent) system operating parameter(s) that are the primary indicator(s) of carbon mass feed rate (or equivalent) recorded under 310 CMR 7.08(2)(h)4.e., are below the level(s) estimated during the compliance tests as specified in 40 CFR 60.58b(m)(1)(i) and 60.58b(m)(1)(ii) as last amended May 10, 2006, with reasons for such occurrences and a description of corrective actions taken.

(i) Reporting Requirements. Any person subject to 310 CMR 7.08(2) shall submit an initial performance report as well as an annual report pursuant to 40 CFR 60.59b(g) as last amended May 10, 2006, the provisions of which are hereby incorporated by reference that includes, but is not limited to, the information specified in 310 CMR 7.08(2)(i)1., as applicable. Any person subject to 310 CMR 7.08(2) shall submit a semiannual report pursuant to 40 CFR 60.59b(h) as last amended May 10, 2006, the provisions of which are hereby incorporated by reference that includes, but is not limited to, the information specified in 310 CMR 7.08(2)(i)2. for any recorded pollutant or parameter that does not comply with the emission limits as set forth in 310 CMR 7.08(2). In meeting the reporting requirements of 310 CMR 7.08(2)(i)1. and 310 CMR 7.08(2)(i)2., any person subject to 310 CMR 7.08(2) shall report the information in a format determined by the Department that is designed to be understandable and informative to the public. The information shall be submitted in written format and electronic format.

1. Annual Reporting Requirements.[a] The information specified in 310 CMR 7.08(2)(i)l.a. through h. shall be reported:

a. 310 CMR 7.08(2)(h)2.a., e. through k. for the highest emission levels recorded.

b. 310 CMR 7.08(2)(h)4.a. and b.

c. 310 CMR 7.08(2)(h)5. and 6., including 40 CFR 60.59b(g)(1)(iv) and (v), as last amended May 10, 2006.

d. 310 CMR 7.08(2)(h)8. through 10.

e. Summary of 310 CMR 7 .08(2)(i)l.a. through d. for the previous year.

f. The performance evaluation of the continuous emission monitoring system using the applicable performance specifications in 40 CFR Part 60: *Appendix B*.

g. A notification of intent to begin the reduced dioxin/furan compliance testing schedule specified in 310 CMR 7.08(2)(g)l.b. during the following calendar year.

h. Documentation of periods when all certified chief facility operators and certified shift supervisors are off site for more than 12 hours.

2. Semi-annual Reporting Requirements[b]. The information specified in 310 CMR 7.08(2)(i)2.a. through e. shall be reported:

a. 310 CMR 7.08(2)(h)2.a., e. through k. for each date recorded in 310 CMR 7.08(2)(h)3.

b. 310 CMR 7.08(2)(h)3.

c. 310 CMR 7.08(2)(h)4.c.

d. 310 CMR 7.08(2)(h)9.[c]

e. 310 CMR 7.08(2)(h)13.

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[a] Annual reports shall be submitted no later than February 15th of each year following the calendar year in which the data were collected.

[b] Semiannual reports shall be submitted according to the schedule specified: (1) If data reported in accordance with section 310 CMR 7.08(2)(i)2. were collected during the first calendar half, then the report shall be submitted on or before August 1st following the first calendar half; (2) If data reported in section 310 CMR 7.08(2)(i)2. were collected during the second calendar half, then the report shall be submitted on or before February 15th following the second calendar half.

[c] Include only the reports which document emission levels that were above the applicable requirements and the corrective actions taken.

7.08: continued

3. Reporting Requirements for Optional Continuous Monitoring and Continuous Automated Sampling. Any person subject to 310 CMR 7.08(2) electing continuous emissions monitoring for particulate matter, mercury, lead, cadmium or hydrogen chloride, or continuous automated sampling for dioxin/furan or mercury, in *lieu* of manual sampling, shall comply with the applicable notification requirements of 40 CFR 60.59b(m) and reporting requirements of 40 CFR 60.59b(n)(12) and 40 CFR 60.59b(o)(12), as last amended May 10, 2006.

(j) Emission Control Plan.

1. General Applicability. Any person subject to 310 CMR 7.08(2) shall submit an emission control plan (ECP) application to the Department on or before September 9, 2018 on a form provided by the Department to include new or amended applicable requirements in 310 CMR 7.08(2)(f). All ECP applications are subject to fee regulations and approval timelines contained in 310 CMR 4.00: *Timely Action Schedule and Fee Provisions*.

2. Emission Control Plan Requirements. The requirements of the ECP are contained in the ECP application but at a minimum, the ECP shall contain sufficient information (*e.g.*, control efficiency, specifications, standard operating and maintenance procedures) for any control equipment used to comply with 310 CMR 7.08.

3. Compliance Demonstration. Any person subject to 310 CMR 7.08(2) must include in the ECP application an affirmative demonstration that any facility(ies) in Massachusetts owned and operated by such persons (or by an entity controlling, controlled, by or under common control with such person) that is subject to 310 CMR 7.00 and 310 CMR 19.00: *Solid Waste Management* is in compliance with, or on a Department approved compliance schedule to meet, all provisions of 310 CMR 7.00 and 310 CMR 19.00 and any plan approval, order, notice of noncompliance or permit issued thereunder;

4. Public Comment on Emission Control Plans.

a. Upon receipt of an ECP application the Department will post a notice of public hearing. on a public website identified by the Department (which may be the Department's own website), for the duration of the public comment period. The public hearing will be held 30 days after the publication of the hearing notice. The Department shall allow for a 30-day public comment period following the published notice

b. After the public hearing and the close of the public comment period, the Department will review all of the information submitted and shall issue either a disapproval of the application or issue a draft emission control plan approval.

c. Upon issuance of the draft emission control plan approval, the Department shall:

i. Provide a 30-day period for submittal of public comment;

ii. Post on a public website identified by the Department (which may be the Department's own website), for the duration of the public comment period, the following:

a. Notice of availability of the Department's proposed decision to approve or deny the ECP application and information on how to submit public comment;

b. The Department's proposed decision to approve or deny the ECP application;

c. Information on how to access the administrative record for the Department's proposed decision to approve or deny the ECP application.

iii. Send a copy of the notice required under 310 CMR 7.08(2)(j)4.c.ii.a. to EPA.

d. After the close of the public comment period, the Department will issue a final approval or disapproval of the emission control plan.

5. Additional Requirements. Additional requirements may be included in the approval if the Department determines that the emissions from a municipal waste combustor plant's unit(s) alone or cumulatively with other municipal waste combustor plant's unit(s) cause or contribute to a condition of air pollution or a violation of any other regulation. Such requirements include but are not limited to, emission limits on air contaminants, and additional stack testing or emission monitoring requirements.

7.08: continued

The Department may modify the ECP at any time if the Department determines that a municipal waste combustor plant's unit(s) alone or cumulatively with other municipal waste combustor plant's unit(s) cause or contribute to a condition of air pollution or a violation of any other regulation. Such modification must comply with the requirements in 310 CMR 7.08(2)(j)7.

6. Compliance Schedule. The ECP shall incorporate a compliance schedule that at a minimum contains the requirements in 310 CMR 7.08(2)(k).

7. Modification to the ECP.

a. If the Department proposes to modify a municipal waste combustor plant's emission control plan, the Department shall:

i. Provide a 30-day period for submittal of public comment;

ii. Post on a public website identified by the Department (which may be the Department's own website), for the duration of the public comment period, the following:

(i) Notice of availability of the Department's proposed decision to approve or deny the ECP modification and information on how to submit public comment;

(ii) The Department's proposed decision to approve or deny the ECP modification; and

(iii) Information on how to access the administrative record for the Department's proposed decision to approve or deny the ECP modification.

iii. Send a copy of the notice required under 310 CMR 7.08(2)(j)7.a.ii.a. to EPA.

b. After the close of the public comment period, the Department will issue a final approval or disapproval of the modified ECP.

(k) Schedule. Municipal waste combustor unit(s) subject to 310 CMR 7.08(2) shall be in full compliance with the applicable requirements of 310 CMR 7.08(2) after March 9, 2018, except:

1. Nitrogen oxides emission limits are to be complied with by the dates specified in 310 CMR 7.08(2)(f)3.: *Table* 3, and in no case later than March 10, 2020.

2. If a municipal waste combustor unit(s) cannot comply with the NO_x emission limit in 310 CMR 7 .08(2)(f)3.: *Table* 3, the person subject to 310 CMR 7.08(2) may apply in the emission control plan application due under 310 CMR 7.08(2)(j) for a source specific alternative NO_x emission limit, not to exceed a 24-hour daily arithmetic average of 185 parts per million by volume, dry basis, corrected to 7% oxygen. Such emission control plan application must evaluate each of the following NO_x controls, where it may be applied, and its technological and economic feasibility.

a. low-NO_x burners;
b. close coupled and separated overfire air;
c. flue gas recirculation;
d. steam/water injection;
e. dry low-NO_x combustors;
f. fuel emulsification;
g. selective noncatalytic reduction (SNCR);
h. selective catalytic reduction (SCR);
i. nonselective catalytic reduction (NSCR);
j. use of emission reduction credits (ERCs) certified by the Department pursuant to 310 CMR 7.00: *Appendix B* (3), or pursuant to the interstate trading provisions at 310 CMR 7.00: *Appendix B(3)(f);* and
k. other innovative technologies available to reduce NO_x.

(3) Commercial, Industrial, and Special Incinerators. No person shall cause, suffer, allow, or permit the construction or substantial reconstruction or alteration or thereafter the operation of a commercial, industrial, or special incinerator for which the site location has not been approved by the Department in writing.

(4) Hazardous Waste Incinerators.

(a) No person shall construct, reconstruct, alter, or modify or operate, or cause, suffer, allow or permit the construction, reconstruction alteration, modification, or operation of, any hazardous waste incinerator unless such construction, reconstruction, alteration, modification, or operation is in compliance with:

7.08: continued

1. 310 CMR 7.01, 7.08(4), and all other provisions of 310 CMR 7.00.
2. the terms of a Department approval granted pursuant to 310 CMR 7.00.
3. all applicable provisions of 310 CMR 30.000: *Hazardous Waste* and/or 314 CMR 8.00: *Supplemental Requirements for Hazardous Waste Management Facilities*.
4. the terms of a license or permit granted by the Department pursuant to 310 CMR 30.000: *Hazardous Waste* and/or 314 CMR 8.00: *Supplemental Requirements for Hazardous Waste Management Facilities*.
5. In addition, 310 CMR 7.08(2) is adopted pursuant to the authority granted by M.G.L. c. 111, § 150A.

7.08: continued

Noncompliance with any provision of 310 CMR 30.000, or of a license granted pursuant to 310 CMR 30.000, shall be deemed noncompliance with, and shall be subject to all applicable provisions, of M.G.L. c. 21C. Noncompliance with any provision of 314 CMR 8.00, or of a permit granted pursuant to 314 CMR 8.00, shall be deemed noncompliance with, and shall be subject to all applicable provisions of, M.G.L. c. 21, §§ 26 through 53. No approval granted by the Department shall affect the responsibility of the owner or operator to comply with all other applicable laws and regulations.

(b) No person shall construct, reconstruct, alter, modify, or operate or cause, suffer, allow or permit the construction, reconstruction, alteration, modification, or operation of, any hazardous waste incinerator unless the plans, specifications, proposed Standard Operating Procedure, and the Proposed Maintenance Procedure for such hazardous waste incinerator have been submitted to the Department for approval, and the Department has granted such approval in writing. The Department may prescribe a form and/or other application methods which shall be used by each person applying for such approval from the Department.

(c) Each application for approval to construct, reconstruct, alter, modify or operate a hazardous waste incinerator shall be in compliance with the requirements set forth in 310 CMR 30.001 through 30.099 (General Provisions, *e.g.*, Definitions; Requirements for Accurate, Timely and Complete Monitoring, Recordkeeping and Submittals to the Department; Notification Procedures; and Transition Provisions) and 30.800 (Licensing Requirements and Procedures) and shall:

1. be signed by the owner or operator of the hazardous waste incinerator;
2. be accompanied by site information, plans, descriptions, specifications, and drawings showing the design of the hazardous waste incinerator, the nature and amount of emissions, and the manner in which the hazardous waste incinerator will be operated and controlled;
3. specify waste feed(s), including, for each, the anticipated heating value, viscosity, description of the physical form of the waste, and identification and quantification of hazardous waste constituents listed in 310 CMR 30.160 by the use of analytical techniques specified in "Test Methods for Evaluating Solid Waste", United States Environmental Protection Agency SW-846, 1980;
4. include a detailed description of the hazardous waste incinerator, including at least the following:
    a. the incinerator's model number and type, and the name of its manufacturer;
    b. the linear dimensions of the incinerator unit and the cross sectional area of the combustion chamber(s);
    c. the auxiliary fuel system (type/feed);
    d. the capacity of the prime mover;
    e. the automatic cutoff system(s);
    f. the stack gas monitoring and pollution control equipment;
    g. the design of the nozzle and burner;
    h. the construction materials; and
    i. each device for indicating and/or controlling temperature, pressure, and/or flow, including the location of each such device;
5. include the applicant's proposed standard operating procedure and proposed maintenance procedure, which shall include, but not be limited to, procedures for:
    a. incinerator startup and operation prior to, during, and immediately following emission testing, and
    b. long term incinerator operation, and
    c. sampling and analysis of waste feeds, including the frequency thereof.

Such procedures shall include procedures for rapidly shutting down the waste feed and the incinerator, and controlling emissions, in the event of equipment malfunction. Such procedures shall, to the satisfaction of the Department, indicate that the incinerator will operate in compliance with the emission limitations set forth in 310 CMR 7.08(4);

7.08: continued

6. include a proposed emission test protocol for demonstrating compliance with 310 CMR 7.00 in general and in particular with the emission limitations set forth in 310 CMR 7.08(4)(h). This protocol shall include at least the following: sampling and analysis procedures and equipment, sample locations, frequency and duration of sampling, anticipated test dates, duration of testing, quantity of waste to be burned, range(s) of temperature(s), waste feed rate, combustion gas velocity, auxiliary fuel use, and all other parameters which may affect the performance of the incinerator;

7. include whatever other information, plans, specifications, evidence, or documentation the Department may request; and

8. bear the seal and signature of a professional engineer, registered in the Commonwealth pursuant to M.G.L. c. 112, on all engineering plans, specifications, and other material submitted in or with the application.

(d) The Department may approve the construction, reconstruction, alteration, modification or operation of a hazardous waste incinerator only if the Department is persuaded that:**

1. emissions from the incinerator would not result in air quality exceeding the Massachusetts or National Ambient Air Quality Standards;

2. emissions from the incinerator would not result in noncompliance with 310 CMR 7.01 or any other provision of 310 CMR 7.00.

3. a proposed incinerator to be constructed in a non-attainment area would not have a potential to emit equal to or greater than 100 tons per year of the contaminant upon which the non-attainment status is based (*e.g.*, particulate matter, sulfur oxides, nitrogen oxides, volatile organic compounds, or carbon monoxide), unless the incinerator is in compliance with the requirements of 310 CMR 7.00: *Appendix A*(1) through (6), Emission Offsets and Non-attainment Review;

4. a proposed modification of an incinerator in a non-attainment would not produce a significant increase in emissions of the contaminant upon which the non-attainment status is based (*e.g.*, particulate matter, sulfur oxides, nitrogen oxides, volatile organic compounds, or carbon monoxide), unless the incinerator is in compliance with the requirements of 310 CMR 7.00: *Appendix A*(1) through (6), Emissions Offsets and Non-attainment Review; and

5. a proposed incinerator subject to 310 CMR 7.00: *Appendix A*(1) through (6) (a major source or major modification) would not have total allowable emissions which, when added to allowable emissions from:

a. existing facilities in the pertinent regions, and

b. new or modified sources in the pertinent region, which sources are

not major emitting facilities, would, by the time that the incinerator is to commence operation, exceed the total emissions from existing sources allowed under the applicable SIP (prior to the application for such permit to construct or modify) by such an amount as to be inconsistent with "reasonable further progress" as defined in the Massachusetts State Implementation Plan (SIP).

(e) The Department may impose any reasonable condition upon an approval, including, but not limited to:

1. compliance with record-keeping requirements set forth in 310 CMR 30.542;
2. limitations on waste feed;
3. waste feed rates;
4. operating conditions during start-up, prior to, and during emissions testing;
5. long term operating conditions;

** In addition to the requirements contained herein, major new sources of air contaminants and major modifications of existing sources located in attainment areas may be subject to Prevention of Significant Deterioration (PSD) regulations at 40 CFR 52.21. Effective July 1, 1982, the Department implemented the PSD program in accordance with the Department's "Procedures for Implementing Federal Prevention of Significant Deterioration Regulations". As of March 3, 2003, the federal PSD regulations are administered by the U.S. Environmental Protection Agency.

7.08: continued

6. requiring the hazardous waste incinerator to be provided with:
   a. sampling ports of such size, number, and location as the Department may require, and safe access to each port, and
   b. instrumentation to monitor and record emission data;
7. quantitative analysis of the scrubber water, if any, the ash residues, and other residues, if any, for the purpose of estimating the fate of the trial POHCs; and
8. any other sampling and/or testing equipment.

(f) The Department may revoke an approval if:
1. construction is not begun within four years from the date of issuance of the approval; or
2. during construction, work is suspended for two years; or
3. there is any other lawful cause.

(g) For each hazardous waste incinerator whose construction was not completed prior to October 15, 1983, all provisions of 310 CMR 7.08(4) shall take effect on October 15, 1983. For each hazardous waste incinerator whose construction was completed prior to October 15, 1983:
1. all provisions of 310 CMR 7.08(4)(a) through (g) shall take effect on October 15, 1983; and
2. within nine calendar months after the date on which a license application is required to be submitted to the Department pursuant to 310 CMR 30.099(6), either:
   a. comply with 310 CMR 7.08(4)(b), (c), and (h) through (l), or
   b. persuade the Department that more time is needed to comply with 310 CMR 7.08(4)(h) through (l), and submit to the Department a proposed plan and schedule for such compliance. Said plan and schedule are subject to review and approval by the Department and shall provide for compliance with 310 CMR 7.08(4)(b), (c) and (h) through (l) as expeditiously as practicable, and in any event no later than 24 months after the date on which a license application is required to be submitted to the Department pursuant to 310 CMR 30.099(6). Such proposed plan and schedule shall be submitted in compliance with all applicable requirements set forth in 310 CMR 7.08 and in 310 CMR 30.000 and/or 314 CMR 8.00.

(h) Except as provided in 310 CMR 7.08(4)(g), no person owning, leasing, or controlling the operation of any hazardous waste incinerator shall cause, suffer, allow, or permit emissions therefrom in excess of the following emission limitations:
1. for each waste feed, a hazardous waste incinerator shall achieve a destruction and removal efficiency (DRE) of 99.99% for each Principal Organic Hazardous Constituent (POHC) designated in the Department's approval. DRE shall be determined for each POHC from the following equation:

$$DRE = \frac{(W\ in - W\ out)}{W\ in} \times 100\%$$

Where:

W in = Mass feed rate of one POHC in the waste stream feeding the incinerator, and

W out = Mass emission rate of the same POHC present in exhaust emissions prior to release to the atmosphere;

2. For a hazardous waste incinerator with the potential to emit hydrogen chloride (HCl) at a rate equal to or greater than four pounds per hour, such HCl emissions shall be limited to no greater than the larger of either four pounds per hour or 1% of the HCl in the combustion gas prior to entering any air pollution control equipment;
3. Particulate emissions form a hazardous waste incinerator shall not exceed 0.08 grains per dry standard cubic foot when corrected for the amount of oxygen in the stack gas according to the formula:

7.08: continued

$$Pc = PM \times \frac{14}{21-Y}$$

Where:

Pc = the corrected concentration of particulate matter.

Pm = the measured concentration of particulate matter, and

Y = the measured concentration (percent by volume, dry) of oxygen in the stack gas.

4. Emissions of products of incomplete combustion (PICs) shall be limited to the degree necessary to comply with 310 CMR 7.01.

(i) For the purposes of demonstrating compliance with the emission limitations contained in 310 CMR 7.08(4)(h), compliance with other requirements of 310 CMR 7.00, or compliance with the terms of any approval granted pursuant to 310 CMR 7.00, each person owning, leasing, or controlling the operation of a hazardous waste incinerator shall conduct or have conducted performance tests, including, without limitation, sampling and analysis of waste and exhaust emissions, in accordance with the requirements set forth in 310 CMR 7.00, including, without limitation, the following requirements:

1. For a newly constructed, substantially reconstructed, or altered incinerator, such performance tests shall be conducted as soon as possible as determined by the Department, but in no case latter than 720 hours of operation or 120 calendar days, whichever comes first, after the initial introduction into the incinerator of each waste feed specified in a Department approval.

2. For a hazardous waste incinerator for which the Department is of the opinion that performance tests are necessary, such performance tests shall be conducted within 90 days of written notification from the Department that such tests are required, or within such other deadline as the Department may specify in said written notification, and

3. shall include an analysis demonstrating that the emissions of products of incomplete combustion (PICs) are in compliance with 310 CMR 7.01. Such analysis of PICs shall include the identification and quantification of no less than the five PICs that occur in the highest concentration in the flue gas stream. The Department may require that additional analysis be performed including, but not limited to, specifying particular compounds to be identified and quantified.

(j) Performance tests in compliance with 310 CMR 7.08(4)(i) shall be conducted in accordance with methods as approved by the Department and in conformance with 310 CMR 7.13. The sampling and analysis of waste shall in all cases be done by a person knowledgeable therein, and shall be done in the presence of a representative of the Department whenever such is deemed necessary by the Department. The results of all such tests shall:

1. be recorded and the records placed in the operating log in compliance with 310 CMR 30.542, and

2. be submitted to the Department in accordance with 310 CMR 30.807 no later than 90 days after completion of the actual testing or within such other deadline as the Department may prescribe in writing.

(k) No person shall cause, suffer, allow, or permit the operation of any hazardous waste incinerator that is not equipped with instrumentation which is properly maintained in an accurate operating condition and operated continuously to indicate and record the:

1. carbon monoxide and oxygen levels in the stack exhaust gas,
2. waste feed and supplementary fuel rates,
3. combustion temperature, and
4. combustion gas velocity.

The instrumentation and its installation shall be as approved by the Department in accordance with 310 CMR 7.08(4).

7.08: continued

(l) No person shall cause, suffer, allow, or permit the operation of any hazardous waste incinerator unless said operation is in conformance with the following:

1. During start-up and shutdown, hazardous waste shall not be fed into the incinerator unless the incinerator is operating within the conditions of operation as specified in the Department's approval; and
2. Fugitive emissions from the combustion zone shall be controlled by:
   a. keeping the combustion zone totally sealed against fugitive emissions; or
   b. maintaining a combustion zone pressure lower than atmospheric pressure; or
   c. an alternative means of fugitive emissions control equivalent to maintenance of combustion zone pressure lower than atmospheric pressure as approved by the Department; and
3. Each hazardous waste incinerator shall be equipped with a functioning system to automatically cease operation of the incinerator when change(s) in waste feed, incinerator design, or operating conditions exceed limits as designated in a Department approval. Each such systems, and each alarm associated therewith, shall be tested at least weekly to verify operability; and
4. At least once each day during which it is operated, each hazardous waste incinerator and associated equipment (*e.g.* pumps, valves, conveyors, and pipes) shall be subjected to thorough visual inspection for leaks, spills, fugitive emissions, and signs of tampering; and
5. All monitoring and inspection data shall be recorded and the records shall be placed in the operating log required by 310 CMR 30.542.

(m) No incinerator for the burning of polyhalogenated aromatic hydrocarbons shall be constructed, substantially reconstructed, altered, or operated except in compliance with the following requirements:

1. Polyhalogenated aromatic hydrocarbons may be burned only after the Department has expressly and in writing approved the burning of such material, and only to the extent and only while such approval is in effect. The application to the Department for such approval shall expressly state that approval is sought to burn polyhalogenated aromatic hydrocarbons.
2. The burning of polyhalogenated aromatic hydrocarbons shall achieve a destruction and removal efficiency, as determined pursuant to 310 CMR 7.08(4)(h)1., of 99.9999% for each POHC, based on burning materials more difficult to burn than tetra-, penta-, and hexachlo- rodibenzo-p-dioxin and dibenzofurans.

7.09: U Dust, Odor, Construction, and Demolition

(1) No person having control of any dust or odor generating operations such as, but not limited to asphalt batching plants, asphalt roofing materials manufacturing plants, asphalt blowing plants, foundries, chemical products manufacturing plants, incinerators, fuel utilization facilities, petroleum products manufacturing plants, aggregate manufacturing plants, food preparation or processing facilities, wood products plants, dry cleaning establishments, paint and varnish manufacturing plants, paper manufacturing plants, leather manufacturing plants, concrete batching plants, metal coating and treating plants, land clearing operations, construction work, dump operations, agricultural operations and street sweeping shall permit emissions therefrom which cause or contribute to a condition of air pollution.

(2) No person responsible for any construction or demolition of an industrial, commercial, or institutional building or residential building with 20 or more dwelling units, shall cause, suffer, allow, or permit emissions therefrom which cause or contribute to a condition of air pollution. Said person shall notify the Department in writing ten working days prior to the initiation of said construction or demolition operation. The ten working day advance notice period will be waived in the event of emergency demolition necessary to prevent a public health or safety hazard.

7.09: continued

(3) No person responsible for an area where construction or demolition has taken place shall cause, suffer, allow, or permit particulate emissions therefrom to cause or contribute to a condition of air pollution by failure to seed, pave, cover, wet, or otherwise treat said area to prevent excessive emissions of particulate matter.

(4) No person shall cause, suffer, allow, or permit the handling, transportation, or storage of any material in a manner that results or may result in emissions therefrom which cause or contribute to a condition of air pollution.

(5) No persons responsible for any construction or demolition of a structure that contains friable asbestos material shall fail to comply with 310 CMR 7.09(2) and 310 CMR 7.02. (National Emission Standards for Hazardous Pollutants)

(6) No person shall cause, suffer, allow, or permit the operation of mechanized street sweeping equipment that is not equipped with a suitable dust collection or dust suppression system which is maintained in good operating condition and is operated continuously while the street sweeping equipment is in use to prevent conditions of air pollution.

(7) 310 CMR 7.09(1) through 7.09(4) and 7.09(6) are subject to the enforcement provisions specified in 310 CMR 7.52.

7.10: U Noise

(1) No person owning, leasing, or controlling a source of sound shall willfully, negligently, or through failure to provide necessary equipment, service, or maintenance or to take necessary precautions cause, suffer, allow, or permit unnecessary emissions from said source of sound that may cause noise.

(2) 310 CMR 7.10(1) shall pertain to, but shall not be limited to, prolonged unattended sounding of burglar alarms, construction and demolition equipment which characteristically emit sound but which may be fitted and accommodated with equipment such as enclosures to suppress sound or may be operated in a manner so as to suppress sound, suppressible and preventable industrial and commercial sources of sound, and other man-made sounds that cause noise.

(3) 310 CMR 7.10(1) shall not apply to sounds emitted during and associated with:
(a) parades, public gatherings, or sporting events, for which permits have been issued provided that said parades, public gatherings, or sporting events in one city or town do not cause noise in another city or town;
(b) emergency police, fire, and ambulance vehicles;
(c) police, fire, and civil and national defense activities;
(d) domestic equipment such as lawn mowers and power saws between the hours of 7:00 A.M. and 9:00 P.M.

(4) 310 CMR 7.10(1) is subject to the enforcement provisions specified in 310 CMR 7.52.

7.11: U Transportation Media

(1) Motor Vehicles.
(a) All motor vehicles registered in the Commonwealth shall comply with pertinent regulations of the Registry of Motor Vehicles relative to exhaust and sound emissions.
(b) No person shall cause, suffer, allow, or permit the unnecessary operation of the engine of a motor vehicle while said vehicle is stopped for a foreseeable period of time in excess of five minutes. 310 CMR 17.11 shall not apply to:
1. vehicles being serviced, provided that operation of the engine is essential to the proper repair thereof, or

7.11: continued

2. vehicles engaged in the delivery or acceptance of goods, wares, or merchandise for which engine assisted power is necessary and substitute alternate means cannot be made available, or

3. vehicles engaged in an operation for which the engine power is necessary for an associated power need other than movement and substitute alternate power means cannot be made available provided that such operation does not cause or contribute to a condition of air pollution.

(c) 310 CMR 7.11(1)(b) is subject to the enforcement provisions specified in 310 CMR 7.52.

(2) Diesel Trains.

(a) No person owning or operating a diesel powered locomotive shall cause, suffer, allow, or permit said locomotive to be operated in a manner such as to cause or contribute to a condition of air pollution.

(b) No person shall cause, suffer, allow, or permit the unnecessary foreseeable idling of a diesel locomotive for a continuous period of time longer than 30 minutes. 310 CMR 7.00 shall not apply to diesel locomotives being serviced provided that idling is essential to the proper repair of said locomotive and that such idling does not cause or contribute to a condition of air pollution.

(c) 310 CMR 7.11(2)(a) and 7.11(2)(b) are subject to the enforcement provisions specified in 310 CMR 7.52.

(3) Aircraft. No person owning or operating an airport shall cause, suffer, allow, or permit routine warmups, testing, or other operation of aircraft while on the ground, in such a manner as to cause or contribute to a condition of air pollution, outside of the property lines of the airport, that in the opinion of the Department are unreasonable and feasibly preventable.

(4) Marine Vessels. No person owning, operating, or having control of a seagoing vessel while it is in the District shall cause, suffer, allow, or permit, aboard said vessel, tube blowing or soot removal activities that cause or contribute to a condition of air pollution. 310 CMR 7.11 shall apply only in the Merrimack Valley Air Pollution Control District, Metropolitan Boston Air Pollution Control District, and the Southeastern Massachusetts Air Pollution Control District.

7.12: U Source Registration

(1) Applicability.

(a) 310 CMR 7.12 applies to any owner/operator of a facility if such facility meets any of the criteria in 310 CMR 7.12(1)(a)1. through 11.

1. Has a facility-wide maximum energy input capacity in BTU/hour from fuel utilization facilities equal to or greater than the following size thresholds:

a.	All Fuels	40,000,000;
b.	Residual Fuel Oil	10,000,000;
c.	Solid Fuel	3,000,000;
d.	Used Oil Fuel	3,000,000; or
e.	Landfill Gas	3,000,000.

2. Has a maximum energy input capacity in Btu/hour from any fuel utilization facility emission unit that combusts natural gas, propane, butane, or distillate oil equal to or greater than the 10,000,000 Btu/hour.

3. Has non-combustion federal potential[1] to emit (facility-wide) equal to or greater than:

a.	Particulate Matter	two tons per year;
b.	Oxides of Sulfur	2.5 tons per year;
c.	Organic Material	ten tons per year;
d.	Nitrogen Dioxide	4.4 tons per year; or
e.	Hazardous Air Pollutants	ten tons of any individual HAP per year or 25 tons of total HAPs per year.

[1] Non-combustion potential emissions excludes emissions from motor vehicles, incinerators and products of combustion from fuel utilization facilities.

7.12: continued

4. Is or contains a hazardous waste incinerator, regardless of size.

5. Is or contains an incinerator with the capacity to reduce 50 pounds per hour or more of waste.

6. Is or contains an emission unit or process that is subject to a National Emission Standard for Hazardous Air Pollutants (NESHAP) or subject to a Maximum Achievable Control Technology (MACT) standard defined at 40 CFR Part 61 and Part 63, for which the Department has received delegation from EPA.

7. Is or contains a stationary reciprocating internal combustion engine (except for emergency or standby engines) with a maximum energy input capacity of 3,000,000 Btu per hour or greater (burning any fuel).

8. Is required to submit a Source Registration as a condition of a plan approval or operates under a Restricted Emission Status (RES) pursuant to 310 CMR 7.02(9) or 7.02(10) issued since January 1, 1990. The owner/operator of a facility required by a plan approval, issued prior to January 1, 1990, to submit an annual Source Registration is no longer required to do so unless such facility meets one of the other applicability criteria in 310 CMR 7.12 or a more recent Department approval requires submittal of a Source Registration.

9. Is a facility for which the owner/operator has received a request from the Department to submit a Source Registration.

10. Is a facility subject to 310 CMR 7.00: *Appendix C* in the previous calendar year.

11. Had actual emissions equal to or greater than 0.5 tons of lead, 25 tons of NO_x, or 25 tons of VOC in the previous calendar year.

(b) Any owner/operator of a facility that becomes subject to 310 CMR 7.12 that was not previously subject to 310 CMR 7.12 shall notify the Department by January 31st of the calendar year immediately following the calendar year in which the facility became subject to 310 CMR 7.12.

(c) Any owner/operator of a facility subject to 310 CMR 7.26(20) through (29) need not submit a Source Registration pursuant to 310 CMR 7.12 unless otherwise required to report pursuant to 310 CMR 7.12(1)(a)9. or such facility meets any of the applicability criteria in 310 CMR 7.12(1)(a)(11).

(2) Schedule.

(a) Except as provided in 310 CMR 7.12(2)(b), a Responsible Official of a facility shall sign and submit a Source Registration to the Department every year by the date indicated below:

1. May 1st for a facility subject to 310 CMR 7.00: *Appendix C* in the previous calendar year;

2. June 1st for a facility that:

a. has an RES permit issued by the Department pursuant to 310 CMR 7.02(9);

b. had actual emissions of lead equal to or greater than 0.5 tons in the previous calendar year, or actual emissions of NO_x or VOC equal to or greater than 25 tons per year in the previous calendar year;

c. emits an air contaminant subject to a NESHAP or is subject to a MACT standard defined at 40 CFR Part 61 and Part 63, for which the Department has received delegation from EPA;

d. is required, as a condition of a plan approval issued by the Department since January 1, 1990, to submit a Source Registration annually.

(b) If a facility is not subject to the annual reporting schedule in 310 CMR 7.12(2)(a), a Responsible Official shall sign and submit a Source Registration to the Department by April 1st once every three years.

(3) Source Registration Contents.

(a) An owner/operator shall provide information in the Source Registration as specified in a format provided by the Department including, but not limited to:

1. A complete description of the facility, including a description of process and combustion equipment, facility operating hours and operating schedule, and raw materials and fuels used at the facility. Once a facility is subject to 310 CMR 7.12, all emission units and processes at the facility shall be included in the Source Registration even if, individually, certain emission units and processes may not meet the applicability thresholds of 310 CMR 7.00. Emission units that are "insignificant activities" under 310 CMR 7.00: *Appendix C*(5)(i) need not be included;

7.12: continued

2. Detailed emissions estimates for all criteria and hazardous air pollutants emitted at the facility;
3. An Emission Statement summarizing and certifying actual annual emissions and peak ozone season day emissions of volatile organic compounds and oxides of nitrogen;
4. A description of air pollution control equipment and capture and control efficiencies of said equipment;
5. Calculations and assumptions used to support calculations of emissions such as annual fuel process rate, and peak ozone season daily process rate; and
6. Certification of accuracy to ensure that the information contained in the Source Registration is accurate and complete to the best knowledge of the Responsible Official signing the submittal pursuant to 310 CMR 7.01.

(b) Where such format is part of an electronic data system operated by the Department, the owner/operator shall submit the Source Registration using the electronic data system.

(c) Copies of Source Registration and other information supplied to the Department, to comply with 310 CMR 7.12 shall be retained by the facility owner/operator for five years from the date of submittal.

(4) Verification of Information. The Department may inspect a facility at any time for the purpose of verifying information contained in Source Registration.

7.13: U Stack Testing

(1) Any person owning, leasing, operating or controlling a facility for which the Department has determined that stack testing is necessary to ascertain compliance with the Department's regulations or design approval provisos shall cause such stack testing:

(a) to be conducted by a person knowledgeable in stack testing,

(b) to be conducted in accordance with procedures contained in a test protocol which has been approved by the Department,

(c) to be conducted in the presence of a representative of the Department when such is deemed necessary, and

NON-TEXT PAGE

7.13: continued

(d) to be summarized and submitted to the Department with analyses and report within such time as agreed to in the approved test protocol.

(2) Any person having control of a facility, relative to which the Department determines that stack testing (to ascertain the mass emission rates of air contaminants emitted under various operating conditions) is necessary for the purposes of regulation enforcement or determination of regulation compliance, shall cooperate with the Department to provide:

(a) entrance to a location suitable for stack sampling;
(b) sampling ports at locations where representative samples may be obtained;
(c) staging and ladders to support personnel and equipment for performing the tests;
(d) a suitable power source at the sampling location for the operation of sampling equipment; and
(e) such other reasonable facilities as may be requested by the Department.

7.14: U Monitoring Devices and Reports

(1) Upon request by the Department through direct communication or public notice, any person who owns or operates a stationary emission source of a category and class specified by the Department:

(a) shall install, maintain, and use emission monitoring devices, of a design and installation approved by the Department; and
(b) shall make periodic reports to the Department on the nature and amounts of emissions from said source which the Department shall review and correlate for its use in emissions control and exhibit for public information.

(2) Any person who owns or operates an emission source as described in 40 CFR, Part, 51, Appendix P, as amended, shall comply with the minimum requirements for continuous emission monitoring, recording, and reporting as set forth therein for opacity, nitrogen oxides emissions, sulfur dioxide emissions, and oxygen or carbon dioxide.

(3) The monitoring and recording required in 310 CMR 7.14(2) shall begin by August 6, 1988.

7.15: U Asbestos

(1) Definitions. The definitions set forth at 310 CMR 7.00 apply to 310 CMR 7.15, unless otherwise defined in 310 CMR 7.15(1). The following words and phrases shall have the following meanings as they appear in 310 CMR 7.15. If a term is defined both in 310 CMR 7.00 and in 310 CMR 7.15(1), then the definition in 310 CMR 7.15(1) applies for purposes of 310 CMR 7.15.

ADEQUATELY WET or ADEQUATELY WETTED means fixing or coating with water (or water to which a surfactant has been added), amended water or a remover-encapsulant, so as to prevent a friable condition and visible emissions. Material shall be considered adequately wetted where it has been fixed or coated with water (or water to which a surfactant has been added), amended water or a remover-encapsulant, so as to prevent a friable condition and visible emissions.

AHERA means the Asbestos Hazard Emergency Response Act, 15 U.S.C. 2646 *et seq*., and the regulations promulgated thereunder, including 40 CFR Part 763.

AMENDED WATER means water to which a wetting agent has been added.

ASBESTOS means all asbestiform varieties of serpentinite (chrysotile), riebeckite (crocidolite), cummingtonite-grunerite (amosite), anthophyllite, actinolite, and tremolite, and any other asbestiform minerals designated as asbestos by EPA in 40 CFR 61.141.

7.15: continued

ASBESTOS ABATEMENT ACTIVITY means the removal, encapsulation, demolition, renovation, enclosure, repair, disturbance, handling, transportation, storage, or disposal of asbestos-containing material or asbestos-containing waste material or any other activity involving asbestos-containing material or asbestos-containing waste material that has the potential to result in a condition of air pollution. ASBESTOS ABATEMENT ACTIVITY does not include survey, sampling, analysis, monitoring, or visual inspection activities.

ASBESTOS ANALYTICAL SERVICES means services provided by a person certified by the Commonwealth pursuant to 453 CMR 6.08: *Certification and Other Requirements for Asbestos Analytical Services* which include, but are not limited to, the counting or enumeration of asbestos fibers in the air (air monitoring analysis) and the identification and quantification of asbestos in materials (bulk sample analysis) in connection with any asbestos hazard assessment, facility inventory, exposure measurement, abatement activity or associated activity.

ASBESTOS-CONTAINING MATERIAL (ACM) means any material containing 1% or more asbestos as determined by a laboratory using protocols set forth in the *Method for the Determination of Asbestos in Bulk Building Materials* found in EPA report EPA/600/R-93/116, or another method as directed by the Department. ASBESTOS-CONTAINING MATERIAL (ACM) includes, but is not limited to, sprayed-on and troweled-on materials applied to ceilings, walls, and other surfaces; insulation on pipes, boilers, tanks, ducts, and other equipment, structural and non-structural members; tiles; asphalt roofing or siding materials; or asbestos-containing paper.

ASBESTOS-CONTAINING WASTE MATERIAL (ACWM) means any ACM removed during a demolition or renovation project and anything contaminated with asbestos in the course of a demolition or renovation project including, but not limited to, asbestos waste from control devices, bags or containers that previously contained asbestos, contaminated clothing, materials used to enclose the work area during the demolition or renovation operation, and demolition or renovation debris. ASBESTOS-CONTAINING WASTE MATERIAL (ACWM) shall also include ACM on and/or in facility components that are inoperable or have been taken out of service and any ACM that is damaged or deteriorated to the point where it is no longer attached as originally applied or is no longer serving the intended purpose for which it was originally installed.

ASBESTOS CONTRACTOR means any person who has a valid license issued by the Commonwealth pursuant to 453 CMR 6.05: *Licensure of Asbestos Contractors* for the purpose of entering into or engaging in asbestos abatement activity.

ASBESTOS INSPECTOR means any person certified by the Commonwealth pursuant to 453 CMR 6.07: *Certification of Consultants* who identifies, assesses the condition of, or collects pre-abatement samples of ACM.

ASBESTOS PROJECT MONITOR means any person certified by the Commonwealth pursuant to 453 CMR 6.07: *Certification of Consultants* who:

(a) Collects air and bulk samples and performs visual inspections for the purpose of determining asbestos project completion;

(b) Collects environmental asbestos air samples for the purpose of assessing present or future potential for exposure to airborne asbestos; or

(c) Functions as the on-site representative of the facility owner or other persons by overseeing the activities of the asbestos contractor.

ASBESTOS SURVEY REPORT means a written report resulting from a thorough inspection using EPA approved procedures and methods, or an alternate asbestos inspection method that has received prior written approval from the Department, to determine whether materials or structures to be worked on, renovated, removed or demolished (including materials on the outside of structures) contain asbestos.

7.15: continued

BULK LOADING means the placement of unconfined ACWM in a vehicle or container, such as a roll-off, dumpster or truck in *lieu* of packaging the ACWM in individual leak tight containers.

CONTAINERIZE means to place into sealed containers which will prevent leakage of solids, including dust, and liquids.

DEMOLITION, for the purposes of 310 CMR 7.15, means the wrecking or taking out of any load-supporting structural member of a facility together with any related handling operations or the intentional burning of any facility.

DISTURBANCE means a physical disruption of the matrix of an ACM which predisposes the material to release fibers or to generate asbestos-containing dust or debris.

DUMPING GROUND, for the purpose of 310 CMR 7.15, means a facility or place used for the disposal of ACWM from one or more sources which is not established or maintained pursuant to a valid site assignment and permit in accordance with M.G.L. c. 111, § 150A, 310 CMR 16.00: *Site Assignment Regulations for Solid Waste Facilities* or 310 CMR 19.000: *Solid Waste Management*.

EMERGENCY RENOVATION OPERATION means a renovation operation that was not planned but results from a sudden, unexpected event that, if not immediately attended to, presents a safety or public health hazard, is necessary to protect equipment from damage, or is necessary to avoid imposing an unreasonable financial burden. EMERGENCY RENOVATION OPERATION includes operations necessitated by nonroutine failures of equipment.

ENCAPSULATION means the application of a coating or liquid sealant to ACM to reduce the tendency of the material to release fibers.

ENCLOSURE means the covering or wrapping of friable ACM in, under or behind air-tight barriers.

FACILITY means any dumping ground, or any installation, structure, building establishment or ship, and associated equipment.

FRIABLE means material that, when dry, can be crumbled, shattered, pulverized or reduced to powder by hand pressure.

FRIABLE ASBESTOS-CONTAINING MATERIAL (FRIABLE ACM) means any ACM, that, when dry, can be crumbled, shattered, pulverized or reduced to powder by hand pressure or any non-friable ACM that has been subjected to sanding, grinding, cutting, or abrading or has been crumbled, shattered or pulverized by mechanical means such as, but not limited to, the use of excavators, bulldozers, heavy equipment, or power and/or hand tools.

GLOVE BAG or GLOVEBAG means a manufactured plastic bag-type of enclosure with built-in gloves, which is placed with an air-tight seal around a facility component which permits ACM in or on the facility component to be removed without releasing asbestos fibers into the atmosphere.

HEPA FILTRATION means high efficiency particulate air filtration capable of filtering 0.3 micron particles with 99.97% efficiency.

INCIDENTAL MAINTENANCE PROJECT OR WORK means any asbestos abatement activity conducted in accordance with the applicable work practice standards set forth in 310 CMR 7.15 and which involves the removal or disturbance of:

(a) 100 square feet or less of asbestos-containing floor tile and related asbestos-containing mastics; and/or

(b) 32 square feet or less of asbestos-containing gypsum wallboard and/or joint compound.

7.15: continued

LEAK-TIGHT means a condition under which solids, including dust and liquids, cannot escape or spill out of a container.

NON-FRIABLE means material that, when dry, cannot be crumbled, shattered, pulverized or reduced to powder by hand pressure.

NON-FRIABLE ASBESTOS-CONTAINING MATERIAL (NON-FRIABLE ACM) means any ACM that, when dry, cannot be crumbled, shattered, pulverized or reduced to powder by hand pressure and that has not been subjected to sanding, grinding, cutting, or abrading and has not been crumbled, shattered, or pulverized by mechanical means such as, but not limited to, the use of excavators, bulldozers, heavy equipment, or power and/or hand tools.

OSHA means the Occupational Safety and Health Administration of the United States Department of Labor.

OWNER-OCCUPIED, SINGLE-FAMILY RESIDENCE means any single unit building containing space for uses such as living, sleeping, preparation of food, and eating that is used by a single family which owns the property both prior to and after renovation or demolition. OWNER-OCCUPIED, SINGLE-FAMILY RESIDENCE includes houses, mobile homes, trailers, detached garages, houseboats, and houses with a "mother-in-law apartment" or "guest room". OWNER-OCCUPIED, SINGLE-FAMILY RESIDENCE does not include rental property, multiple-family buildings, mixed use commercial/residential buildings or structures used for fire training exercises.

OWNER/OPERATOR means any person who:

(a) has legal title, alone or with others, of a facility or dumping ground;

(b) has the care, charge, or control of a facility or dumping ground, or

(c) has control of an asbestos abatement activity including, but not limited to, contractors and subcontractors.

RENOVATION, for the purposes of 310 CMR 7.15, means altering a facility or one or more facility components in any way, including the stripping or removal of ACM from a facility component. Operations in which load-supporting structural members are wrecked or taken out are "demolitions".

SAMPLING means the process of obtaining portions of materials suspected of containing asbestos, including the taking of bulk portions of materials for analysis to determine composition, and the collection of air for the purposes of measuring the presence of asbestos.

SURVEY means any pre-demolition or pre-renovation activity undertaken at a facility for the purpose of determining the presence, location, amount, and condition of ACM or material assumed to contain asbestos. Activities including, but not limited to, the following do not meet the requirements for a survey pursuant to 310 CMR 7.15:

(a) Inspections performed by employees or agents of federal, state or local government solely for the purpose of determining compliance with applicable statutes or regulations; or

(b) Inspections, surveillance and testing conducted for the purpose of compliance with AHERA.

7.15: continued

SUSPECT ASBESTOS-CONTAINING MATERIAL means products that have a reasonable likelihood of containing asbestos based upon their appearance, composition and use. SUSPECT ASBESTOS-CONTAINING MATERIAL includes, but is not limited to, non-fiberglass insulation (*e.g.* pipe, boiler, duct work, *etc.*), cement/transite shingles, vinyl floor and wall tiles, vinyl sheet flooring, plaster, cement/transite pipes, cement sheets (corrugated and decorative), ceiling tiles, cloth vibration dampers or ductwork, spray-on fire proofing, mastic (flooring or cove base adhesive or damp proofing), and asphalt roofing or siding materials (shingles, roofing felts, tars, *etc.*).

VISIBLE DEBRIS means any visually detectable particulate residue, such as dust, dirt or other extraneous material which may or may not contain asbestos.

WASTE SHIPMENT RECORD means the shipping document, required to be originated and signed by the owner/operator, used to track and substantiate the disposition of ACWM.

WORK AREA means the area or location where any asbestos abatement activity or incidental maintenance work is being performed, including but not limited to: areas used for accessing the location where asbestos abatement, asbestos-associated project work or incidental work is being performed; areas used for the storage of equipment or removed materials related to asbestos abatement activity; and other areas of a facility or location in which the Department determines that such asbestos abatement activity has been or may be an actual or potential cause of a condition of air pollution.

WORK PRACTICE STANDARDS means the standards, procedures or actions for the removal, enclosure or encapsulation of asbestos, or for the demolition, renovation, maintenance or repair of facilities containing asbestos.

WORKING DAY means any day that the Massachusetts Department of Environmental Protection is open for business.

(2) Applicability.

(a) 310 CMR 7.15 applies to any persons engaged in asbestos abatement activities or associated activities or actions set forth in 310 CMR 7.15(3), and to activities associated with such asbestos abatement activities, including, but not limited to, notifications, surveys, visual inspections, and recordkeeping.

(b) Nothing in 310 CMR 7.15 shall relieve any person from complying with all other applicable federal, state and local laws and regulations, including, but not limited to, 42 U.S.C.A. § 7412 (the Clean Air Act) and 40 CFR, Part 61, Subpart M (the Asbestos National Emission Standard for Hazardous Air Pollutants); and M.G.L. c. 149, §§ 6A through 6F (statutes authorizing the Department of Labor Standards to regulate asbestos) and 453 CMR 6.00: *The Removal, Containment or Encapsulation of Asbestos*.

(3) Prohibitions.

(a) No person shall:

1. Violate or cause, suffer, allow or permit a person to violate any requirement set forth in 310 CMR 7.15; or

2. Cause, suffer, allow, or permit any asbestos abatement activity which causes or contributes to a condition of air pollution; or

3. Cause, suffer, allow, or permit any asbestos abatement activity which poses an actual or potential threat to human health, safety and welfare or to the environment.

(b) No person shall prevent access to ACM for subsequent removal.

(c) No person shall spray ACM on any facility or facility component.

(d) No person shall apply an encapsulant to severely damaged or deteriorated ACM.

(e) No person shall install or reinstall asbestos-containing insulating material on a facility or facility component or install or reinstall a facility component that contains asbestos-containing insulating material.

7.15: continued

(f) No person shall abandon or leave inoperable or out-of-service facility components that contain ACM, that are not in compliance with 310 CMR 7.15(3)(g), and are located above ground or have been exposed by excavation on-site. Inoperable or out-of-service facility components containing ACM and located underground do not need to be removed unless they are disturbed or uncovered by excavation.

(g) No person shall fail to maintain ACM that is located above ground, in a facility or that is uncovered by excavation, in good condition and serving the intended purpose for which it was originally installed.

(h) No person shall make, or cause any other person to make, any false, inaccurate, incomplete or misleading statement(s) in any notification or any other record or report submitted to or required by the Department pursuant to 310 CMR 7.15. Each owner/operator of a facility subject to any asbestos abatement activity shall notify the Department in writing immediately, but in no event more than 24 hours after the discovery of any false, inaccurate, incomplete, or misleading statement(s) in any such notification or other record or report submitted to or required by the Department pursuant to 310 CMR 7.15.

(4) Survey Requirements. With the exception of the owner of an Owner-occupied, Single-family Residence who performs asbestos abatement activities at the owner's residence involving solely non-friable ACM, the owner/operator of a facility or facility component that contains suspect ACM shall, prior to conducting any demolition or renovation, employ or engage an asbestos inspector to thoroughly inspect the facility or facility component, or those parts thereof where the demolition or renovation will occur, to identify the presence, location, amount and condition of any ACM or suspect ACM and to prepare a written asbestos survey report. The survey shall identify and assess suspect ACM located in all areas that will be breached or otherwise affected by demolition or renovation activities including, but not limited to, wall cavities, areas above ceilings and under/between multiple layers of flooring. Public and private utility owners/operators of underground cement pipes in their system networks shall comply with the provisions of 310 CMR 7.15(12A)(b) in *lieu* of 310 CMR 7.15(4).

(a) The written asbestos survey report shall describe the demolition or renovation operation to be undertaken and identify the types, amounts, condition and locations of all ACM present. The written asbestos survey report shall also include the following:

1. The date(s) of the survey of the facility;
2. The printed name, business address, business telephone number, certification number and signature of the asbestos inspector who conducted the survey and prepared the report; and
3. A description of the manner used to determine the sampling locations.

(b) The written asbestos survey report shall also contain an inventory of the exact locations of the ACM or suspect ACM from which samples were collected, analytical results of all samples taken, the date(s) such samples were collected, the name(s) of the persons who provided asbestos analytical services, and a blueprint, site map, diagram or written description of the facility and locations(s) thereof subject to demolition or renovation. This documentation shall clearly identify each location subject to demolition and/or renovation and the corresponding footage (square and/or linear) of any ACM or suspect ACM in each location.

(c) Any suspect ACM that is not sampled and tested for the presence of asbestos must be handled and disposed of as if it were ACM and must be identified as ACM in the asbestos survey report.

(d) The owner/operator of a facility or facility component shall maintain a copy of the written asbestos survey report available at the facility for review by or submittal to the Department upon request at all times during the asbestos abatement activities and shall preserve and maintain such report at the facility for at least two years following the completion of said activities. If the facility is unstaffed or in the event that the facility is demolished, the owner/operator shall preserve and maintain the written asbestos survey report at its regular place of business.

(5) Removal Requirements. The owner/operator of a facility or facility component shall:

(a) Remove and dispose of any ACM in accordance with 310 CMR 7.15, prior to conducting any demolition and/or any renovation thereof; and

(b) Remove or encapsulate any friable ACM that has been or will be exposed or created as a result of any demolition or renovation, in accordance with 310 CMR 7.15(7).

7.15: continued

(6) Notification Requirements. Unless specifically exempted under the provisions of 310 CMR 7.15(6)(f), or if notification is being made under the terms of an approved facility blanket notification pursuant to 310 CMR 7.15(6)(j), the owner/operator of a facility or facility component shall notify the Department and obtain Department authorization prior to conducting any asbestos abatement activity, as follows:

(a) Each owner/operator shall ensure that a fully completed asbestos notification form, including any applicable fee, is received by the Department at least ten working days prior to the commencement of the asbestos abatement activity;

(b) An asbestos notification form shall be deemed accepted by the Department unless the person submitting said asbestos notification form is notified in writing by the Department of deficiencies in the asbestos notification form within ten calendar days of the Department's receipt of said form;

(c) The Department's acceptance of said asbestos notification form shall constitute the Department's authorization for the asbestos abatement activity described in the asbestos notification form to be conducted in compliance with all applicable provisions of 310 CMR 7.15;

(d) The start date on the asbestos notification form shall encompass the time required for set-up of the area where such asbestos abatement activity will occur, including any pre-cleaning and installation of polyethylene sheeting required by 310 CMR 7.15(7)(c); and

(e) Notification shall be made only by use of the Department approved asbestos notification form, and shall include all required information, be accompanied by the applicable fee, and be legible. An incomplete or illegible notification form will not be accepted and any asbestos abatement activity described therein will not be deemed authorized by the Department or in compliance with 310 CMR 7.15.

(f) Notification Exemptions. The following activities shall not be subject to the notification requirements of 310 CMR 7.15(6)(a) through (e):

1. Notification Exemption for Exterior Asbestos-containing Cementitious Shingles, Sidings and Panels. The removal or disturbance of 100 square feet or less of exterior asbestos-containing cementitious shingles, sidings and panels, provided that the applicable requirements of 310 CMR 7.15(12) are met.

2. Notification Exemption for Asbestos Incidental Maintenance Projects or Work. The removal or disturbance of asbestos-containing floor tile, and asbestos mastics or asbestos-containing gypsum wallboard/joint compound systems, provided that the applicable requirements of 310 CMR 7.15(13) are met.

3. Notification Exemption for Owner of Owner-occupied, Single-family Residence. The owner of an Owner-occupied, Single-family Residence who performs asbestos abatement activities at the owner's residence involving solely non-friable ACM; provided that the abatement activity does not cause the non-friable ACM to become friable ACM and provided that the asbestos abatement activity is not required to be conducted by a Licensed Contractor pursuant to 453 CMR 6.00: *The Removal, Containment or Encapsulation of Asbestos*. This exemption does not apply to the removal or disturbance of greater than 100 square feet of exterior asbestos-containing cementitious shingles, siding and panels.

(g) Notification Revision Procedures. Notification date changes shall be made as follows:

1. The original start date on a notification form that has been submitted to and accepted by the Department in compliance with 310 CMR 7.15(6)(a) and (b) may be revised (*i.e.* moved forward or postponed), and asbestos abatement activity may start on said revised date provided that a revised notification form is received and accepted by the Department at least ten working days prior to the new start date for the asbestos abatement activity and provided that the revision is properly submitted to and accepted by the Department prior to the start date for the asbestos abatement activity listed on the original notification form.

2. If the asbestos abatement activity will end earlier than the end date listed on the original notification form, the Department must receive a revised notification form identifying the change no later than 24 hours prior to the revised end date for the activity.

3. The asbestos abatement activity end date set forth in the original notification form may be extended to allow additional time to complete the specific asbestos abatement activity identified on the original notification. In such cases, the person who submitted the original notification form shall revise the original notification form and specify a new end date provided that the end date specified in the original notification form has not passed.

7.15: continued

4. If asbestos abatement activities are not continuous and will occur at intermittent times within the notified asbestos abatement work period identified on the notification form, the person who submitted the original notification shall inform the applicable Department regional office in writing, via fax, email or hand delivery, of the specific dates and times when the asbestos abatement activities will suspend and resume. The person who submitted the original notification form shall provide the Department with such notice a maximum of 24 hours following suspension of work and a minimum of 24 hours prior to resuming asbestos abatement activities.

(h) Multiple Building Abatements. Separate notification forms shall be submitted to and accepted by the Department at least ten working days in advance of any asbestos abatement activity for each building and/or structure in which asbestos abatement activities will occur.

(i) Waiver of the Advance Notification Period.

1. The Department may approve, at its sole discretion, a waiver of the ten working day advance notification period under the following circumstances and situations:

a. demolition of a facility under an order of a state or local government agency issued because the facility is structurally unsound and in danger of imminent collapse; or

b. an emergency renovation operation.

2. Requests for approval of an advance notification waiver shall be made to the applicable Department regional office.

3. When approved by the Department, the waiver shall apply only to the ten working day advance notification period. All other requirements of 310 CMR 7.15 shall continue to fully apply to asbestos abatement activities for which such notification waiver has been approved.

4. If the Department approves such a waiver, the person receiving the waiver shall provide notification regarding all asbestos abatement activities to the Department on the Department approved asbestos notification approval form (ANF 001) within 24 hours of commencement of the asbestos abatement activities, including set-up or on-site preparation activities.

(j) Facility Blanket Notification. An owner/operator may apply to the Department for approval of a blanket notification covering multiple asbestos abatement projects for limited maintenance projects involving less than ten linear feet of ACM on pipe or 25 square feet of ACM on other facility components at a facility; or for large scale planned asbestos abatement projects at a facility; or for work in individual contiguous utility system networks owned by public or private utilities involving up to 25 linear feet of ACM on pipe or up to 60 square feet of ACM on other facility components at a facility.

1. Blanket notification applications shall be submitted on Department approved forms, shall include all required information and any additional information requested by the Department, shall be accompanied by the appropriate fee, and shall be legible.

2. Blanket notification approvals may be granted for a period not to exceed 12 months at the Department's discretion and when granted the terms of the approval shall be facility-specific.

3. The Department's receipt and acceptance of a blanket notification application shall not constitute approval thereof. The Department will issue a written approval or denial of the application at its discretion.

4. Individual notifications shall be submitted to the Department before the start of each project or project segment thereof conducted under an approved Facility Blanket notification. The approval of an application for a Facility Blanket notification shall have the effect of waiving the ten working days advance notification period for each individual project or project segment conducted under said Facility Blanket approval. However, each approval of an application for a Facility Blanket notification shall establish an advance notification period that shall apply to the individual project(s) or project segment(s) conducted under that specific approval.

(7) General Asbestos Abatement Work Practice Standards. Unless otherwise exempted under 310 CMR 7.15(9), 310 CMR 7.15(10), 310 CMR 7.15(11), 310 CMR 7.15(12) or 310 CMR 7.15(13), the owner/operator of a facility or facility component where any asbestos abatement activity is conducted shall ensure that the work practice standards listed below are followed.

7.15: continued

(a) No Visible Emissions. No visible emissions shall be discharged to the outside air during the collection, processing, packaging, or transporting of any ACM or ACWM.

(b) Required Use of Asbestos Contractors. Except as allowed by 453 CMR 6.14(1)(a): *Exception to Licensing Requirement for Entities Conducting Response Actions in their Own Facilities*, only asbestos contractors licensed pursuant to 453 CMR 6.00: *The Removal, Containment or Encapsulation of Asbestos* shall carry out asbestos abatement activities.

(c) Work Area Preparation Requirements to prevent emissions to the ambient air.

1. Shutdown of HVAC Systems. The facility heating, ventilation and air conditioning (HVAC) systems in the work area shall be shut down, locked out and isolated.

2. Removal of Moveable Objects. All moveable objects shall be removed from the work area prior to commencement of asbestos abatement work. Items to be reused which may have been contaminated with asbestos shall be decontaminated by HEPA vacuuming or wet cleaning prior to their being removed from the work area.

3. Covering of Non-moveable Objects. All non-moveable or fixed objects remaining within the work area shall be wrapped or covered with six mil (minimum) plastic sheeting and completely sealed with duct tape or the equivalent.

4. Isolation of Work Area. Prior to the commencement of any asbestos abatement activity, the work area shall be isolated in accordance with the requirements of 310 CMR 7.15(7)(c)4. to prevent emissions to the ambient air. The work area shall be isolated by sealing all openings including, but not limited to, windows, doors, ventilation openings, drains, grills, and grates with six mil thick (minimum) plastic sheeting and duct tape or the equivalent. For asbestos abatement activities defined at 310 CMR 7.15(1), large openings such as open doorways, elevator doors, and passageways shall be first sealed with solid construction materials, such as plywood over studding, which shall constitute the outermost boundary of the asbestos work area. All cracks, seams and openings in such solid construction materials shall be caulked or otherwise sealed, so as to prevent the movement of asbestos fibers out of the work area.

5. Covering of Floor and Wall Surfaces. Except as listed in 310 CMR 7.15(7)(c)5.a. through c., floor and wall surfaces shall be covered with plastic sheeting. All seams and joints shall be sealed with duct tape or the equivalent. Floor covering shall consist of at least two layers of six mil thick plastic sheeting, with the edges upturned to cover at least the bottom 12 inches of the adjoining wall(s). Wall covering shall consist of a minimum of two layers of four mil thick plastic sheeting. Wall covering shall extend from ceiling to floor and overlap the upturned floor coverings without protruding onto the floor. Duct tape or the equivalent shall be used to seal the seams in the plastic sheeting at the wall-to-floor joints.

a. Exception to Covering Requirement Where Surfaces Are Impervious. Compliance with 310 CMR 7.15(7)(c)5. is not required where floors and walls are covered by ceramic tile or other impervious materials that are free from holes, drains, cracks, fissures or other openings and which may be thoroughly decontaminated by washing at the conclusion of the work, provided that such action does not result in the passage of asbestos fibers from the work area.

b. Exception to Covering Requirement for Abatement Surfaces. Compliance with 310 CMR 7.15(7)(c)5. is not required for those floor, ceiling and wall surfaces from which asbestos coverings are removed.

c. Exception to Wall Surface Covering Requirement Where Glovebags Are Used. Covering of wall is optional for asbestos abatement activities where glovebags are used as the sole means of removal or repair, provided that the work area is isolated in accordance with 310 CMR 7.15(7)(c)4., that all moveable objects in the work area are removed in accordance with 310 CMR 7.15(7)(c)2., that immoveable objects remaining in the work area are covered in accordance with 310 CMR 7.15(7)(c)3., and that all other relevant requirements of 310 CMR 7.15(7)(c)1. through 4. are met. Where glovebags are used, the floor of the work area shall be covered with a minimum of one layer of six mil thick plastic sheeting.

6. Covering of Ceiling Surfaces. Ceiling surfaces within the work area shall be covered with a minimum of two layers of four mil thick plastic sheeting or shall be cleaned and decontaminated by wet wiping and HEPA-vacuuming in accordance with 310 CMR 7.15(7)(f)4.

7.15: continued

(d) Equipment Decontamination Requirements. No equipment, supplies or materials (except properly containerized waste material) shall be removed from an asbestos work area, unless such equipment, supplies or materials have been thoroughly cleaned and are free of asbestos debris. Where decontamination is not feasible, such materials shall be wrapped in a minimum of two layers of six mil thick polyethylene sheeting with all joints, seams and overlaps sealed with duct tape or equivalent, or containerized in a metal, plastic or fiber drum with a locking lid. Said wrapped equipment, supplies or materials shall be labeled as being ACWM prior to removal from the work area. HEPA vacuums shall be emptied of contents prior to removal from the work area. Air filtration devices shall have used pre-filters removed and replaced with fresh filters prior to removal from the work area. Used HEPA filters and pre-filters shall be disposed of as ACWM.

(e) Requirements for Work Area Ventilation System.

1. A HEPA-filtered work area ventilation system shall be used to maintain a reduced atmospheric pressure of at least -0.02 column inches of water pressure differential within the contained work area.
2. The HEPA system shall be in operation at all times from the commencement of the asbestos project until the requirements of 310 CMR 7.15(8) have been met.
3. The ventilation equipment utilized shall be of sufficient capacity to provide a minimum of four air changes per hour and shall be equipped with an operating alarm system capable of indicating when the unit is not working properly, and utilizing a clean filter specified for that unit and capable of filtering 0.3 micron particles with 99.97 % efficiency.
    a. No later than June 20, 2017 the operating alarm system shall be an audible and visual alarm system capable of indicating the unit is working properly, and utilizing a clean filter specified for that unit and capable of filtering 0.3 micron particles with 99.97 % efficiency.
4. The HEPA system units shall be operated in accordance with Appendix J of *EPA Guidance Document* EPA 560/5-85-024.
5. Make-up air entering the work area shall pass through the decontamination system.
6. Exhaust air shall be HEPA-filtered before being discharged outside of the work area.
    a. Exhaust air tubes or ducts associated with the work area ventilation system shall be free of leaks.
    b. Whenever feasible, exhaust air shall be discharged to the outside of the building. If access to the outside is not available, exhaust air may be discharged to an area within the building, but in no case shall exhaust air be discharged into any occupied areas of the building or into any areas of the building which contain exposed or damaged asbestos.
7. Exception to Work Area Ventilation System Requirement Where Glovebags Are Used. Compliance with 310 CMR 7.15(7)(e) is not required for asbestos abatement activities where glovebags are used as the sole means of abatement removal or repair.

(f) Removal and Cleanup Requirements. Removal of ACM from facility components shall be conducted within the work area at the site of origin as described in 310 CMR 7.15(7)(f)1. through 5.

1. Wetting of ACM. Prior to removal, all ACM shall be adequately wetted with amended water. Amended water shall not be applied in amounts that will cause run-off or leakage of the water from the work area. Once removed, ACM shall be kept adequately wet until and after it is placed into containers pursuant to 310 CMR 7.15(15).
2. Removal of ACM Being Removed as Units or in Sections. Facility component(s), covered or coated with ACM, being removed as units or in sections, shall be adequately wetted, carefully lowered to the floor level as units or sections and abated within the work area.
3. Containerization of ACWM. All ACWM within the work area shall be promptly cleaned up and placed into leak-tight containers as described in 310 CMR 7.15(7)(f)3.a. through c. Containerized ACWM shall be removed from the work area at least once per shift and stored in secured, totally enclosed vehicles or containers that are designed, constructed, and operated to prevent spills, leaks, or emissions in accordance with 310 CMR 7.15(15) through (17).

7.15: continued

a. ACM and ACWM not containing components with sharp edges shall be containerized in two plastic bags (six mil minimum thickness each bag, one inside the other) or in leak-proof metal, plastic or plastic lined drums with locking lids.

b. ACM and ACWM with sharp-edge components shall be contained in leak-proof metal, plastic or plastic-lined drums with locking lids or plastic lined boxes.

c. Large components removed intact shall be wrapped in a minimum of two layers of six mil thick polyethylene sheeting with all joints and seams sealed with duct tape or equivalent, and labeled as ACWM prior to removal from the contained work area.

4. Clean-up. Following an asbestos abatement activity, all contaminated surfaces within the work area shall be decontaminated using HEPA-vacuuming or wet cleaning techniques. All equipment and materials used and all surfaces from which ACM has been removed shall be decontaminated. An inch of soil shall be removed from dirt floors and disposed of as ACWM. Clean-up shall be to the level of no visible debris.

5. Removal of Work Area Barriers and Work Area Ventilation Systems. The conditions described in 310 CMR 7.15(7)(f)5.a through c. shall be maintained until such time as the visual inspection requirements of 310 CMR 7.15(8) are met:

a. all work area barriers remain in place;

b. work area ventilation systems (if required) remain in operation; and

c. all other work practice standards established by 310 CMR 7.15 are met.

(8) Visual Inspection Requirements. With the exception of the owner of an Owner-occupied, Single-family Residence who performs asbestos abatement activities at the owner's residence involving solely non-friable ACM, in addition to the specific asbestos abatement work practice standards set forth at 310 CMR 7.15(7), upon completion of an asbestos abatement activity, the owner/operator shall ensure that the following visual inspection procedures are performed for all asbestos abatement activities. The visual inspection shall be performed only by an asbestos project monitor. Public and private utility owners/operators of underground asbestos cement pipes in their system networks shall comply with the provisions of 310 CMR 7.15(12A)(d) in *lieu* of 310 CMR 7.15(8).

(a) An asbestos project monitor shall inspect all surfaces within the work area for visible debris.

(b) Should any visible debris be found in the work area, it shall be repeatedly cleaned by the asbestos contractor in accordance with 310 CMR 7.15 until there is no visible debris.

(9) Requirements for Asbestos Glovebag Operations. The owner/operator of a facility or facility component where asbestos abatement activities involving glovebag operations are conducted shall ensure that the following requirements are met:

(a) For activities that disturb friable ACM, no visible emissions shall be discharged to the outside air during the collection, processing, packaging or transporting of any ACM or ACWM.

(b) Glovebags shall be used only on those facility components for which they are specifically designed and they shall not be modified for use on any other type of facility component. Glovebags shall be constructed of six mil thick (minimum) plastic sheeting and be seamless at the bottom.

(c) Glovebags shall be used only once and shall not be moved along the facility component from where they are initially applied.

(d) The work area shall be isolated in accordance with 310 CMR 7.15(7)(c)5.c. and cleaned of visible debris by wet wiping or HEPA-vacuuming prior to installation of the glovebag.

(e) Glovebags shall be installed so as to form an airtight covering around the facility components on which they are to be used. Any friable ACM in the immediate area of glovebag installation shall be wrapped and sealed in two layers of six mil (0.006 inch) thick plastic sheeting or otherwise maintained intact prior to glovebag installation. All openings in the glovebag shall be sealed against leakage with duct tape or the equivalent material.

(f) ACM shall be adequately wetted with amended water prior to its removal and shall be maintained in an adequately wet condition inside the glovebag.

(g) Any ACM that has been exposed as a result of the glovebag operation shall be removed, encapsulated or enclosed so as to prevent the leakage of asbestos fibers prior to the removal of the glovebag.

7.15: continued

(h) All surfaces inside the glovebag from which ACM has been removed and the upper portions of the glovebag itself shall be cleaned free of visible debris prior to removal of the glovebag.

(i) Debris shall be isolated in the bottom of the glovebag by twisting the bag so as to form a closure in the middle. This closure shall then be taped around with duct tape or the equivalent. Air in the glovebag shall be exhausted with a HEPA vacuum cleaner prior to its removal.

(j) Following removal from the facility component, the glovebag and its contents shall be containerized in accordance with 310 CMR 7.15(15) and 310 CMR 19.000: *Solid Waste Management*.

(10) Requirements for the Removal of Asbestos-containing Asphaltic Roofing and Siding Materials.

(a) If the requirements of 310 CMR 7.15(10) are followed, asbestos-containing asphaltic roofing and siding may be disposed of in any landfill permitted by the Department to accept solid waste pursuant to 310 CMR 19.000: *Solid Waste Management*. If the asbestos-containing asphaltic roofing and siding are not handled in accordance with 310 CMR 7.15(10) or if the Department has determined that asbestos fibers may be released during handling, removal or disposal, then the materials shall be disposed of in a landfill that has obtained a special waste permit to accept asbestos wastes or is managing such wastes in accordance with 310 CMR 19.061: *Special Waste*.

(b) Roof level heating and ventilation air intakes shall be isolated by covering the intakes with six mil thickness plastic sheeting prior to the start of the removal work.

(c) Asphaltic shingles and felts shall be removed intact to the greatest extent feasible.

(d) Asphaltic shingles and felts that are not intact, or will be rendered non-intact, shall be adequately wet during removal.

(e) Where cutting machines are used in the removal of asphaltic shingles and felts, said cutting machines shall be equipped with a HEPA vacuum to capture dust produced by the cutting process. Cutting machines that are not equipped with a HEPA vacuum to capture dust produced by the cutting process shall only be used inside a work area for which containment sufficient to prevent visible emissions of fugitive dust to the ambient air has been established.

(f) Where cutting machines are used in the removal of asphaltic shingles and felts, the material shall be adequately wetted throughout the cutting process.

(g) Dust produced by power roof cutters operating on aggregate surfaces shall be removed by HEPA-vacuuming. Dust produced by power roof cutters operating on non-aggregate, smooth surfaces shall be removed by HEPA-vacuuming or wet wiping along the cut line.

(h) Asbestos-containing shingles or felts shall not be dropped or thrown to the ground. Unless the material is carried or passed to the ground by hand, it shall be lowered to the ground by crane or hoist or transferred in dust-tight chutes.

(i) Intact asphaltic shingles and felts shall be lowered to the ground prior to the end of each work shift. Non-intact asphaltic shingles and felts shall be kept adequately wet at all times while on the roof. Non-intact asphaltic shingles and felts shall be placed in an impermeable waste bag (six mil thickness) or wrapped in plastic sheeting (minimum six mil thickness), sealed with duct tape or the equivalent and lowered to the ground prior to the end of each work shift.

(j) For activities that disturb friable ACM, no visible emissions shall be discharged to the outside air during the collection, processing, packaging or transporting of any ACM or ACWM.

(11) Requirements for Window Painting and/or Repair Work That Result in the Disturbance of Asbestos-containing Glazing and/or Caulking Compounds.

(a) A work area defined at 310 CMR 7.15(1) shall be established that extends outward from the exterior side of the building or facility where the window painting and/or repair work that will result in disturbance of asbestos-containing glazing and/or caulking compounds is to take place. Said work area shall be large enough to encompass all areas where dust, debris or waste generated during the operation are expected to accumulate and areas where there is a reasonable possibility that airborne levels of asbestos could be elevated, as well as any area occupied by equipment.

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(b) Windows, doors and other openings on the side of the building where the window repair/painting work that will result in disturbance of asbestos-containing glazing and/or caulking compounds is occurring shall be closed while the work is occurring and air conditioners on the same side of the building shall be turned off.

(c) Tarpaulin or plastic sheeting shall be spread on the ground under the window(s) being painted or repaired. Said tarpaulin or plastic sheeting shall extend away from the edge of the building and to either side of the work area a sufficient distance to catch any debris generated by the work operation. Tarpaulin or sheeting shall be cleaned of accumulated debris no later than the end of each work shift.

(d) If the entire sash is to be removed during painting or repair operations, window openings shall be sealed on the inside of the building with six mil thickness polyethylene sheeting in a manner sufficient to prevent leakage of dust or debris to interior spaces. Where less than an entire sash is to be replaced, covering and sealing of interior surfaces of the sash that encompasses the area of the panes being worked on may be performed in *lieu* of sealing the entire sash.

(e) Prior to commencing removal or repair of asbestos-containing glazing compound or caulk, the exterior and interior window well and sash areas shall be pre-cleaned by HEPA-vacuuming and/or wet wiping.

(f) Asbestos-containing glazing compound and caulk shall be adequately wet with amended water prior to removal or repair. All pieces or particles of glazing compound and caulk shall be removed using a HEPA vacuum and/or using a wet wipe collection method.

(g) The work area, including ground covers and equipment, shall be cleaned of visible debris at the end of each workday.

(h) Upon completion of the removal of the asbestos-containing glazing compound and/or caulk, the sash and sill areas shall again be cleaned by HEPA-vacuuming and/or wiped with a wet sponge or cloth. Polyethylene sheeting (where used) shall be removed from the interior of the window and disposed of as ACWM in accordance with 310 CMR 7.15(15) through (18), and the window well shall be cleaned by HEPA-vacuuming and/or wet wiping.

(i) All equipment utilized in the work operation shall be cleaned of visible dust and debris by HEPA-vacuuming and/or wet wiping prior to removal from the work area. Wet wipes shall be managed as ACWM.

(j) The tarpaulin or plastic sheeting below the window(s) shall be cleaned of visible dust and debris by HEPA-vacuuming and/or wet wiping. Dry sweeping shall not be allowed. Ground covers that are free of visible debris and dust may be reused or disposed as solid waste in accordance with 310 CMR 19.000: *Solid Waste Management*.

(k) Barrier tape may be disposed as solid waste in accordance with 310 CMR 19.000: *Solid Waste Management*.

(l) If disposable protective clothing is used, it shall be disposed as ACWM in accordance with 310 CMR 7.15(15) through (18).

(m) Wetted window caulking and glazing and other ACM shall be collected and sealed into a six mil plastic bag that is placed in a leak-tight container for disposal as ACWM in accordance with 310 CMR 7.15(15) through (18).

(n) If an entire sash is to be removed and disposed of as ACWM, then the adequately wetted sash shall be removed intact, wrapped in a minimum of two layers of six mil thick polyethylene sheeting with all joints and seams sealed with duct tape.

(o) At the conclusion of the work, the work site shall be inspected for paint dust or chip debris and asbestos-containing glazing compound or caulk. The work area shall be re-cleaned until no such debris is found.

(p) All waste shall be labeled as ACWM prior to removal from the work area.

(q) Visual inspection of the work area required by 310 CMR 7.15(8) shall be conducted by a person who has completed the asbestos operations and maintenance projects worker training specified in 453 CMR 6.00: *The Removal, Containment or Encapsulation of Asbestos*.

(r) For activities that disturb friable ACM, no visible emissions shall be discharged to the outside air during the collection, processing, packaging, or transporting of any ACM or ACWM.

(12) Requirements for Exterior Asbestos-containing Cementitious Shingles, Siding and Panels.

(a) Asbestos cement shingles, siding and panels shall not be broken, sanded, sawed or drilled at any time during removal or subsequent handling.

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(b) Tarpaulin or plastic sheeting shall be spread on the ground under the areas where the shingles, siding or panels are being removed. Said tarpaulin or plastic sheeting shall extend away from the edge of the building and to either side of the work area a sufficient distance to catch any debris generated by the work operation. Tarpaulin or sheeting shall be cleaned of accumulated debris no later than the end of each work shift.

(c) Openings on the side of the building where the asbestos abatement activities are taking place shall be closed or sealed with polyethylene sheeting and duct taped in a manner sufficient to prevent leakage of dust or debris to interior spaces.

(d) Nails securing shingles shall be cut or pulled to allow intact shingle removal. Cementitious asbestos-containing shingles, siding and panels shall be removed whole and intact to the greatest extent feasible. Methods likely to break shingles, siding or panels during removal shall not be used.

(e) Each panel, siding or shingle shall be adequately wetted with amended water prior to removal.

(f) Shingles, siding or panels shall be carefully lowered to the ground in a manner to avoid breakage.

(g) Removed shingles, siding or panels and associated debris shall be containerized in leak-proof metal, plastic or plastic-lined drums or boxes or wrapped with double thickness plastic sheeting (six mil minimum thickness each layer) sealed with duct tape no later than the end of each work shift.

(h) Uncontained asbestos cement shingles, siding or panels shall not be bulk loaded into a truck, dumpster or trailer for storage, transport or disposal.

(i) For activities that disturb friable ACM, no visible emissions shall be discharged to the outside air during the collection, processing, packaging or transporting of any ACM or ACWM.

(12A) Requirements for Underground Asbestos-cement Pipe.

(a) Applicability.

1. The requirements of 310 CMR 7.15(12A)(b) and (d) shall apply only to repair and replacement of underground asbestos-cement pipe that is owned and/or operated by public and private utilities (*e.g.*, pipes conveying drinking water, sanitary sewage, storm water, electricity, and gas). Repair and replacement of all other underground cement pipe shall comply with the survey requirements at 310 CMR 7.15(4) and the visual inspection requirements of 310 CMR 7.15(8) if the pipe is found to be ACM.

a. Public and private utility owners/operators of underground asbestos-cement pipe covered by 310 CMR 7.15(12A) shall comply with all the requirements of 310 CMR 7.15(12A)(b) in *lieu* of 310 CMR 7.15(4), Survey Requirements.

b. Public and private utility owners/operators of underground asbestos-cement pipe shall comply with all the requirements of 310 CMR 7.15(12A)(d) in *lieu* of 310 CMR 7.15(8), Visual Inspection Requirements.

2. All owners/operators shall comply with all the requirements of 310 CMR 7.15(12A)(c) in *lieu* of 310 CMR 7.15(7)(c) and (e), General Asbestos Abatement Work Practice Standards, when conducting asbestos abatement activity involving underground asbestos-cement pipe.

3. All owners/operators shall comply with all other requirements of 310 CMR 7.15 when conducting asbestos abatement activity involving underground asbestos-cement pipe.

(b) Survey.

1. The public and private utility owner/operator shall thoroughly inspect the facility, facility component or any part thereof where the demolition or renovation will occur, to identify the presence, location and amount of any asbestos-cement pipe. If the pipe is not identified as asbestos-cement pipe, the owner/operator shall comply with 310 CMR 7.15(4). The thorough inspection shall be satisfied by one of the following:

a. As-built plans or other documents, reviewed by the owner/operator, identifying whether particular underground cement pipe or parts thereof that may be affected by a repair or replacement project is asbestos-cement pipe, provided that the documentation has been updated to reflect any repairs or alterations; or

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b. Visual identification conducted by a person who meets the requirements of 310 CMR 7.15(12A)(b)2. through their field observations of the underground asbestos-cement pipe to be worked on including, but not limited to, the manufacturer's brand-label markings indicating transite material or the source of the pipe; or

c. A presumption by the owner/operator that the underground cement pipe is asbestos-cement pipe.

2. The survey in 310 CMR 7.15(12A)(b)1.b. shall be conducted by a person who has successfully completed a training course that has been approved in writing by the Department of Labor Standards, that specifically addresses, at a minimum, underground asbestos-cement pipe and the survey requirements in 310 CMR 7.15(12A)(b).

3. The person conducting the survey shall document in writing, in a format prescribed by the Department, the method used to determine whether the cement pipe to be worked on is an ACM including, but not limited to, identification of specific documents, the specific features of the pipe that were visually observed and/or other information that was relied upon to make said determination. Owners/operators shall keep such documentation at their regular place of business for two years from the date of the survey and provide it to the Department upon request.

(c) Specific Work Practice Requirements for Underground Asbestos-cement Pipe. Owners/operators shall ensure the work practice standards listed below are followed:

1. Asbestos-cement pipe shall be handled in a manner that will minimize the risk of making it friable ACM or releasing asbestos dust into the environment.

2. At the start of work involving asbestos-cement pipe, owners/operators shall ensure that:

a. The asbestos-cement pipe shall be exposed with minimal disturbance.

b. Mechanical excavation shall not be used within six inches of the asbestos-cement pipe.

c. The soil within six inches of the asbestos-cement pipe shall be uncovered by hand or with a shovel.

d. Once the pipe has been exposed, an assessment shall be made before proceeding to determine whether the asbestos-cement pipe is damaged, cracked or broken to determine whether the requirements of 310 CMR 7.15(12A)(c)3. or 4. apply to the asbestos abatement activity.

3. If the assessment shows that the asbestos-cement pipe is intact and not deteriorated:

a. Place six mil (0.006 inch) thick polyethylene sheeting under the asbestos-cement pipe to prevent soil contamination.

Adequately wet the asbestos-cement pipe with amended water using surfactant or liquid soap before and during removal to avoid creating airborne dust.

b. Separate the asbestos-cement pipe at the nearest coupling (bell or compression fitting).

c. Slide the asbestos-cement pipe apart at the joints (no saw cutting) or use other methods that do not cause the asbestos-cement pipe to break, become friable ACM or otherwise create the potential to release asbestos fibers.

d. Containerizing the wet asbestos-cement pipe and other debris from the abatement in accordance with 310 CMR 7.15(7)(f)(3) may be done in the trench or adjacent to the trench.

e. If the trench is filled with water, the placement of polyethylene sheeting is not required.

4. If the asbestos-cement pipe is deteriorated or is not intact, or when the use of mechanical breakage with saws, snap or blade cutting, and/or tapping is necessary:

a. Place six mil (0.006 inch) thick polyethylene sheeting under the asbestos-cement pipe to prevent soil contamination.

b. Adequately wet asbestos-cement pipe with amended water where cutting or breaking will occur.

c. Saw cutting of asbestos-cement pipe shall only be conducted with a HEPA-shrouded vacuum attachment or wet cutting equipment, unless it is conducted within a small enclosure that isolates the area in which the saw cutting is being conducted to prevent the release of asbestos fibers to ambient air.

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d. Wrap wet asbestos-cement pipe in two layers of six mil polyethylene sheeting, seal with duct tape and label (this may be done either in the trench or adjacent to the trench).

5. For activities that disturb friable ACM, no visible emissions shall be discharged to the outside air during the collection, processing, packaging or transporting of any ACM or ACWM.

(d) Visual Inspection. The final visual inspection shall be satisfied by complying with the following requirements:

1. The visual inspection shall be performed by a person who has successfully completed a training course, approved in writing by the Department of Labor Standards, that specifically addresses, at a minimum, underground asbestos-cement pipe and the requirements of the visual inspection in 310 CMR 7.15(12A)(d).

2. The person conducting the final visual inspection shall:

a. Inspect the work area to ensure there was no visible debris remaining:

i. In the excavation trench;

ii. In soil excavated from the trench;

iii. In the surrounding area adjacent to the trench after the removal of the asbestos-cement pipe, and

iv. On any tools used during the removal/repair/replacement activities.

b. Ensure that all ACWM has been removed for proper storage/disposal.

3. The person who conducted the final visual inspection shall sign and date the documentation of the final inspection, in a format provided by the Department, as evidence that the inspection was performed and that the condition of "no remaining visible debris" was met. Owners/operators shall keep such documentation at their regular place of business for two years from the date of final visual inspection and provide it to the Department upon request.

(13) Work Practice Standards for Asbestos Incidental Maintenance Projects or Work. The owner/operator of a facility or facility component where an incidental maintenance project or work is conducted, as defined by 310 CMR 7.15(1), involving the removal or disturbance of asbestos-containing floor tile, or asbestos-containing gypsum wallboard/joint compound systems shall ensure that the following general work practice standards are met.

(a) General Work Practice Standards for Incidental Maintenance Projects or Work.

1. Barriers shall be constructed, as necessary, to insure that asbestos-containing dust released during work activities is contained within the work area. Glove bags, HEPA-shrouded tools and mini-enclosures are permitted in *lieu* of constructed barriers.

2. ACM shall be adequately wetted with amended water before it is disturbed, and it shall be kept adequately wet throughout the asbestos abatement activities until containerized in accordance with 310 CMR 7.15(7)(f)3.

3. Where ACM is being removed, it shall be removed in an intact state to the greatest extent feasible.

4. Where power tools are used to cut, chip or abrade an ACM, said power tools shall be equipped with HEPA-filtered local exhaust attachments specifically manufactured for the tools being used.

5. Any friable ACM exposed as a result of the asbestos abatement activities shall be removed or, if in suitable condition, encapsulated.

6. HEPA-vacuuming or wet cleaning shall be used to decontaminate the work area and any equipment used in the work operation until all surfaces are free of visible debris. The use of compressed air or dry-sweeping is prohibited.

7. HEPA vacuums shall be emptied and decontaminated in accordance with 310 CMR 7.15(7)(d).

8. All surfaces within the work area shall be visually inspected for dust, debris and other particulates residue in accordance with 310 CMR 7.15(8). The work area shall be repeatedly cleaned until there is no visible debris.

(b) Requirements for the Removal of Asbestos Floor Tile as Incidental Maintenance Projects or Work. Any person conducting an incidental maintenance project or work involving the removal of floor tile and related mastics shall presume that said materials contain asbestos, unless the results from an asbestos bulk analysis or manufacturer's specifications indicate otherwise.

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1. General Requirements:
   a. Asbestos floor tile and related mastics being removed shall not be sanded, dry-swept, dry-scraped, drilled, sawed, abrasive-blasted, mechanically chipped or pulverized during said removal work.
   b. All furniture and other movable objects shall be removed from the work area before removal begins. All non-movable objects in the work area shall be wrapped or covered with four mil (0.004 inch minimum) plastic sheeting. Plastic sheet coverings shall be completely sealed with duct tape or the equivalent.
   c. The entire floor surface from which asbestos floor tile is to be removed shall be vacuumed with a HEPA vacuum prior to removal of the floor tile.

2. Specific Requirements for Removal of Asbestos Floor Tile. In addition to the General Requirements of 310 CMR 7.15(13)(b)1., the following specific requirements for the removal of asbestos floor tile shall also be followed:
   a. Floor tiles shall be adequately wetted with amended water prior to removal and kept adequately wet throughout the removal process.
   b. Floor tiles shall be individually removed by prying upward with hand scrapers or similar hand-held tools in a manner which minimizes breakage. Removal with spud-bars, ice scrapers or similar implements is prohibited. Where tiles do not readily release from underlying mastic, the removal tool may be struck with a hammer to facilitate release. Floor tiles shall be removed in an intact state to the extent feasible.
   c. Tile surfaces may be heated with a heat gun or other heat source to soften the adhesive and facilitate tile removal. Where heat is used to facilitate removal, the wetting of tile specified in 310 CMR 7.15(13)(b)2.a. may be delayed until after release of the tile from the floor surface.
   d. Removed floor tiles and ACWM within the work area shall be promptly cleaned up and containerized while still adequately wet. Containerized ACM shall be removed from the work area at least once each working shift. Waste not containing components with sharp edges shall be containerized in two plastic bags (six mil minimum thickness each bag, one inside the other) or in metal, plastic or fiber drums with locking lids. Floor tile with sharp edges and sharp-edged components likely to puncture the plastic bags specified above shall be contained in leak-proof metal, plastic or plastic lined drums or boxes.
   e. Following containerization of floor tile and associated debris, the floor surface shall be HEPA-vacuumed while still wet and then allowed to dry.
   f. Immediately after drying, the floor surface shall be HEPA-vacuumed again before the visual inspection required by 310 CMR 7.15(8) is performed.

(c) Specific Requirements for the Removal or Repair of Asbestos-containing Gypsum Wallboard and/or Joint Compound. Any person conducting an incidental maintenance project or work involving the removal of gypsum wallboard and/or joint compound shall presume that said materials contain asbestos unless the results from an asbestos bulk analysis or manufacturer's specifications indicate otherwise.

1. Where removal of sections of gypsum wallboard and/or joint compound is required, said sections shall be removed intact to the greatest extent feasible.
2. Where gypsum wallboard and/or joint compound must be cut to allow removal or refitting of sections, only the minimum number of cuts necessary to accomplish said removal or refitting shall be permitted.
3. Manually-operated tools or power tools fitted with HEPA-filtered vacuum attachments shall be used for the cutting or resurfacing of asbestos-containing gypsum wallboard and/or joint compound.
4. Where manually-operated tools are used for the cutting or resurfacing of gypsum wallboard and/or joint compound, the area being cut shall be adequately wetted with amended water during the cutting operation.
5. Dry sanding of asbestos-containing gypsum wallboard and/or joint compound during refinishing operations is prohibited; only wet sanding is permitted.
6. Where holes of ½ inch or less in diameter are to be drilled through asbestos gypsum wallboard and/or joint compound, the area encompassing the hole shall be covered with a sufficient quantity of shaving foam to catch the generated chips and dust. Where holes of greater than ½ inch are to be drilled, the area being drilled shall be adequately wetted with amended water during the drilling operation.

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(14) Nontraditional Asbestos Abatement Work Practice Approvals.

(a) A person may apply to the Department to utilize Nontraditional Asbestos Abatement Work Practices that result in the need to deviate from section(s) of 310 CMR 7.15 if one or more of the following circumstances or situations occur:

1. Demolition of a facility under an order of a state or local government agency issued because the facility is structurally unsound and in danger of imminent collapse;
2. Where ACM or ACWM was not accessible for testing and was, therefore, not discovered until after demolition began and, as a result of the demolition, the material cannot be safely removed;
3. Where asbestos abatement activity is conducted as part of an emergency renovation operation;
4. Where asbestos abatement activity is conducted to clean up and decontaminate a facility or portion of a facility as a result of:
   a. asbestos abatement activities not conducted in compliance with 310 CMR 7.15, or
   b. ACM deterioration that, if not immediately attended to, presents a safety or public health hazard;
5. For a facility that is being renovated, where wetting would unavoidably damage equipment or present a safety hazard; or
6. Bulk loading ACM and/or ACWM.

(b) A Nontraditional Asbestos Abatement Work Practice Approval, if granted, shall apply to a specific facility or facility component and shall be nontransferable.

(c) The Department shall, in its sole discretion, only grant a Nontraditional Asbestos Abatement Work Practice Approval, to the extent and for the duration of time during which the Department is persuaded that the activities allowed by the approval will:

1. result in no discharge of visible emissions to the outside air;
2. keep ACM and ACWM adequately wet until it is placed and sealed into containers pursuant to 310 CMR 7.15(15);
3. comply with all other applicable requirements of 310 CMR 7.15; and
4. be consistent with the requirements of the laws and regulations cited in 310 CMR 7.15(2)(b).

(d) Any person applying for a Nontraditional Asbestos Abatement Work Practice Approval shall submit an application to the Department on a Department approved form. The application shall include:

1. a description of the need and justification for each requirement of 310 CMR 7.15 for which a deviation is sought;
2. a description of each nontraditional work practice proposed;
3. a demonstration that the deviations from 310 CMR 7.15 and alternatives proposed will not cause any visible emissions to the outside air and will not pose significant risk to public health, safety or the environment;
4. all required information specified in the application form; and
5. any additional information requested by the Department.

(e) The application shall be accompanied by the applicable fee and shall be legible. An incomplete or illegible application will not be accepted or approved and shall not constitute compliance with 310 CMR 7.15.

(15) Asbestos-containing Waste Material Packaging Requirements. The owner/operator of a facility or facility component where any asbestos abatement activity is conducted shall comply with the following:

(a) Adequately wet ACWM obtained from air cleaning equipment or from removal operations.

(b) While adequately wet, containerize and seal the ACWM in leak-tight containers.

(c) Label the containers with the following information printed in letters of sufficient size and contrast so as to be readily visible and legible:

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DANGER
CONTAINS ASBESTOS FIBERS
MAY CAUSE CANCER
CAUSES DAMAGE TO LUNGS
DO NOT BREATHE DUST
AVOID CREATING DUST

Prior to June 1, 2015, the containers may be labeled with the following information in *lieu* of the labeling requirements above:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD

(d) In addition to the warning label requirement specified in 310 CMR 7.15(15)(c), each individual container and/or package of ACWM shall be labeled prior to being transported off the site of generation with the name of the waste generator, the location at which the waste was generated, and the date of generation.

(e) Bulk-loading of ACWM is not permitted without the Department's prior approval of a Nontraditional Asbestos Abatement Work Practice Application.

(16) Asbestos-containing Waste Material Transport Requirements.

(a) All ACWM shall be containerized pursuant to 310 CMR 7.15(15) prior to being transported.

(b) All ACWM shall be transported in totally enclosed vehicles or containers that are designed, constructed, and operated to prevent spills, leaks, or emissions.

(c) All ACWM shall be transported in conformance with 40 CFR Part 61 and applicable US Department of Transportation, OSHA and state and local regulations.

NON-TEXT PAGE

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(17) Asbestos-containing Waste Material Storage and Disposal Requirements.

(a) The owner/operator of a facility or facility component where any asbestos abatement activity is conducted shall ensure that all ACWM generated from any asbestos abatement activity is properly disposed of at a landfill approved to accept such material. If within Massachusetts, such sites must be operated in accordance with 310 CMR 19.000: *Solid Waste Management*. If outside Massachusetts, such sites must be operated in accordance with applicable state and federal asbestos and landfill laws and regulations of the receiving state.

(b) ACWM shall be stored only at:

1. A location that is an approved refuse transfer station facility permitted or that is managing such wastes in accordance with 310 CMR 19.061: *Special Waste*; and/or
2. The site of generation of the ACWM while the asbestos abatement activity is ongoing and for up to 30 calendar days after completion of the asbestos abatement activity and the visual inspection requirements of 310 CMR 7.15(8) are met.

(c) No person shall dispose of ACWM at a location that is not a landfill approved to accept such material. If within Massachusetts, such sites must be operated in accordance with 310 CMR 19.000: *Solid Waste Management*. If outside Massachusetts, such sites must be operated in accordance with applicable state and federal asbestos and landfill laws and regulations of the receiving state.

(d) Intact and unbroken vinyl asbestos tile that is not coated with asbestos-containing mastic may be disposed of in any landfill permitted by the Department to accept solid waste pursuant to 310 CMR 19.000: *Solid Waste Management*.

(18) Waste Shipment Records and Reports.

(a) All ACWM shall be shipped via asbestos waste shipment records on a Department approved form that includes, but is not limited to, the following information:

1. The name, address and telephone number of the owner/operator of the facility or dumping ground where asbestos abatement activities have occurred;
2. The quantity and type (friable or non-friable) of the ACWM in cubic meters (cubic yards) and a description of the container used for shipment;
3. The name, address and telephone number of the person who conducted any asbestos abatement activity;
4. The name and telephone number of the disposal site operator;
5. The name and physical location of the disposal site;
6. The date transported;
7. The name, address, and telephone number of the transporter(s);
8. Certification by the owner/operator of the facility or dumping ground where asbestos abatement activities have occurred/where asbestos waste was generated that the contents of each shipment have been characterized, packaged, marked and labeled in accordance with 310 CMR 7.15;
9. Signature of each transporter confirming the contents of each shipment are in all respects in the proper condition for transport according to applicable international, federal, state and local regulations;
10. Signature by the receiving disposal facility confirming that:
    a. the quantity of ACWM listed on the waste shipment record is the same as the quantity accepted for disposal; and
    b. it holds appropriate permits and/or authorizations to accept for disposal ACWM described on waste shipment records; and
11. Such other information as the Department requires.

(b) If a copy of the waste shipment record, signed by the owner/operator of the designated disposal site, is not received by the owner/operator of the facility or dumping ground where asbestos abatement activities have occurred/where the ACWM was generated within 35 days of the date the waste leaves the site of origin, the owner/operator of the facility or dumping ground where the asbestos abatement activities have occurred and/or where the ACWM was generated shall contact the transporter and/or operator of the designated disposal site to determine the status of the waste shipment.

(c) The owner/operator of the facility or dumping ground where the asbestos abatement activities have occurred and/or where the ACWM was generated shall report, in writing, to the Department if a copy of the waste shipment record, signed by the owner/operator of the designated waste disposal site, is not received by the owner/operator of the facility or dumping ground where the asbestos abatement activities have occurred and/or where the

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ACWM was generated within 45 days of the date the waste was accepted by the initial transporter. The report shall include the following information:

1. A copy of the waste shipment record for which a confirmation of delivery was not received; and

2. A cover letter signed by the owner/operator of the facility or dumping ground explaining the efforts taken to locate the asbestos waste shipment records in accordance with 310 CMR 7.15. Compliance with the foregoing reporting requirements shall not be construed to relieve the owner/operator of the facility or dumping ground of the obligation to maintain waste shipment records in accordance with 310 CMR 7.15.

(d) The owner/operator of the facility or dumping ground where the asbestos abatement activities have occurred and/or where the ACWM was generated shall report, in writing, to the Department if the waste shipment record is modified after the date the waste is accepted by the initial transporter. The report shall include a description of the amendment or modification together with copies of the waste shipment record before and after amendment or modification.

(e) The owner/operator of the facility or dumping ground where the asbestos abatement activities have occurred and/or where the ACWM was generated, the transporter, and the owner/operator of the designated waste disposal site shall retain a copy of all waste shipment records, including a copy of the waste shipment record signed by the owner/operator of the designated waste disposal site, for at least two years. All such parties shall furnish upon request, and make available for inspection by Department personnel, all records required under 310 CMR 7.15(18).

(19) General Enforcement Provisions. In addition to the Department's enforcement authority under M.G.L. c. 111, §§ 142A through O, M.G.L. c. 21A § 16 and other applicable laws and regulations, the provisions of 310 CMR 7.15 are subject to the enforcement provisions of 310 CMR 7.52.

7.16: U Reduction of Single Occupant Commuter Vehicle Use

(1) Commencing with the effective date of 310 CMR 7.16 each affected facility (except as provided below) shall diligently and expeditiously implement and thereafter continuously maintain the following mandatory measures which are designed to achieve a goal of reducing the number of single occupant commuter vehicles customarily commuting daily to each employment facility as of its base date by 25% or as adjusted pursuant to 310 CMR 7.16(7):

(a) making available to commuters any pass program offered by the area transit authority, if any commuter to the facility uses the public transit facilities of such Authority as part of his daily commuting trip, including making all administrative arrangements for commuters to purchase the pass and thereby participate in the pass program and encouraging commuters to participate by such means as publicizing the availability of the pass program and the cost advantages thereof.

(b) posting in a conspicuous place or places the schedules, rates and routes of every bus which serves the facility including the services offered by the area transit authority and any privately or publicly operated services which may exist in the immediate vicinity of the employer.

(c) providing incentives for bicycle commuting such as secure locking facilities and removal of restrictive rules against bicycle usage at the facility.

(d) negotiating with authorities in charge of bus lines serving the facility for improved service to the facility, including providing information on the location and density of employees' residences and commuting times to be used for route planning by local transit authorities.

(e) conducting a carpooling program (either alone or in cooperation with neighboring facilities) which:

1. matches on a regularly recurring basis (not less often than once every 12 months) the names, addresses, and suitable contact information of all commuters who commute in single-occupant commuter vehicles or carpool to a facility or group of neighboring facilities and who express interest in carpooling, so that such commuters with similar daily travel patterns are informed and aware of each other for the purpose of forming carpools;

7.16: continued

2. continuously publicizes the advantages of carpooling, both in terms of savings of fuel and money and any incentive in effect at the facility;

3. creates incentives for carpool formation by providing persons who carpool with first call on available parking space or spaces which are closest to entrances to the facility; and,

4. provides information for carpooling program to prospective and new employees, and offers new employees the opportunity to participate in such program.

(f) In the case of an employment facility with 1,000 or more employees, implementing a vanpool program which shall include the following elements:

1. The employer shall:

a. cooperate with a non-profit third-party vanpool program and offer their employees the opportunity to participate in such a program; or

b. post in a conspicuous place and regularly notify all employees of an outstanding offer to acquire (by purchase, lease or otherwise), insure and make available to any group of at least ten employees a van for their use as a vanpool. Such offer, a copy of which shall be sent to the Secretary at the time of the employer's first updated report, shall include the procedures by which vanpools are offered and the conditions upon which the offer is contingent, including acceptance by the prospective driver of the responsibility for providing regular service, training backup drivers, and arranging vehicle maintenance, and acceptance by each other member of the prospective group of responsibility for payment of a *pro rata* share of all direct costs (such as rental charge, licensing costs, insurance, tolls, fuel and repair) and indirect costs (such as depreciation and interest on borrowed funds) of the operation and maintenance of the vehicle.

c. notify the Secretary when it is learned that ten or more employees are interested in forming a vanpool.

2. The employer shall analyze and continuously publicize the advantages of vanpooling, including any resulting cost savings, convenience and any incentives in effect at the facility. Such incentives shall include providing persons who vanpool with first call on available parking spaces or spaces which are closest to entrances to the facility.

3. Matching for the vanpool program should be coordinated with the carpool matching program, to facilitate the formation of vanpools.

Upon reaching such a 25% goal, as stated at the beginning of 310 CMR 7.16, such employer shall thereafter continue such a program in such a manner as to aim at maintaining the ratio of single-occupant commuter vehicles to total commuters customarily arriving at its facility at or below the ratio referred to in 310 CMR 7.16(4)(e). If an employer or educational institution reaches and thereafter maintains said goal by implementing less than all the measures in 310 CMR 7.16(1), it shall not be subject to a requirement to implement the remainder of such measures.

Commencing with the effective date of 301 CMR 7.00 smaller employers shall also cooperate with MASSPOOL in its efforts to promote and organize mulit-employer ridesharing activities.

7.16: continued

(2) MB. The base date and the date for submittal of the base date report for all existing affected facilities shall be as provided in 40 CFR 52.1161, June 12, 1975. 310 CMR 7.00 established the base date for all existing affected facilities as October 1, 1975, except as provided below, and required a facility with more than 250 commuters to submit at least a base date report to the Secretary on October 15, 1975. The base date for an affected facility which becomes subject to the requirements of 310 CMR 7.16 upon its effective date shall be October 15, 1979, except as provided below. Each employer with a base date of October 15, 1979 shall submit to the Secretary their base data report for each affected facility by November 15, 1979. The base date for an affected facility which attains an employment level of 250 or more employees after the effective date of 310 CMR 7.16 shall be the date six months after it reaches such a level, except as provided below, and its base date report shall be due on the next date not more than six months later than is specified for any report or updated report by any existing facility. Where an employer or educational institution can establish to the satisfaction of the Secretary that a facility had commenced measures to reduce the number of single-occupant commuter vehicles customarily arriving daily at an earlier date, the Secretary may approve the use of such earlier date as the base date for such facility. In lieu of establishing the actual number of such vehicles on such earlier date, an employer or educational institution may assume for the purpose of 310 CMR 7.16(2) that prior to such earlier date 20% of all commuters to such facility who arrived by motor vehicle other than mass transit customarily arrived by means other than single-occupant commuter vehicles.

(3) PV. The base date for all existing affected facilities shall be June 15, 1977, except as provided below. By June 30, 1977 each employer with a base date of June 15, 1977 shall submit to the Secretary their base date report for each affected facility. The base date for an affected facility which becomes subject to the requirements of 310 CMR 7.16 upon its effective date shall be October 15, 1979, except as provided below. Each employer with a base date of October 15, 1979 shall submit to the Secretary their base date report for each affected facility by November 15, 1979. The base date for an affected facility which attains an employment level of 250 or more employees after the effective date of 310 CMR 7.00 shall be the date six months after it reaches such a level, except as provided below, and its base date report shall be due on the next date not more than six months later than is specified for any report or updated report by an existing facility. Where an employer or educational institution can establish to the satisfaction of the Secretary that a facility had commenced measures to reduce the number of single-occupant commuter vehicles customarily arriving daily at an earlier date, the Secretary may approve the use of such earlier date as the base date for such facility. In lieu of establishing the actual number of such vehicles on such earlier date, an employer or educational institution may assume for the purpose of 310 CMR 7.16(3) that prior to such earlier date 20% of all commuters to such facility who arrived by motor vehicle other than mass transit customarily arrived by means other than single-occupant commuter vehicles.

(4) B, CM, MV, SM. The base date for all existing affected facilities shall be October 15, 1979, except as provided below. By November 15, 1979, each employer shall submit to the Secretary their base date report for each affected facility. The base date for an employment facility which attains an employment level of 150 or more employees after the effective date of 310 CMR 7.16 shall be the date six months after it reaches such a level, except as provided below, and its base date report shall be due on the next date not more than six months later than is specified for any report or updated report by an existing facility. Where an employer or educational institution can establish to the satisfaction of the Secretary that a facility had commenced measures to reduce the number of single-occupant commuter vehicles customarily arriving daily at an earlier date, the Secretary may approve the use of such earlier date as the base date for such facility. In lieu of establishing the actual number of such vehicles on such earlier date, an employer or educational institution may assume for the purpose of 310 CMR 7.16(4) that prior to such earlier date 20% of all commuters to such facility who arrived by motor vehicle other than mass transit customarily arrived by means other than single-occupant commuter vehicles.

7.16: continued

Each base date report shall be current and include:

(a) The number of commuters who take any means of transportation to such facility as of its base date.

(b) The number of single-occupant commuter vehicles customarily used daily by commuters to the facility, the number of commuters who customarily carpool in a private vehicle carrying two or more occupants, the number of commuters who customarily vanpool in a vehicle carrying eight or more occupants, the number of commuters who customarily commute by any means of public transportation, the number of employees who customarily commute by any other means of travel (taxi, bicycle, *etc.*).

(c) The total number of vehicles customarily used daily by commuters to the facility as of the base date.

(d) The percentage which the current number of daily commuters in single-occupant vehicles is of all daily commuters to the facility.

(e) The percentage derived by taking ¾ of the percentage calculated in 310 CMR 7.16(4)(d). This percentage will serve as the program goal for individual employers defined as the ratio of single-occupant commuter vehicles to total daily commuters to the facility.

(f) The number of van type vehicles with eight or more commuters customarily arriving at the facility.

(g) The type of carpool matching program with a description of materials currently being used.

(h) The level of participation achieved in the most recent program, including the number of data cards distributed, and returned, the number of matching lists distributed and the number of commuters in newly formed carpools.

(i) The type of incentives offered, including parking, flexi-hours and others.

(j) The promotional strategies used to encourage ridesharing with copies of relevant materials excluding those supplied by MASSPOOL.

(k) The number of vans sponsored.

(l) The number of participants currently enrolled in a prepaid transit pass program, if applicable.

(5) U. Each affected employer shall annually update its base date report by means of a report containing:

(a) Updated information called for in 310 CMR 7.16(2) through 7.16(4).

(b) The net change in percentage points between the percentage reported under 310 CMR 7.16(4)(e) as of the base date and that under 310 CMR 7.16(4)(d) as of the date of the current report.

(c) The net change in percentage points between the percentage reported under 310 CMR 7.16(4)(d) as of the last reporting period and the date of the current report.

(d) A detailed description of all measures which have been taken to reduce the number of single-occupant commuter vehicles to the facility and the commuter response to such measures.

The first such annual updated report for affected employers in the Metropolitan Boston Air Pollution Control District and the Pioneer Valley Air Pollution Control District shall be due on November 15, 1979, and successively each 12 months. The first such annual updated report for affected employers in the Berkshire Air Pollution Control District, Central Massachusetts Air Pollution Control District, Merrimack Valley Air Pollution Control District, and Southeastern Massachusetts Air Pollution Control District shall be due on November 15, 1980, and successively each 12 months.

(6) U. Each employer submitting reports required by 310 CMR 7.16(5) shall cause such reports to be signed as follows:

(a) In the case of a corporation, by a principal executive officer of at least the level of vice president, or his duly authorized representative, if such representative is responsible for the overall operation of the facility covered by the reports.

(b) In the case of a partnership, by a general partner.

(c) In the case of a sole proprietorship, by the proprietor.

(d) In the case of an unincorporated association, by the president or the chairman thereof.

7.16: continued

(e) In the case of municipal, state, or other public facility, by either a principal executive officer, ranking elected official, or other fully authorized employee.

Each employer submitting reports required by 310 CMR 7.16(5) shall retain for at least three years all supporting documents and data upon which each such report was based. Each report submitted pursuant to 310 CMR 7.16(5) shall be accompanied by an adequate explanation of the methodology used to gather, complete and analyze the data, the assumptions used in that analysis, and samples of the forms used to elicit the underlying information from commuters at the facility.

(7) U. Where the total number of commuters to a particular facility is changed due to fluctuation in employment between the base date and the date of any report under 310 CMR 7.16(5) such fact shall be reported at the time of the submission of such report. The goal of the employer having such a change is to attain and maintain the ratio of commuters customarily arriving at facility daily in single-occupant commuter vehicles to total commuters indicated by 310 CMR 7.16(4)(e).

(8) U. If an employer does not meet and thereafter at all times maintain the reduction specified under 310 CMR 7.16(2) through 7.16(4) in connection with each report under 310 CMR 7.16(5) it shall, upon written notification of the Secretary, submit a description of any remedial actions which it intends to take to meet the requirements of 310 CMR 7.16(2) through 7.16(4).

(9) U. If an employer in good faith diligently and expeditiously implements and thereafter continuously maintains those measures set forth in 310 CMR 7.16(2) through 7.16(4) as are applicable to it, it shall not be subject to any enforcement action even though it may fail to achieve the 25% goal referred to in 310 CMR 7.16(1).

(10) U. Within 60 days after the receipt of the periodic reports required under 310 CMR 7.16(5), the Secretary shall submit to the Department a summary of the information contained in such reports, including:

(a) A list of all employers in the order of the percentage reduction achieved between the base dates and the date of the required report.

(b) The total reduction between the respective base dates and the date of the required reports of the number of single-occupant vehicles customarily used to arrive at all facilities for which reports were filed.

(c) A list of employers that have not complied with the provisions of 310 CMR 7.16.

7.18: U Volatile and Halogenated Organic Compounds

(1) U Applicability and Handling Requirements.

(a) 310 CMR 7.18 shall apply in its entirety to persons who own, lease, operate or control any facility which emits volatile organic compounds (VOC).

(b) For purposes of 310 CMR 7.18, except for 310 CMR 7.18(30), VOC shall include both VOC as defined in 310 CMR 7.00 and Halogenated Organic Compounds (HOC) as defined in 310 CMR 7.00.

(c) On or after July 1, 1980 any person owning, leasing, operating, or controlling a facility regulated under 310 CMR 7.18, shall store and dispose of volatile organic compounds in a manner which will minimize evaporation to the atmosphere. Proper storage shall be in a container with a tight fitting cover. Proper disposal shall include incineration in an incinerator approved by the Department, transfer to another person licensed by the Department to handle VOC, or any other equivalent method approved by the Department.

(d) Any person who owns, leases, operates, or controls a facility which is or becomes subject to 310 CMR 7.18, except for those persons solely subject to 310 CMR 7.18(30) unless the facility is a CTG-affected facility as defined in 310 CMR 7.18(30)(b), shall continue to comply with all requirements of 310 CMR 7.18, even if emissions from the subject facility no longer exceed applicability requirements of 310 CMR 7.18.

(e) Any person not regulated by 310 CMR 7.18, prior to August 15, 1989 shall achieve compliance with the applicable section(s) of 310 CMR 7.18 by August 15, 1990.

7.18: continued

(f) Any person who, since January 1, 1990, obtains a plan approval for an emission unit under 310 CMR 7.02 where said approval establishes BACT or LAER to be no less stringent than RACT for a facility size and type as defined in 310 CMR 7.18 shall comply with the BACT or LAER established in the plan approval, and is not subject to RACT standards of 310 CMR 7.18 as may otherwise be applicable, until the applicable RACT standards of 310 CMR 7.18 become more stringent than the BACT or LAER established in the plan approval, at which point the person shall become subject to the updated RACT standards.
(g) Any person who complies with 310 CMR 7.03 in *lieu* of obtaining a plan approval for an emission unit under 310 CMR 7.02 shall comply with applicable RACT requirements of 310 CMR 7.18 when such requirements become more stringent than those in 310 CMR 7.03.
(h) Any person who complies with 310 CMR 7.26 shall comply with applicable RACT requirements of 310 CMR 7.18 when such requirements become more stringent than those in 310 CMR 7.26.

(2) U Compliance with Emission Limitations.
(a) Any person subject to 310 CMR 7.18 shall maintain continuous compliance with all requirements of 310 CMR 7.18. Except as provided for in 310 CMR 7.18(2)(b) and (g), compliance is based on the control method selected to meet the applicable emission limitations specified in 310 CMR 7.18, and EPA test methods as codified in 40 CFR Part 60, or other methods approved by the Department and EPA, and are as follows:

Compliance or Control Method	EPA Reference Test Method (or other as indicated)	Test Method Sampling Duration
Volatile organic compound leak detection	21	as specified in Test Method
Coatings, Inks and Related Materials Formulation	24, 24A	instantaneous grab sample
Exhaust measurement except carbon adsorption	18	as specified in Test Method
	25, 25A, 25B, California Air Resources Board (CARB) Method 100	three hours (as three, one hour runs)
Carbon adsorption	18	as specified in Test Method
	25 or other as appropriate	the length on the adsorption cycle or 24 hours, whichever is less.

(b) Any person proposing to comply with the requirements of 310 CMR 7.18 by emissions averaging is subject to the requirements of 310 CMR 7.00: *Appendix B*(4).
(c) Any person regulated under 310 CMR 7.18(14), (15), or (16), who cannot comply with the emission limitations contained therein through the use of add-on controls and/or low/no solvent coatings, shall apply to the Department by January 1, 1987 for an alternative emission limitation which reflects the application of source specific Reasonably Available Control Technology. Any alternative emission limitation provided for by 310 CMR 7.18 must also be approved by EPA. An applicant for an alternative RACT shall:

1. demonstrate to the Department that it is not technologically and economically feasible for that person to comply with the applicable emission limitation; and
2. determine an emission limitation which reflects the application of Reasonably Available Control Technology;

Any person granted such an emission limitation shall:

3. re-evaluate, on a biennial basis (every two years), the emission limitation to reflect current application of Reasonably Available Control Technology and to confirm that the RACT emission limitation contained in 310 CMR 7.18(14) through (16) is still technologically and economically infeasible.

(d) The Department encourages any person owning, leasing, operating, or controlling a facility regulated under 310 CMR 7.18 to reduce the emissions of volatile organic compounds through the use of compounds which present less of a burden to the air, water and land, and which do not increase public health impacts.

7.18: continued

(e) Any person owning, leasing, operating, or controlling a facility using air pollution capture and control equipment to comply with 310 CMR 7.18 shall continuously monitor and maintain records on the following parameters:

1. for a thermal incinerator; the combustion temperature measured in °F;
2. for a catalytic incinerator: the exhaust gas temperature (°F), the temperature rise across the catalyst bed (°F), and the date the catalyst was most recently replaced or changed;
3. for a condenser or refrigeration system; the inlet temperature of the cooling medium (°F), and the exhaust gas temperature (°F);
4. for a carbon adsorbers; the pressure drop across the adsorber, and the exhaust gas VOC concentration;
5. for emissions capture and control equipment not otherwise listed; any requirements specified by the Department in any approval(s) or order(s).

(f) Exemption for Coatings Used in Small Amounts. For any person who owns, leases, operates or controls a facility with coating line(s) subject to 310 CMR 7.18, except for 310 CMR 7.18(30), the emissions of VOC from any coatings used in small amounts at that facility are exempt from the emission limitations of the particular section, provided the person satisfies the following conditions:

1. the total amount of all coatings exempted does not exceed 55 gallons on a rolling 12-month period at the facility; and,
2. the person notifies the Department that this exemption is being used 30 days prior to its first use; and
3. the person identifies in such notice the coatings which will be covered by this exemption; and,
4. the person complies with the recordkeeping and testing requirements of the particular section.

(g) Daily Weighted Averaging. Any person who owns, leases, operates or controls a coating line subject to 310 CMR 7.18, with the exception of coating lines subject to 310 CMR 7.18(24) or (28), may comply with the VOC emission limitations of the applicable section of 310 CMR 7.18 through the use of a daily-weighted average on an individual coating line, provided the person meets the following conditions:

1. the daily-weighted average for each coating line, each day, complies with the applicable emission limitation in 310 CMR 7.18 with no cross-line averaging allowed; and,
2. the coating line using a daily-weighted average to determine compliance does not use any emissions capture and control equipment for the compliance determination; and,
3. prior to being used, the exact method of measuring and determining compliance on a daily-weighted average basis is approved by the Department in an emissions control plan submitted under 310 CMR 7.18(20); and,
4. records kept to determine compliance on a daily-weighted average basis are kept at the facility for a period of five years, and made available to the Department or EPA on request; and,
5. the daily-weighted average for each coating line, with the exception of coating lines subject to 310 CMR 7.18(26) is calculated according to the following equation:

$$VOC_W = \frac{\sum_{i-1}^{n} V_i C_i}{V_T}$$

where:

VOC_w = the daily-weighted average VOC content of the coatings used each day on each coating line in units of pounds of VOC per gallon of solids as applied;
n = the number of different coatings applied, each day on a coating line;
V_i = the volume of solids as applied for each coating, each day, on each coating line, in units of gallons of solids as applied;
C_i = the VOC content for each coating, each day, on each coating line in units of pounds of VOC per gallons of solids as applied; and

7.18: continued

V_T = the total volume of solids as applied, each day on each coating line.

6. For coating lines subject to 310 CMR 7.18(26): *Textile Finishing*, the daily weighted average for each coating line is calculated according to the following equation:

$$VOC_{WM} = \frac{\sum_{i-1}^{n} M_i C_i}{M_T}$$

where:

VOC_{WM} = the daily-weighted average VOC content of the coatings used each day on each coating line in units of pounds of VOC per pound of solids, as applied;

n = the number of different coatings applied each day on a coating line;

M_i = the mass of solids as applied for each coating, each day, on each coating line, in units of pounds of solids as applied;

C_i = the VOC content of the coatings used, each day, on each coating line in units of pounds of VOC per pounds of solids, as applied;

M_T = the total mass of solids as applied, each day on each coating line.

Coating usage may be averaged, providing the units in the equation are the same as the units that are used in the section of 310 CMR 7.18 that applies to the coatings included in the daily average. Only coatings subject to the same emissions standard may be averaged together.

(h) Emission Reduction Credits (ERCs). Any facility may comply, either in part or entirely, with the applicable emission standard contained in 310 CMR 7.18 through the use of emission reduction credits (ERCs) certified by the Department pursuant to 310 CMR 7.00: *Appendix B*(3), provided that the requirements of 310 CMR 7.00: *Appendix B*(3)(e) are met prior to use of said ERCs.

(3) U Metal Furniture Surface Coating.

(a) Applicability.

1. On or after January 1, 1980, and prior to March 9, 2020, no person who owns, leases, operates, or controls a metal furniture surface coating line, which emits, before any application of air pollution control equipment, in excess of 15 pounds per day of volatile organic compounds (VOC), shall cause, suffer, allow or permit emissions in excess of the requirements of 310 CMR 7.18(3)(d)1. Such person shall also comply with 310 CMR 7.18(3)(g) through (i).

2. On or after March 9, 2020, any person who owns, leases, operates, or controls metal furniture surface coating operations and related cleaning operations which emit, before any application of add-on air pollution capture and control equipment, equal to or greater than 15 pounds of VOC per day or, in the alternative, equal to or greater than three tons of VOC per rolling 12-month period shall comply with 310 CMR 7.18(3)(c), (d)2., (e), and (g) through (i).

3. On or after March 9, 2018, any person who owns, leases, operates, or controls metal furniture surface coating operations and related cleaning operations which emit, before any application of add-on air pollution capture and control equipment, equal to or greater than 15 pounds of VOC per day, in the alternative, equal to or greater than three tons of VOC per rolling 12-month period shall comply with the work practices of 310 CMR 7.18(3)(f) for coating and cleaning operations.

(b) Exemptions.

1. The requirements of 310 CMR 7.18(3)(d)2. and 3. do not apply to:
   a. stencil coatings;
   b. safety-indicating coatings;
   c. solid-film lubricants;
   d. electric-insulating and thermal-conducting coatings;
   e. touch-up coatings;
   f. repair coatings; or
   g. coating application utilizing hand-held aerosol cans.
2. The requirements of 310 CMR 7.18(3)(e) do not apply to:
   a. touch-up coatings;
   b. repair coatings; or
   c. coating application utilizing hand-held aerosol cans.

7.18: continued

(c) Extensions. Any person subject to 310 CMR 7.18(3)(a)2. may apply in writing to the Department for a nonrenewable extension of the implementation deadline in 310 CMR 7.18(3)(a)2. by complying with 310 CMR 7.18(3)(g). The Department will consider a nonrenewable extension of the deadline in 310 CMR 7.18(3)(a)2. for persons applying under 310 CMR 7.18(3)(c) until no later than March 9, 2021, provided the emission control plan submitted for approval under 310 CMR 7.18(20) meets the following criteria in addition to those of 310 CMR 7.18(20):

1. a Toxics Use Reduction Plan or a Resource Conservation Plan completed for the facility in accordance with 310 CMR 50.40 through 50.48 is submitted as part of the emission control plan;
2. the Toxics Use Reduction Plan or Resource Conservation Plan was certified by a Toxics Use Reduction Planner certified under M.G.L. c. 21I, and 310 CMR 50.50 through 50.63;
3. the emission control plan proposes to reduce emissions or natural asset use, from the process or elsewhere in the facility, more than otherwise required pursuant to an applicable regulation or approval of the Department, through toxics use reduction techniques or resource conservation actions as defined in M.G.L. c. 21I; and
4. implementation of the emission control plan meets the emission limitations of 310 CMR 7.18(3)(d).

(d) Reasonably Available Control Technology Requirements.

1. Any person subject to 310 CMR 7.18(3)(a)1. shall not exceed a limitation of 5.1 pounds of VOC per gallon of solids applied.
2. Any person subject to 310 CMR 7.18(3)(a)2. shall limit VOC emissions by using only coatings having a VOC content no greater than the emission limitations listed in Tables 310 CMR 7.18(3)(d)2.a. (low-VOC coatings to meet the mass of VOC per volume of coating less water and exempt compounds, as-applied, limits) or b. (low-VOC coatings or a combination of coatings and add-on control equipment on a coating unit to meet the mass of VOC per volume of coating solids limits) or by complying with the requirement in 310 CMR 7.18(3)(d)3. If a coating can be classified in more than one coating category in 310 CMR 7.18(3)(d)2., then the least stringent coating category limitation shall apply.

Table 310 CMR 7.18(3)(d)2.a.
RACT Emission Limitations for Metal Furniture Surface Coating

	Mass of VOC per volume of coating less water and exempt compounds, as applied			
	Baked		Air-dried	
Coating Category	kg/l coating	lb/gal coating	kg/l coating	lb/gal coating
General, One Component	0.275	2.3	0.275	2.3
General, Multi-component	0.275	2.3	0.340	2.8
Extreme High Gloss	0.360	3.0	0.340	2.8
Extreme Performance	0.360	3.0	0.420	3.5
Heat Resistant	0.360	3.0	0.420	3.5
Metallic	0.420	3.5	0.420	3.5
Pretreatment Coatings	0.420	3.5	0.420	3.5
Solar Absorbent	0.360	3.0	0.420	3.5

Table 310 CMR 7.18(3)(d)2.b.
RACT Emission Limitations for Metal Furniture Surface Coating

	Mass of VOC per volume of coating solids, as applied			
	Baked		Air-dried	
Coating Category	kg/l solids	lb/gal solids	kg/l solids	lb/gal solids
General, One Component	0.40	3.3	0.40	3.3
General, Multi-component	0.40	3.3	0.55	4.5
Extreme High Gloss	0.61	5.1	0.55	4.5
Extreme Performance	0.61	5.1	0.80	6.7
Heat Resistant	0.61	5.1	0.80	6.7
Metallic	0.80	6.7	0.80	6.7
Pretreatment Coatings	0.80	6.7	0.80	6.7
Solar Absorbent	0.61	5.1	0.80	6.7

7.18: continued

3. Any person may achieve an overall VOC control efficiency of at least 90% by weight using add-on air pollution capture and control equipment instead of complying with the requirements of 310 CMR 7.18(3)(d)2.

(e) Application Methods. Unless complying with 310 CMR 7.18(3)(a)2. by means of 310 CMR 7.18(3)(d)3., all coatings shall be applied using one or more of the following:

1. electrostatic spray application;
2. HVLP spray;
3. flow coat;
4. roller coat;
5. dip coat, including electrodeposition;
6. airless spray;
7. air-assisted airless spray; or
8. a coating application method capable of achieving a transfer efficiency equivalent to or greater than that achieved by HVLP, as approved by EPA.

(f) Work Practices for Coating and Cleaning Operations. Any person subject to 310 CMR 7.18(3) shall comply with the work practices of 310 CMR 7.18(31)(e).

(g) Plan and Extension Submittal Requirements.

1. Any person subject to 310 CMR 7.18(3)(a)1. or 2. who chooses to install add-on air pollution capture and control equipment to comply with 310 CMR 7.18(3)(d) shall submit an emission control plan in accordance with 310 CMR 7.18(20).

2. Any person subject to 310 CMR 7.18(3)(a)2. who chooses to apply for an extension under 310 CMR 7.18(3)(c) shall comply with 310 CMR 7.18(20).

(h) Recordkeeping Requirements. Any person subject to 310 CMR 7.18(3)(a) shall prepare and maintain records sufficient to demonstrate compliance consistent with 310 CMR 7.18(2). Records kept to demonstrate compliance shall be kept on site for five years and shall be made available to representatives of the Department and EPA in accordance with the requirements of an approved compliance plan or upon request. Such records shall include, but are not limited to:

1. identity, quantity, formulation and density of coating(s) used;
2. identity, quantity, formulation and density of any diluent(s) and clean-up solvent(s) used;
3. solids content of any coating(s) used;
4. actual operational and emissions characteristics of the coating line and any appurtenant emissions capture and control equipment;
5. quantity of product processed, if necessary to determine emissions; and
6. any other requirements specified by the Department in any approval(s) or order(s) issued to the person.

(i) Testing Requirements. Any person subject to 310 CMR 7.18(3)(a) shall, upon request of the Department, perform or have performed tests to demonstrate compliance with 310 CMR 7.18(3). Testing shall be conducted in accordance with EPA Method 24 or Method 25 as described in CFR Title 40 Part 60, or by other methods approved by the Department and EPA. EPA Method 25A shall be used when:

1. an exhaust concentration of less than or equal to 50 parts per million volume (ppmv) as carbon is required to comply with the applicable limitation;
2. the inlet concentration and the required level of control results in an exhaust concentration of less than or equal to 50 ppmv as carbon; or
3. the high efficiency of the control device alone results in an exhaust concentration of less than or equal to 50 ppmv as carbon.

(4) U Metal Can Surface Coating.

(a) On or after January 1, 1980, no person who owns, leases, operates, or controls a metal can coating line, which emits, before any application of air pollution control equipment, in excess of 15 pounds per day of volatile organic compounds (VOC), shall cause, suffer, allow or permit emissions therefrom in excess of the emission limitations set forth in 310 CMR 7.18(4)(b).

7.18: continued

(b) Emission Limitations Metal Can Surface Coating.

Emission Source	Emission Limitation in pounds of volatile organic compounds per gallon of solids applied
Sheet base coat (exterior and interior and exterior overvarnish)	4.5
Two-piece can exterior (basecoat and overvarnish)	4.5
Two and Three-piece can (interior body spray)	9.8
Two-piece can exterior end (spray or roll coat)	9.8
Three-piece can side seam spray	21.8
End sealing compound	7.4

(c) Any person subject to 310 CMR 7.18(4)(a) shall maintain continuous compliance at all times. Compliance averaging times will be met in accordance with the requirements of 310 CMR 7.18(2)(a). Demonstrations of compliance shall not include any considerations of transfer efficiency.

(d) Any person subject to 310 CMR 7.18(4)(a) shall prepare and maintain daily records sufficient to demonstrate compliance consistent with the applicable averaging time as stated in 310 CMR 7.18(2)(a). Records kept to demonstrate compliance shall be kept on site for three years and shall be made available to representatives of the Department and EPA in accordance with the requirements of an approved compliance plan or upon request. Such records shall include, but are not limited to:

1. identity, quantity, formulation and density of coating(s) used;
2. identity, quantity, formulation and density of any diluent(s) and clean-up solvent(s) used;
3. solids content of any coating(s) used;
4. actual operational and emissions characteristics of the coating line and any appurtenant emissions capture and control equipment;
5. quantity of product processed;
6. any other requirements specified by the Department in any approval(s) and/or order(s) issued to the person.

(e) Persons subject to 310 CMR 7.18(4)(a) shall, upon request of the Department, perform or have performed tests to demonstrate compliance. Testing shall be conducted in accordance with EPA Method 24 and/or Method 25 as described in CFR Title 40 Part 60, or by other methods approved by the Department and EPA.

(5) U Large Appliance Surface Coating.

(a) Applicability.

1. On or after January 1, 1980, and prior to March 9, 2020, no person who owns, leases, operates, or controls a large appliance surface coating line, which emits, before any application of air pollution control equipment, in excess of 15 pounds per day of volatile organic compounds (VOC), shall cause, suffer, allow or permit emissions in excess of the requirements of 310 CMR 7.18(5)(d)1. Such person shall also comply with 310 CMR 7.18(5)(g) through (i).
2. On or after March 9, 2020, any person who owns, leases, operates, or controls large appliance surface coating operations and related cleaning operations which emit, before any application of add-on air pollution capture and control equipment, equal to or greater than 15 pounds of VOC per day or, in the alternative, equal to or greater than three tons of VOC per rolling 12 month period shall comply with 310 CMR 7.18(5)(c), (d)2., (e), and (g) through (I).

7.18: continued

3. On or after March 9, 2018, any person who owns, leases, operates, or controls large appliance surface coating operations and related cleaning operations which emit, before any application of add-on air pollution capture and control equipment, equal to or greater than 15 pounds of VOC per day or, in the alternative, equal to or greater than three tons of VOC per rolling 12-month period shall comply with the work practices of 310 CMR 7.18(5)(f) for coating and cleaning operations.

(b) Exemptions.

1. The requirements of 310 CMR 7.18(5)(d)2. and 3. do not apply to:
   a. stencil coatings;
   b. safety-indicating coatings;
   c. solid-film lubricants;
   d. electric-insulating and thermal-conducting coatings;
   e. touch-up coatings;
   f. repair coatings; or
   g. coating application utilizing hand-held aerosol cans.
2. The requirements of 310 CMR 7.18(5)(e) do not apply to:
   a. touch-up coatings;
   b. repair coatings; or
   c. coating application utilizing hand-held aerosol cans.

(c) Extensions. Any person subject to 310 CMR 7.18(5)(a)2. may apply in writing to the Department for a nonrenewable extension of the implementation deadline in 310 CMR 7.18(5)(a)2. by complying with 310 CMR 7.18(5)(g). The Department will consider a nonrenewable extension of the deadline in 310 CMR 7.18(5)(a)2. for persons applying under 310 CMR 7.18(5)(c) until no later than March 9, 2021, provided the emission control plan submitted for approval under 310 CMR 7.18(20) meets the following criteria in addition to those of 310 CMR 7.18(20):

1. a Toxics Use Reduction Plan or a Resource Conservation Plan completed for the facility in accordance with 310 CMR 50.40 through 50.48 is submitted as part of the emission control plan;
2. the Toxics Use Reduction Plan or Resource Conservation Plan was certified by a Toxics Use Reduction Planner certified under M.G.L. c. 21I, and 310 CMR 50.50 through 50.63;
3. the emission control plan proposes to reduce emissions or natural asset use, from the process or elsewhere in the facility, more than otherwise required pursuant to an applicable regulation or approval of the Department, through toxics use reduction techniques or resource conservation actions as defined in M.G.L. c. 21I; and
4. implementation of the emission control plan meets the emission limitations of 310 CMR 7.18(5)(d).

(d) Reasonably Available Control Technology Requirements.

1. Any person subject to 310 CMR 7.18(5)(a)1. shall not exceed a limitation of 4.5 pounds of VOC per gallon of solids applied.
2. Any person subject to 310 CMR 7.18(5)(a)2. shall limit VOC emissions by using only coatings having a VOC content no greater than the emission limitations listed in Tables 310 CMR 7.18(5)(d)2.a. (low-VOC coatings to meet the mass of VOC per volume of coating less water and exempt compounds, as-applied, limits) or b. (low-VOC coatings or a combination of coatings and add-on control equipment on a coating unit to meet the mass of VOC per volume of coating solids limits) or by complying with the requirement in 310 CMR 7.18(5)(d)3. If a coating can be classified in more than one coating category in 310 CMR 7.18(5)(d)2., then the least stringent coating category limitation shall apply.

7.18: continued

Table 310 CMR 7.18(5)(d)2.a. RACT Emission Limitations for Large Appliance Surface Coating				
	Mass of VOC per volume of coating less water and exempt compounds, as applied			
	Baked		Air - Dried	
Coating Category	kg/l coating	lb/gal coating	kg/l coating	lb/gal coating
General, One Component	0.275	2.3	0.275	2.3
General, Multi-Component	0.275	2.3	0.340	2.8
Extreme High Gloss	0.360	3.0	0.340	2.8
Extreme Performance	0.360	3.0	0.420	3.5
Heat Resistant	0.360	3.0	0.420	3.5
Metallic	0.420	3.5	0.420	3.5
Pretreatment Coatings	0.420	3.5	0.420	3.5
Solar Absorbent	0.360	3.0	0.420	3.5

Table 310 CMR 7.18(5)(d)2.b. RACT Emission Limitations for Large Appliance Surface Coating				
	Mass of VOC per volume of coating solids, as applied			
	Baked		Air - Dried	
Coating Category	kg/l solids	lb/gal solids	kg/l solids	lb/gal solids
General, One Component	0.40	3.3	0.40	3.3
General, Multi-Component	0.40	3.3	0.55	4.5
Extreme High Gloss	0.61	5.1	0.55	4.5
Extreme Performance	0.61	5.1	0.80	6.7
Heat Resistant	0.61	5.1	0.80	6.7
Metallic	0.80	6.7	0.80	6.7
Pretreatment Coatings	0.80	6.7	0.80	6.7
Solar Absorbent	0.61	5.1	0.80	6.7

3. Any person may achieve an overall VOC control efficiency of at least 90% by weight using add-on air pollution capture and control equipment instead of complying with the requirements of 310 CMR 7.18(5)(d)2.

(e) Application Methods. Unless complying with 310 CMR 7.18(5)(a)2. by means of 310 CMR 7.18(5)(d)3., all coatings shall be applied using one or more of the following:

1. electrostatic spray application;
2. HVLP spray;
3. flow coat;
4. roller coat;
5. dip coat, including electrodeposition;
6. airless spray;
7. air-assisted airless spray; or
8. a coating application method capable of achieving a transfer efficiency equivalent to or greater than that achieved by HVLP, as approved by EPA.

(f) Work Practices for Coating and Cleaning Operations. Any person subject to 310 CMR 7.18(5) shall comply with the work practices of 310 CMR 7.18(31)(e).

(g) Plan and Extension Submittal Requirements.

1. Any person subject to 310 CMR 7.18(5)(a)1. or 2. who chooses to install add-on air pollution capture and control equipment to comply with 310 CMR 7.18(5)(d) shall submit an emission control plan in accordance with 310 CMR 7.18(20).
2. Any person subject to 310 CMR 7.18(5)(a)2. who chooses to apply for an extension under 310 CMR 7.18(5)(c) shall comply with 310 CMR 7.18(20).

(h) Recordkeeping Requirements. Any person subject to 310 CMR 7.18(5)(a) shall prepare and maintain records sufficient to demonstrate compliance consistent with 310 CMR 7.18(2). Records kept to demonstrate compliance shall be kept on site for five years and shall be made available to representatives of the Department and EPA in accordance with the requirements of an approved compliance plan or upon request. Such records shall include, but are not limited to:

1. identity, quantity, formulation and density of coating(s) used;

7.18: continued

2. identity, quantity, formulation and density of any diluent(s) and clean-up solvent(s) used;
3. solids content of any coating(s) used;
4. actual operational and emissions characteristics of the coating line and any appurtenant emissions capture and control equipment;
5. quantity of product processed, if necessary to determine emissions; and
6. any other requirements specified by the Department in any approval(s) or order(s) issued to the person.

(i) Testing Requirements. Any person subject to 310 CMR 7.18(5)(a) shall, upon request of the Department, perform or have performed tests to demonstrate compliance with 310 CMR 7.18(5). Testing shall be conducted in accordance with EPA Method 24 or Method 25 as described in CFR Title 40 Part 60, or by other methods approved by the Department and EPA. EPA Method 25A shall be used when:

1. an exhaust concentration of less than or equal to 50 parts per million volume (ppmv) as carbon is required to comply with the applicable limitation;
2. the inlet concentration and the required level of control results in an exhaust concentration of less than or equal to 50 ppmv as carbon; or
3. the high efficiency of the control device alone results in an exhaust concentration of less than or equal to 50 ppmv as carbon.

(6) U Magnet Wire Insulation Surface Coating.

(a) On or after January 1, 1980, no person who owns, leases, operates, or controls a magnet wire insulation coating line, which emits, before any application of air pollution control equipment, in excess of 15 pounds per day of volatile organic compounds, shall cause, suffer, allow or permit emissions therefrom in excess of 2.2 pounds of volatile organic compounds per gallon of solids applied.

(b) Any person subject to 310 CMR 7.18(6)(a) shall maintain continuous compliance at all times. Compliance averaging times will be met in accordance with the requirements of 310 CMR 7.18(2)(a). Demonstrations of compliance shall not include any considerations of transfer efficiency.

(c) Any person subject to 310 CMR 7.18(6)(a) shall prepare and maintain daily records sufficient to demonstrate compliance consistent with the applicable averaging time as stated in 310 CMR 7.18(2)(a). Records kept to demonstrate compliance shall be kept on site for three years and shall be made available to representatives of the Department and EPA in accordance with the requirements of an approved compliance plan or upon request. Such records shall include, but are not limited to:

1. identity, quantity, formulation and density of coating(s) used;
2. identity, quantity, formulation and density of any diluent(s) and clean-up solvent(s) used;
3. solids content of any coating(s) used;
4. actual operational and emissions characteristics of the coating line and any appurtenant emissions capture and control equipment;
5. quantity of product processed;
6. any other requirements specified by the Department in any approval(s) and/or order(s) issued to the person.

(d) Persons subject to 310 CMR 7.18(6)(a) shall, upon request of the Department, perform or have performed tests to demonstrate compliance. Testing shall be conducted in accordance with EPA Method 24 and/or Method 25 as described in CFR Title 40 Part 60, or by other methods approved by the Department and EPA.

(7) U Automobile Surface Coating. (Reserved)

(8) U Solvent Metal Degreasing.

(a) Cold Cleaning Degreasing. On or after September 6, 2009, no person owning, operating, leasing or controlling any solvent metal degreasing facility which utilizes a cold cleaning degreaser (that is able to contain more than one liter of solvent) shall cause, suffer, allow or permit emissions of volatile organic compounds therefrom unless they comply with the requirements in 310 CMR 7.18(8)(a)1. through 3.

7.18: continued

1. The solvent used in a cold cleaning degreaser shall have a vapor pressure that does not exceed 1.0 mm Hg measured at 20°C. This requirement shall not apply to any of the following:
   a. cold cleaning degreasers used in special and extreme solvent metal cleaning;
   b. cold cleaning degreasers for which the owner or operator has received Department approval of a demonstration that compliance with the requirement to use a solvent with a vapor pressure of 1.0 mm Hg or less at 20°C will result in unsafe operating conditions;
   c. cold cleaning degreasers that are located in a permanent total enclosure having control equipment that is designed and operated with an overall VOC control efficiency of 90% or greater; and
   d. cold cleaning degreasers used in the cleaning of high precision products for which the owner or operator has received Department and EPA approval.
2. Any leaks shall be repaired immediately, or the degreaser shall be shut down.
3. The following requirements shall apply unless the cold cleaning degreaser is a sink-like work area with a remote solvent reservoir with an open drain area less than 100 square centimeters:
   a. Each cold cleaning degreaser is equipped with a cover that is designed to be easily operated with one hand;
   b. Each cold cleaning degreaser is equipped to drain clean parts so that, while draining, the cleaned parts are enclosed for 15 seconds or until dripping ceases, whichever is longer;
   c. Each cold cleaning degreaser is designed with:
      i. a freeboard ratio of 0.75 or greater; or
      ii. a water blanket (only if the solvent used is insoluble in and heavier than water); or
      iii. an equivalent system of air pollution control which has been approved by the Department and EPA;
   d. The covers of each cold cleaning degreaser are closed whenever parts are not being handled in the degreaser, or when the degreaser is not in use; and
   e. The drafts across the top of each cold cleaning degreaser are minimized such that when the cover is open the degreaser is not exposed to drafts greater than 40 meters per minute (1.5 miles per hour), as measured between one and two meters upwind at the same elevation as the tank lip.

(b) Vapor Degreasing. On or after December 31, 1980 no person owning, leasing operating or controlling a solvent metal degreasing facility which utilizes a vapor degreaser shall cause, suffer, allow or permit emissions therefrom unless:

1. each vapor degreaser is equipped with a cover designed to be easily operated in manner which will not disturb the vapor zone; and
2. each vapor degreaser is covered except when work loads are being loaded, unloaded or degreased in the degreaser; and
3. each vapor degreaser is equipped with the following safety switches which are maintained and operated in accordance with the recommendations of the manufacturer:
   a. a switch designed to shut off the heating source for the sump if the condenser coolant is either not circulating, or the solvent vapor level has risen above the primary coil; and
   b. a switch designed to shut off the spray pump if the solvent vapor level drops more than ten centimeters (four inches) below the lowest condensing coil; and
4. at least one of the following devices has been installed on each vapor degreaser, and that device is maintained and operated in accordance with the recommendations of the manufacturer:
   a. a freeboard ratio equal to or greater than 0.75 and, a power cover, if the degreaser opening is greater than one square meter (ten square feet); or,
   b. a refrigerated chiller; or,
   c. an enclosed design whereby the cover is open only when the dry part is entering or exiting the vapor degreaser; or

7.18: continued

d. an adsorption system with ventilation greater than or equal to 15 cubic meters per minute per square meter (50 cubic feet per minute per square foot) of air/vapor area (determined when the degreaser's cover is open) which exhausts less than 25 parts per million of solvent by volume averaged over one complete adsorption cycle or 24 hours whichever is less; or,

e. any other device, demonstrated to have a control efficiency equal to or greater than any of the above, approved by the Department and EPA; and,

5. solvent carry out from each vapor degreaser is minimized by:

a. racking parts to allow for complete drainage; and,

b. moving parts in and out of the degreaser at less than 3.3 meters per minute (11 feet per minute); and,

c. holding the parts in the vapor zone for 30 seconds or until condensation ceases, whichever is longer; and,

d. tipping out any pools of solvent on the cleaned parts before removal from the vapor zone; and,

e. allowing parts to dry within the degreaser for 15 seconds or until visually dry, whichever is longer; and,

6. no porous or absorbent material, such as, but not limited to cloth, leather, wood or rope is placed in the vapor degreaser; and,

7. less than half of the degreaser's open top area is occupied with a workload; and,

8. each degreaser is operated so that the vapor level does not drop more than ten centimeters (four inches) when the workload is removed from the vapor zone; and,

9. operators always spray within the vapor zone; and,

10. liquid leaks in each vapor degreaser are repaired immediately, or the degreaser is shut down; and,

11. each degreaser is operated so as to prevent water from being visually detected in the solvent exiting the water separator; and,

12. each degreaser is located and operated in such a manner that it is not exposed to drafts greater than 40 meters per minute (131 feet per minute) as measured between one and two meters upwind at the same elevation as the tank lip, nor is it provided with an exhaust ventilation system which exceeds 20 cubic meters per minute per square meter (65 cubic feet per minute per square foot) of vapor degreaser open area, unless such an exhaust ventilation system is necessary to meet OSHA requirements; and,

13. the cover is located below the lip exhaust, if the vapor degreaser is equipped with a lip exhaust.

(c) Conveyorized Degreasing. On or after December 31, 1980 no person who owns, leases, operates or controls a solvent metal degreasing facility which utilizes a conveyorized degreaser shall cause, suffer, allow or permit emissions therefrom, unless:

1. at least one of the following devices has been installed on each conveyorized degreaser with an air/vapor interface greater than 21.5 square feet, and that device is maintained and operated in accordance with the recommendations of the manufacturer:

a. a refrigerated chiller; or,

b. an adsorption system with ventilation greater than or equal to 15 cubic meters per minute per square meter (50 cubic feet per minute per square foot) of air/vapor area (determined when the degreaser's downtime covers are open) which exhausts less than 25 parts per million of solvent by volume averaged over one complete adsorption cycle or 24 hours whichever is less; or,

c. any other device, demonstrated to have a control efficiency equal to or greater than any of the above, approved by the Department and EPA; and,

2. each conveyorized degreaser is designed and operated to prevent cleaned parts from carrying out the solvent liquid or vapor, for example equipping the degreaser with a drying tunnel or rotating (tumbling) basket; and

3. each conveyorized degreaser is equipped with the following safety switches which are maintained and operated in accordance with the recommendations of the manufacturer:

a. a switch designed to shut off the heating source for the sump if the condenser coolant is either not circulating, or if the solvent vapor level has risen above the primary coil; and

7.18: continued

b. a switch designed to shut off the spray pump or the conveyor if the solvent vapor level drops more than ten centimeters (four inches) below the lowest condensing coil; and

4. the openings of each conveyorized degreaser are minimized during operation such that average clearance at the entrances and exits of the degreaser between the workloads and the edge of the degreaser opening is less than ten centimeters (four inches) or 10% of the width of the opening; and,

5. covers are placed over the entrances and exits of each conveyorized degreaser immediately after the conveyors and exhausts are shut down, and the covers are left in place until just prior to start-up; and,

6. solvent carry out from each conveyorized degreaser is minimized by:

a. racking parts to allow for complete drainage; and,

b. maintaining the vertical conveyor speed at less than 3.3 meters per minute (11 feet per minute); and,

7. leaks in each conveyorized degreaser are repaired immediately, or the degreaser is shutdown; and,

8. each conveyorized degreaser is operated so as to prevent water from being visually detected in solvent exiting the water separator; and,

9. no conveyorized degreaser is provided with an exhaust ventilation system which exceeds 20 cubic meters per minute per square meter (65 cubic feet per minute per square foot) of vapor degreaser open area, unless such an exhaust ventilation system is necessary to meet OSHA requirements; and,

(d) Aqueous Cleaning: any aqueous cleaner in which all the following conditions are satisfied is exempt from the requirements of 310 CMR 7.18(8)(a) through (c):

1. 1. All organic material in the cleaning fluid is water soluble; and

2. The cleaning fluid contains no more than 5% by weight organic material, excluding soaps.

(e) On or after December 31, 1980 any person subject to 310 CMR 7.18(8)(a), (b), or (c) shall operate any solvent metal degreaser using procedures which minimize evaporative emissions and prohibit spills from the use of said degreaser. Such procedures include but are not limited to:

1. notification to operators of the performance requirements that must be practiced in the operation of the degreaser, including the permanent and conspicuous posting of labels in the vicinity of the degreaser detailing performance requirements; and

2. storage of waste degreasing solvent in closed containers, and disposal or transfer of waste degreasing solvent to another party, in a manner such that less than 20% of the waste degreasing solvent by weight can evaporate into the atmosphere; and

3. where applicable, supplying a degreasing solvent spray which is a continuous fluid stream (not a fine, atomized or shower type spray) at a pressure which does not exceed ten pounds per square inch as measured at the pump outlet, and use any such spray within the confines of the degreaser, except for cleaning of high precision products, for which such person has received Department and EPA approval to use spray operations with non-continuous fluid stream or pressure greater than ten pounds per square inch, provided that such person shall:

a. Limit the amount of solvent consumed in such spray operations at the premises to less than 3,000 gallons in any 12-month period, excluding solvent captured and recycled on-site;

b. Use a solvent with a VOC content less than 7.7 pounds per gallon in such operations; and

c. Prepare and maintain records sufficient to demonstrate compliance with 310 CMR 7.18(8)(e)3.a. and b. Records to demonstrate compliance shall be kept on site for five years and shall be made available to representatives of the Department and EPA in accordance with the requirements of an approved compliance plan or upon request.

(f) Any person subject to 310 CMR 7.18(8)(a), (b), or (c) shall maintain instantaneous and continuous compliance at all times.

7.18: continued

(g) Any person subject to 310 CMR 7.18(8)(a), (b), (c) or (d) shall prepare and maintain daily records sufficient to demonstrate continuous compliance. Records kept to demonstrate compliance shall be kept on site for five years and shall be made available to representatives of the Department and EPA in accordance with the requirements of an approved compliance plan or upon request. Such records shall include, but are not limited to:

1. identity, quantity, formulation and density of solvent(s) used;
2. quantity, formulation and density of all waste solvent(s) generated;
3. actual operational and performance characteristics of the degreaser and any appurtenant emissions capture and control equipment, if applicable; and
4. any other requirements specified by the Department in any approval(s) and/or order(s) issued to the person.

(h) Persons subject to 310 CMR 7.18(8) shall, upon request by the Department, perform or have performed tests to demonstrate compliance. Testing shall be conducted in accordance with a method approved by the Department and EPA.

(9) U Cutback Asphalt.

(a) On or after May 1, 1982, no person using asphalt shall cause, suffer, allow or permit the use or application of cutback asphalt for paving purposes.

(b) 310 CMR 7.18(9)(a) shall not apply to any of the following:

1. Cutback asphalt usage from October 1 through April 30.
2. Cutback asphalt used as a penetrating prime coat.
3. Storage or stockpiling of patching mixes used in pavement maintenance for a time period greater than one month.
4. Cutback asphalt of which less than 5% by weight of the total solvent evaporates at a temperature up to and including 500°F as determined by ASTM Method D402, Distillation of Cutback Asphalt Products.

(c) Any person subject to 310 CMR 7.18(9)(a) shall demonstrate continuous compliance consistent with an instantaneous averaging period.

(d) Persons using cutback asphalt shall keep records to satisfy the requirements of 310 CMR 7.18(9)(c) and said records shall be made available to representatives of the Department and EPA upon request. Such records shall include, but are not limited to:

1. quantity and formulation of any cutback asphalt used;
2. name and address of the supplier, date of purchase and date of use of any cutback asphalt; and
3. any other requirements specified by the Department in any order(s) issued to the person, if applicable.

(e) Persons subject to 310 CMR 7.18(9)(a) shall, upon request of the Department, perform or have performed tests to demonstrate compliance. Testing shall be conducted in accordance with ASTM Method D-244, or by other methods approved by the Department and EPA.

(10) U Metal Coil Coating.

(a) On or after July 1, 1980, no person who owns, leases, operates, or controls a metal coil coating line, which emits, before any application of air pollution control equipment, in excess of 15 pounds per day of volatile organic compounds, shall cause, suffer, allow or permit emissions therefrom in excess of 4.0 pounds of volatile organic compounds per gallon of solids.

(b) Any person subject to 310 CMR 7.18(10)(a) shall maintain continuous compliance at all times. Compliance averaging times will be met in accordance with the requirements of 310 CMR 7.18(2)(a). Demonstrations of compliance shall not include any considerations of transfer efficiency.

(c) Any person subject to 310 CMR 7.18(10)(a) shall prepare and maintain daily records sufficient to demonstrate compliance consistent with the applicable averaging time as stated in 310 CMR 7.18(2)(a). Records kept to demonstrate compliance shall be kept on site for three years and shall be made available to representatives of the Department and EPA in accordance with the requirements of an approved compliance plan or upon request. Such records shall include, but are not limited to:

1. identity, quantity, formulation and density of coating(s) used;
2. identity, quantity, formulation and density of any diluent(s) and clean-up solvent(s) used;

7.18: continued

3. solids content of any coating(s) used;
4. actual operational and emissions characteristics of the coating line and any appurtenant emissions capture and control equipment;
5. quantity of product processed; and
6. any other requirements specified by the Department in any approval(s) and/or order(s) issued to the person.

(d) Persons subject to 310 CMR 7.18(10)(a) shall, upon request of the Department, perform or have performed tests to demonstrate compliance. Testing shall be conducted in accordance with EPA Method 24 and/or Method 25 as described in CFR Title 40 Part 60, or by other methods approved by the Department and EPA.

(11) U Surface Coating of Miscellaneous Metal Parts and Products.

(a) Applicability.

1. On or after December 31, 1982, no person who owns, leases, operates, or controls a miscellaneous metal parts and products surface coating lines, which has the potential to emit equal to or greater than ten tons per year of volatile organic compounds (VOC), shall cause, suffer or permit emissions of volatile organic compounds in excess of the emission limitations set forth in 310 CMR 7.18(11)(d)1. Such person shall also comply with 310 CMR 7.18(11)(g) through (i).

2. On or after March 9, 2020, any person who owns, leases, operates, or controls miscellaneous metal parts and products surface coating operations and related cleaning operations which emit, before any application of add-on air pollution capture and control equipment, equal to or greater than 15 pounds of VOC per day or, in the alternative, equal to or greater than three tons of VOC per rolling 12 month period shall comply with 310 CMR 7.18(11)(c), (d)2. and 3., (e), and (g) through (i).

3. On or after March 9, 2020, any person who owns, leases, operates, or controls plastic parts surface coating operations and miscellaneous metal parts and products surface coating operations and related cleaning operations within the same facility, which in total emit, before any application of add-on air pollution capture and control equipment, equal to or greater than 15 pounds of VOC per day or, in the alternative, equal to or greater than three tons of VOC per rolling 12 month period shall comply with 310 CMR 7.18(11)(c), (d)2. and 3., (e), and (g) through (i). The plastic parts surface coating operations are subject to 310 CMR 7.18(21).

4. On or after March 9, 2018, any person who owns, leases, operates, or controls plastic parts surface coating operations and miscellaneous metal parts and products surface coating operations and related cleaning operations which emit, before any application of add-on air pollution capture and control equipment, equal to or greater than 15 pounds of VOC per day or, in the alternative, equal to or greater than three tons of VOC per rolling 12 month period shall comply with the work practices of 310 CMR 7.18(11)(f) for coating and cleaning operations.

(b) Exemptions.

1. Any facility which has not, since January 1, 1991 emitted, before the application of any air pollution control equipment, one ton or more of volatile organic compounds in any one calendar month, or ten or more tons of volatile organic compounds in any consecutive 12 month time period is exempt from the emissions limitations of 310 CMR 7.18(11)(d)1.

2. The miscellaneous metal parts and products coatings requirements of 310 CMR 7.18(11)(d)2. and 3. and (e) do not apply to:

a. stencil coatings;
b. safety-indicating coatings;
c. solid-film lubricants;
d. electric-insulating and thermal-conducting coatings;
e. magnetic data storage disk coatings;
f. plastic extruded onto metal parts to form a coating;
g. powder coating; or
h. coating application utilizing hand-held aerosol cans.

7.18: continued

3. The requirements of 310 CMR 7.18(11)(e) do not apply to:
   a. touch-up coatings;
   b. repair coatings; or
   c. texture coatings.

4. The requirements of 310 CMR 7.18(11)(e) do not apply to pleasure craft surface coating operations when applying extreme high-gloss coatings.

5. The requirements of 310 CMR 7.18(11)(d)2. and 3., (e), and (f) do not apply to aerospace manufacturing and rework operations. Aerospace manufacturing and rework operations shall remain subject to the emission limitations set forth in 310 CMR 7.18(11)(d)1.

(c) Extensions. Any person subject to 310 CMR 7.18(11)(a)2. or 3. may apply in writing to the Department for a nonrenewable extension of the implementation deadline in 310 CMR 7.18(11)(a)2. or 3. by complying with 310 CMR 7.18(11)(g). The Department will consider a nonrenewable extension of the deadline in 310 CMR 7.18(11)(a)2. or 3. for persons applying under 310 CMR 7.18(11)(c) until no later than March 9, 2021, provided the emission control plan submitted for approval under 310 CMR 7.18(20) meets the following criteria in addition to those of 310 CMR 7.18(20):

1. a Toxics Use Reduction Plan or a Resource Conservation Plan completed for the facility in accordance with 310 CMR 50.40 through 50.48 is submitted as part of the emission control plan;

2. the Toxics Use Reduction Plan or Resource Conservation Plan was certified by a Toxics Use Reduction Planner certified under M.G.L. c. 21I, and 310 CMR 50.50 through 50.63;

3. the emission control plan proposes to reduce emissions or natural asset use, from the process or elsewhere in the facility, more than otherwise required pursuant to an applicable regulation or approval of the Department, through toxics use reduction techniques or resource conservation actions as defined in M.G.L. c. 21I; and

4. implementation of the emission control plan meets the emission limitations of 310 CMR 7.18(11)(d).

(d) Reasonably Available Control Technology Requirements.

1. If more than one emission limitation applies to any specific coating, then the coating shall comply with the least stringent.

Table 310 CMR 7.18(11)(d)1.
Emission Limitations
Surface Coating of Miscellaneous Metal Parts and Products

Emission Source	Emission Limitation* Pounds of VOC per gallon of solids applied
Clear Coatings	10.3
Coating line that is air-dried or forced warm-air dried at temperatures up to 90°C	6.7
Extreme Performance Coating	6.7
All other coatings and coating lines	5.1

*If more than one emission limitation above applies to a specific coating, then the least stringent emission limitation shall be applied.

2. Any person subject to 310 CMR 7.18(11)(a)2. or 3. shall limit VOC emissions by using only coatings having a VOC content no greater than the emission limitations listed in Tables 310 CMR 7.18(11)(d)2.a., c. and d. (low-VOC coatings to meet the mass of VOC per volume of coating less water and exempt compounds, as-applied, limits) or b. and c. (low-VOC coatings or a combination of coatings and add-on control equipment on a coating unit to meet the mass of VOC per volume of coating solids limits), or by complying with the requirement in 310 CMR 7.18(11)(d)3. If a coating can be classified in more than one coating category in 310 CMR 7.18(11)(d), then the least stringent coating category limitation shall apply.

7.18: continued

Table 310 CMR 7.18(11)(d)2.a. RACT Emission Limitations for Surface Coating of Miscellaneous Metal Parts and Products				
	Mass of VOC per volume of coating less water and exempt compounds, as applied			
	Air-Dried		Baked	
Coating Category	kg/l coating	lb/gal coating	kg/l coating	lb/gal coating
General, One-component	0.34	2.8	0.28	2.3
General, Multi-component	0.34	2.8	0.28	2.3
Camouflage	0.42	3.5	0.42	3.5
Electric Insulating Varnish	0.42	3.5	0.42	3.5
Etching Filler	0.42	3.5	0.42	3.5
Extreme High-gloss	0.42	3.5	0.36	3.0
Extreme Performance	0.42	3.5	0.36	3.0
Heat-Resistant	0.42	3.5	0.36	3.0
High Performance Architectural	0.74	6.2	0.74	6.2
High Temperature	0.42	3.5	0.42	3.5
Metallic	0.42	3.5	0.42	3.5
Military Specification	0.34	2.8	0.28	2.3
Mold-seal	0.42	3.5	0.42	3.5
Pan Backing	0.42	3.5	0.42	3.5
Prefabricated Architectural One & Multi-component	0.42	3.5	0.28	2.3
Pretreatment Coatings	0.42	3.5	0.42	3.5
Repair and Touch-up	0.42	3.5	0.36	3.0
Silicone-Release	0.42	3.5	0.42	3.5
Solar-Absorbent	0.42	3.5	0.36	3.0
Vacuum-metallizing	0.42	3.5	0.42	3.5
Drum Coating - New - Exterior	0.34	2.8	0.34	2.8
Drum Coating - New - Interior	0.42	3.5	0.42	3.5
Drum Coating - Reconditioned - Exterior	0.42	3.5	0.42	3.5
Drum Coating - Reconditioned - Interior	0.50	4.2	0.50	4.2

Table 310 CMR 7.18(11)(d)2.b. RACT Emission Limitations for Surface Coating of Miscellaneous Metal Parts and Products				
	Mass of VOC per volume of coating solids, as applied			
	Air-Dried		Baked	
Coating Category	kg/l solids	lb/gal solids	kg/l solids	lb/gal solids
General, One-component	0.54	4.52	0.40	3.35
General, Multi-component	0.54	4.52	0.40	3.35
Camouflage	0.80	6.67	0.80	6.67
Electric Insulating Varnish	0.80	6.67	0.80	6.67
Etching Filler	0.80	6.67	0.80	6.67
Extreme High-gloss	0.80	6.67	0.61	5.06
Extreme Performance	0.80	6.67	0.61	5.06
Heat-Resistant	0.80	6.67	0.61	5.06
High Performance Architectural	4.56	38.0	4.56	38.0
High Temperature	0.80	6.67	0.80	6.67
Metallic	0.80	6.67	0.80	6.67
Military Specification	0.54	4.52	0.40	3.35
Mold-Seal	0.80	6.67	0.80	6.67
Pan Backing	0.80	6.67	0.80	6.67
Prefabricated Architectural One & Multi-component	0.80	6.67	0.40	3.35
Pretreatment Coatings	0.80	6.67	0.80	6.67
Repair and Touch-up	0.80	6.67	0.80	6.67
Silicone-release	0.80	6.67	0.80	6.67
Solar-absorbent	0.80	6.67	0.61	5.06
Vacuum-metallizing	0.80	6.67	0.80	6.67
Drum Coating - New - Exterior	0.54	4.52	0.54	4.52
Drum Coating - New - Interior	0.80	6.67	0.80	6.67
Drum Coating - Reconditioned - Exterior	0.80	6.67	0.80	6.67
Drum Coating - Reconditioned - Interior	1.17	9.78	1.17	9.78

7.18: continued

Table 310 CMR 7.18(11)(d)2.c. RACT Emission Limitations for Pleasure Craft Surface Coatings				
	Mass of VOC per volume of coating less water and exempt compounds, as applied		Mass of VOC per volume of coating solids, as applied	
Coating Category	kg/l coating	lb/gal coating	kg/l solids	lb/gal solids
Extreme High Gloss Topcoat	0.60	5.0	1.87	15.6
High Gloss Topcoat	0.42	3.5	0.80	6.7
Pretreatment Wash Primers	0.78	6.5	6.67	55.6
Finish Primer/Surfacer	0.42	3.5	0.80	6.7
High Build Primer Surfacer	0.34	2.8	0.55	4.6
Aluminum Substrate Antifoulant Coating	0.56	4.7	1.53	12.8
Antifouling Sealer/Tie Coat	0.42	3.5	0.80	6.7
Other Substrate Antifoulant Coating	0.40	3.4	0.75	6.3
All other pleasure craft surface coatings for metal or plastic	0.42	3.5	0.80	6.7

Table 310 CMR 7.18(11)(d)2.d. RACT Emission Limitations for Motor Vehicle Materials		
	Mass of VOC per volume of coating less water and exempt compounds, as applied	
Coating Category	kg/l coating	lb/gal coating
Motor vehicle cavity wax; Motor vehicle sealer; Motor vehicle deadener; Motor vehicle underbody coating; Motor vehicle trunk interior coating	0.65	5.4
Motor vehicle bedliner; Motor vehicle gasket/gasket sealing material	0.20	1.7
Motor vehicle lubricating wax/compound	0.70	5.8

3. Any person may achieve an overall VOC control efficiency of at least 90% by weight using add-on air pollution capture and control equipment instead of complying with the requirements of 310 CMR 7.18(11)(d)2.

(e) Application Methods. Unless complying with 310 CMR 7.18(11)(a)2. or 3. by means of 310 CMR 7.18(11)(d)3., all coatings shall be applied using one or more of the following:

1. electrostatic spray application;
2. HVLP spray;
3. flow coat;
4. roller coat;
5. dip coat, including electrodeposition;
6. airless spray;
7. air-assisted airless spray; or
8. a coating application method capable of achieving a transfer efficiency equivalent to or greater than that achieved by HVLP, as approved by EPA.

(f) Work Practices for Coating and Cleaning Operations. Any person subject to 310 CMR 7.18(11) shall comply with the work practices of 310 CMR 7.18(31)(e).

(g) Plan and Extension Submittal Requirements.

1. Any person subject to 310 CMR 7.18(11)(a)1., 2., or 3. who chooses to install add-on air pollution capture and control equipment to comply with 310 CMR 7.18(11)(d) shall submit an emission control plan in accordance with 310 CMR 7.18(20).

2. Any person subject to 310 CMR 7.18(11)(a)2. or 3. who chooses to apply for an extension under 310 CMR 7.18(11)(c) shall comply with 310 CMR 7.18(20).

(h) Recordkeeping Requirements. Any person subject to 310 CMR 7.18(11)(a) shall prepare and maintain records sufficient to demonstrate compliance consistent with 310 CMR 7.18(2). Records kept to demonstrate compliance shall be kept on site for five years and shall be made available to representatives of the Department and EPA in accordance with the requirements of an approved compliance plan or upon request. Such records shall include, but are not limited to:

7.18: continued

1 identity, quantity, formulation and density of coating(s) used;
2. identity, quantity, formulation and density of any diluent(s) and clean-up solvent(s) used;
3. solids content of any coating(s) used;
4. actual operational and emissions characteristics of the coating line and any appurtenant emissions capture and control equipment;
5. quantity of product processed, if necessary to determine emissions; and
6. any other requirements specified by the Department in any approval(s) or order(s) issued to the person.

(i) Testing Requirements. Any person subject to 310 CMR 7.18(11)(a) shall, upon request of the Department, perform or have performed tests to demonstrate compliance with 310 CMR 7.18(11). Testing shall be conducted in accordance with EPA Method 24 or Method 25 as described in CFR Title 40 Part 60, or by other methods approved by the Department and EPA. If acceptable to the Department and EPA, manufacturer's formulation data may be used to demonstrate compliance with coating VOC content limitations. In the case of a dispute, the VOC content determined using the EPA Method shall prevail, unless a person is able to demonstrate to the Department and EPA that the manufacturer's formulation data are correct. EPA Method 25A shall be used when:

1. an exhaust concentration of less than or equal to 50 parts per million volume (ppmv) as carbon is required to comply with the applicable limitation;
2. the inlet concentration and the required level of control results in an exhaust concentration of less than or equal to 50 ppmv as carbon; or
3. the high efficiency of the control device alone results in an exhaust concentration of less than or equal to 50 ppmv as carbon.

(12) U Packaging Rotogravure and Packaging Flexographic Printing.

(a) Applicability.

1. On or after January 1, 1994, and before March 9, 2020, no person who owns, leases, operates or controls packaging rotogravure printing lines, which have the potential to emit equal to or greater than 50 tons per year of volatile organic compounds (VOC) shall cause, suffer, allow or permit the operation of said lines unless the requirements of 310 CMR 7.18(12)(d)1. and (f) through (h) are met.
2. On or after March 9, 2020, any person who owns, leases, operates or controls a packaging rotogravure printing line or packaging flexographic printing line, which has the potential to emit, before any application of add-on air pollution capture and control equipment, equal to or greater than 25 tons per rolling 12-month period of VOC shall comply with 310 CMR 7.18(12)(c), (d)2., and (f) through (h) at that printing line.
3. On or after March 9, 2018, any person who owns, leases, operates, or controls packaging rotogravure printing operations or packaging flexographic printing operations and related cleaning operations which emit, before any application of add-on air pollution capture and control equipment, equal to or greater than 15 pounds of VOC per day or, in the alternative, equal to or greater than three tons of VOC per rolling 12-month period shall comply with 310 CMR 7.18(12)(e), (g) and (h).

(b) Exemptions. The requirements of 310 CMR 7.18(12)(a)2. do not apply provided the person obtains and complies with a federally enforceable emission limitation which restricts the potential emissions of the printing line to below 25 tons per year.

(c) Extensions.

1. Any person subject to 310 CMR 7.18(12)(a)2. may apply in writing to the Department for a non-renewable extension of the implementation deadline in 310 CMR 7.18(12)(a)2. by complying with 310 CMR 7.18(12)(f). The Department will consider a non-renewable extension of the deadline in 310 CMR 7.18(12)(a)2. for persons applying under 310 CMR 7.18(12)(c) until no later than March 9, 2021, provided the emission control plan submitted for approval under 310 CMR 7.18(20) meets the following criteria in addition to those of 310 CMR 7.18(20):
   a. a Toxics Use Reduction Plan or a Resource Conservation Plan completed for the facility in accordance with 310 CMR 50.40 through 50.48 is submitted as part of the emission control plan;
   b. the Toxics Use Reduction Plan or Resource Conservation Plan was certified by a Toxics Use Reduction Planner certified under M.G.L. c. 21I and 310 CMR 50.50 through 50.63;

7.18: continued

c. the emission control plan proposes to reduce emissions or natural asset use, from the process or elsewhere in the facility, more than otherwise required pursuant to an applicable regulation or approval of the Department, through toxics use reduction techniques or resource conservation actions as defined in M.G.L. c. 21I; and

d. implementation of the emission control plan meets the emission limitations of 310 CMR 7.18(12)(d).

(d) Reasonably Available Control Technology Requirements.

1. Packaging Rotogravure Printing Lines.

a. The volatile portion of the ink, as applied to the substrate contains 25.0% or less by volume of volatile organic compounds and 75.0% or more by volume of water; or,

b. The ink (less water) as it is applied to the substrate contains 60.0% by volume or more non-volatile materials; or,

c. The owner or operator installs and operates:

i. A carbon adsorption system which reduces the volatile organic emissions by at least 90.0% by weight; or,

ii. an incinerator system which oxidizes at least 90.0% by weight of the volatile organic compounds emitted; or,

iii. an alternative volatile organic compound emission reduction system demonstrated to have at least 90.0% reduction efficiency by weight; and,

iv. A capture system must be used in conjunction with any emission control systems installed pursuant to 310 CMR 7.18(12)(d)1.c.i. through iii. The design and operation of said capture system must be consistent with good engineering practice and is required to provide for an overall reduction in volatile organic compound emissions of at least 65.0% where packaging rotogravure process is employed.

2. Packaging Rotogravure and Packaging Flexographic Printing Lines. Any person subject to 310 CMR 7.18(12)(a)2. shall limit VOC emissions by complying with one or more of 310 CMR 7.18(12)(d)2.a. or b.

a. Capture and Control Requirements.

i. A press first installed prior to March 14, 1995 and controlled by an add-on air pollution control device whose first installation date was prior to March 9, 2019 shall achieve at least 65.0% overall control by weight of the VOC emitted.

ii. A press first installed prior to March 14, 1995 and controlled by an add-on air pollution control device whose first installation date was on or after March 9, 2019 shall achieve at least 70.0% overall control by weight of the VOC emitted.

iii. A press first installed on or after March 14, 1995 and controlled by an add-on air pollution control device whose first installation date was prior to March 9, 2019 shall achieve at least 75.0% overall control by weight of the VOC emitted.

iv. A press first installed on or after March 14, 1995 and controlled by an add-on air pollution control device whose first installation date was on or after March 9, 2019 shall achieve at least 80.0% overall control by weight of the VOC emitted.

b. VOC Content Limit. The volatile portion of inks, coatings and adhesives shall contain no more than either 0.8 kg VOC/kg solids applied or 0.16 kg VOC/kg material applied. The VOC content limitations may be met by averaging the VOC content of materials used on a single press (*i.e.*, within a line).

(e) Work Practices and Emission Limitations for Printing and Cleaning Operations.

1. Any person subject to 310 CMR 7.18(12) shall comply with the work practices of 310 CMR 7.18(31)(e).

2. Any person subject to 310 CMR 7.18(12) shall only use cleanup solutions that have a VOC composite partial pressure equal to or less than 25 mm Hg at 20°C (68°F).

(f) Plan and Extension Submittal Requirements.

1. Any person subject to 310 CMR 7.18(12)(a)1. or 2. who chooses to install add-on air pollution capture and control equipment to comply with 310 CMR 7.18(12)(d) shall submit an emission control plan in accordance with 310 CMR 7.18(20).

7.18: continued

2. Any person subject to 310 CMR 7.18(12)(a)2. who chooses to apply for an extension under 310 CMR 7.18(12)(c) shall comply with 310 CMR 7.18(20).

(g) Recordkeeping Requirements. Any person subject to 310 CMR 7.18(12)(a) shall prepare and maintain records sufficient to demonstrate compliance consistent with 310 CMR 7.18(2). Records kept to demonstrate compliance shall be kept on-site for five years and shall be made available to representatives of the Department and EPA in accordance with the requirements of an approved compliance plan or upon request. Such records shall include, but are not limited to:

1. identity, quantity, formulation and density of ink(s), coating(s) and adhesive(s) used;
2. identity, quantity, formulation and density of any diluent(s) and clean-up solvent(s) used;
3. solids content of any ink(s), coating(s) and adhesive(s) used;
4. actual operational and emissions characteristics of the printing line and any appurtenant emissions capture and control equipment;
5. quantity of product processed, if necessary to determine emissions; and
6. any other requirements specified by the Department in any approval(s) or order(s) issued to the person.

(h) Testing Requirements. Any person subject to 310 CMR 7.18(12)(a) shall, upon request of the Department, perform or have performed tests to demonstrate compliance with 310 CMR 7.18(12). Testing shall be conducted in accordance with EPA Method 24, Method 24A or Method 25 as described in CFR Title 40 Part 60, EPA Methods 204 and 204A through F of CFR Title 40 Part 51 Appendix M or by other methods approved by the Department and EPA. EPA Method 25A shall be used when:

1. an exhaust concentration of less than or equal to 50 parts per million volume (ppmv) as carbon is required to comply with the applicable limitation;
2. the inlet concentration and the required level of control results in an exhaust concentration of less than or equal to 50 ppmv as carbon; or
3. the high efficiency of the control device alone results in an exhaust concentration of less than or equal to 50 ppmv as carbon.

((13) Reserved)

(14) U Paper, Film, and Foil Surface Coating.

(a) Applicability.

1. On or after December 31, 1982, no person who owns, leases, operates, or controls a paper, film, or foil surface coating line which emits, before any application of air pollution control equipment, in excess of 15 pounds per day of volatile organic compounds (VOC) shall cause, suffer, allow or permit emissions in excess of the requirements of 310 CMR 7.18(14)(d)1. Such person shall also comply with 310 CMR 7.18(14)(f) through (h).
2. On or after March 9, 2020, any person who owns, leases, operates, or controls a paper, film, or foil surface coating line, which has the potential to emit, before any application of add-on air pollution capture and control equipment, equal to or greater than 25 tons per rolling 12-month period of VOC shall comply with 310 CMR 7.18(14)(c), (d)2., and (f) through (h) at that coating line.
3. On or after March 9, 2018, any person who owns, leases, operates, or controls paper, film, or foil surface coating operations and related cleaning operations which emit, before any application of add-on air pollution capture and control equipment, equal to or greater than 15 pounds of VOC per day or, in the alternative, equal to or greater than three tons of VOC per rolling 12-month period shall comply with the work practices of 310 CMR 7.18(14)(e) for coating and cleaning operations.
4. 310 CMR 7.18(14) does not apply to coating application on or in-line with any offset lithographic, screen, letterpress, flexographic, rotogravure, or digital printing press.

(b) Exemptions. The requirements of 310 CMR 7.18(14)(a)2. do not apply provided the person obtains and complies with a federally enforceable emission limitation which restricts the potential emissions of the coating line to below 25 tons per year.

7.18: continued

(c) Extensions. Any person subject to 310 CMR 7.18(14)(a)2. may apply in writing to the Department for a non-renewable extension of the implementation deadline in 310 CMR 7.18(14)(a)2. by complying with 310 CMR 7.18(14)(f). The Department will consider a non-renewable extension of the deadline in 310 CMR 7.18(14)(a)2. for persons applying under 310 CMR 7.18(14)(c) until no later than March 9, 2021, provided the emission control plan submitted for approval under 310 CMR 7.18(20) meets the following criteria in addition to those of 310 CMR 7.18(20):

1. a Toxics Use Reduction Plan or a Resource Conservation Plan completed for the facility in accordance with 310 CMR 50.40 through 50.48 is submitted as part of the emission control plan;

2. the Toxics Use Reduction Plan or Resource Conservation Plan was certified by a Toxics Use Reduction Planner certified under M.G.L. c. 21I and 310 CMR 50.50 through 50.63;

3. the emission control plan proposes to reduce emissions or natural asset use, from the process or elsewhere in the facility, more than otherwise required pursuant to an applicable regulation or approval of the Department, through toxics use reduction techniques or resource conservation actions as defined in M.G.L. c. 21I; and

4. implementation of the emission control plan meets the emission limitations of 310 CMR 7.18(14)(d).

(d) Reasonably Available Control Technology Requirements.

1. Any person subject to 310 CMR 7.18(14)(a)1. shall not exceed a limitation of 4.8 pounds of VOC per gallon of solids applied.

2. Any person subject to 310 CMR 7.18(14)(a)2. shall limit VOC emissions by complying with one or more of 310 CMR 7.18(14)(d)2.a., b., or c.

a. Achieve an overall VOC control efficiency of at least 90% by weight using add-on air pollution capture and control equipment at that coating line.

b. A paper, film, or foil coating line that is not a pressure sensitive tape and label coating line shall comply with:

i. a VOC content of no greater than 0.40 pounds of VOC per pound of solids applied at that coating line; or

ii. a VOC content of no greater than 0.08 pounds of VOC per pound of coating at that coating line; or

iii. a combination of VOC content and add-on air pollution capture and control equipment to achieve an overall VOC control efficiency of at least 90% by weight; or

iv. within line averaging to achieve compliance with 310 CMR 7.18(14)(d)2.b.i. or ii.

c. A paper, film, or foil coating line that is a pressure sensitive tape and label coating line shall comply with:

i. a VOC content of no greater than 0.20 pounds of VOC per pound of solids applied at that coating line; or

ii. a VOC content of no greater than 0.067 pounds of VOC per pound of coating at that coating line; or

iii. a combination of VOC content and add-on air pollution capture and control equipment to achieve an overall VOC control efficiency of at least 90% by weight; or

iv. within line averaging to achieve compliance with 310 CMR 7.18(14)(d)2.c.i. or ii.

(e) Work Practices for Coating and Cleaning Operations. Any person subject to 310 CMR 7.18(14) shall comply with the work practices of 310 CMR 7.18(31)(e).

(f) Plan and Extension Submittal Requirements.

1. Any person subject to 310 CMR 7.18(14)(a)1. or 2. who chooses to install add-on air pollution capture and control equipment to comply with 310 CMR 7.18(14)(d) shall submit an emission control plan in accordance with 310 CMR 7.18(20).

2. Any person subject to 310 CMR 7.18(14)(a)2. who chooses to apply for an extension under 310 CMR 7.18(14)(c) shall comply with 310 CMR 7.18(20).

7.18: continued

(g) Recordkeeping Requirements. Any person subject to 310 CMR 7.18(14)(a) shall prepare and maintain records sufficient to demonstrate compliance consistent with 310 CMR 7.18(2). Records kept to demonstrate compliance shall be kept on site for five years and shall be made available to representatives of the Department and EPA in accordance with the requirements of an approved compliance plan or upon request. Such records shall include, but are not limited to:

1. identity, quantity, formulation and density of coating(s) used;
2. identity, quantity, formulation and density of any diluent(s) and clean-up solvent(s) used;
3. solids content of any coating(s) used;
4. actual operational and emissions characteristics of the coating line and any appurtenant emissions capture and control equipment;
5. quantity of product processed, if necessary to determine emissions; and
6. any other requirements specified by the Department in any approval(s) or order(s) issued to the person.

(h) Testing Requirements. Any person subject to 310 CMR 7.18(14)(a) shall, upon request of the Department, perform or have performed tests to demonstrate compliance with 310 CMR 7.18(14). Testing shall be conducted in accordance with EPA Method 24 or Method 25 as described in CFR Title 40 Part 60, or by other methods approved by the Department and EPA. EPA Method 25A shall be used when:

1. an exhaust concentration of less than or equal to 50 parts per million volume (ppmv) as carbon is required to comply with the applicable limitation;
2. the inlet concentration and the required level of control results in an exhaust concentration of less than or equal to 50 ppmv as carbon; or
3. the high efficiency of the control device alone results in an exhaust concentration of less than or equal to 50 ppmv as carbon.

(15) U Fabric Surface Coating.

(a) On or after December 31, 1982, unless granted an extension by the Department until January 1, 1987, no person who owns, leases, operates, or controls a fabric surface coating line, which emits, before any application of air pollution control equipment, in excess of 15 pounds per day of volatile organic compounds, shall cause, suffer, allow or permit emissions therefrom in excess of 4.8 pounds of volatile organic compounds per gallon of solids applied.

(b) Any person subject to 310 CMR 7.18(15)(a) shall maintain continuous compliance at all times. Compliance averaging times will be met in accordance with the requirements of 310 CMR 7.18(2)(a). Demonstrations of compliance shall not include any considerations of transfer efficiency.

(c) Any person subject to 310 CMR 7.18(15)(a) shall prepare and maintain daily records sufficient to demonstrate compliance consistent with the applicable averaging time as stated in 310 CMR 7.18(2)(a). Records kept to demonstrate compliance shall be kept on site for three years and shall be made available to representatives of the Department and EPA in accordance with the requirements of an approved compliance plan or upon request. Such records shall include, but are not limited to:

1. identity, quantity, formulation and density of coating(s) used;
2. identity, quantity, formulation and density of any diluent(s) and clean-up solvent(s) used;
3. solids content of any coating(s) used;
4. actual operational and emissions characteristics of the coating line and any appurtenant emissions capture and control equipment;
5. quantity of product processed; and
6. any other requirements specified by the Department in any approval(s) and/or order(s) issued to the person.

(d) Persons subject to 310 CMR 7.18(15)(a) shall, upon request of the Department, perform or have performed tests to demonstrate compliance. Testing shall be conducted in accordance with EPA Method 24 and/or Method 25 as described in CFR Title 40 Part 60, or by other methods approved by the Department and EPA.

7.18: continued

(16) U Vinyl Surface Coating.

(a) On or after December 31, 1982, unless granted an extension by the Department until January 1, 1987, no person who owns, leases, operates, or controls a vinyl coating line, which emits, before any application of air pollution control equipment, in excess of 15 pounds per day of volatile organic compounds shall cause allow or permit emissions therefrom in excess of 7.8 pounds of volatile organic compounds per gallon of solids applied.

NON-TEXT PAGE

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(b) Any person subject to 310 CMR 7.18(16)(a) shall maintain continuous compliance at all times. Compliance averaging times will be met in accordance with the requirements of 310 CMR 7.18(2)(a). Demonstrations of compliance shall not include any considerations of transfer efficiency.

(c) Any person subject to 310 CMR 7.18(16)(a) shall prepare and maintain daily records sufficient to demonstrate compliance consistent with the applicable averaging time as stated in 310 CMR 7.18(2)(a). Records kept to demonstrate compliance shall be kept on site for three years and shall be made available to representatives of the Department and EPA in accordance with the requirements of an approved compliance plan or upon request. Such records shall include, but are not limited to:

1. identity, quantity, formulation and density of coating(s) used;
2. identity, quantity, formulation and density of any diluent(s) and clean-up solvent(s) used;
3. solids content of any coating(s) used;
4. actual operational and emissions characteristics of the coating line and any appurtenant emissions capture and control equipment;
5. quantity of product processed; and
6. any other requirements specified by the Department in any approval(s) and/or order(s) issued to the person.

(d) Persons subject to 310 CMR 7.18(16)(a) shall, upon request of the Department, perform or have performed tests to demonstrate compliance. Testing shall be conducted in accordance with EPA Method 24 and/or Method 25 as described in CFR Title 40 Part 60, or by other methods approved by the Department and EPA.

(17) Reasonable Available Control Technology.

(a) Applicability. 310 CMR 7.18(17) applies to any person who owns, leases, operates or controls any facility which has the potential to emit, before the application of air pollution control equipment, equal to or greater than 25 tons per year of volatile organic compounds, not including VOC emissions exempted under 310 CMR 7.18(17)(b).

(b) Emissions Exemptions. Emissions of volatile organic compounds from any facility which are subject to any of the following requirements are not included when determining the potential to emit, before application of air pollution control equipment, for purposes of 310 CMR 7.18(17)(a):

1. emissions of volatile organic compounds which are subject to regulation by other sections of 310 CMR 7.18, excluding 310 CMR 7.18(1), 310 CMR 7.18(2) and 310 CMR 7.18(20); or,
2. emissions of volatile organic compounds for which standards have been issued by EPA pursuant to Section 112 of the Act, from equipment subject to regulation under 40 CFR Part 61 (NESHAPS); or,
3. emissions of volatile organic compounds from equipment which, since January 1, 1990, have been reviewed and approved as Best Available Control Technology or Lowest Achievable Emission Rate imposed in an approval containing specific emission limits or work practice standards issued under a federally-enforceable regulation; or,
4. emissions of volatile organic compounds from the incomplete combustion of any material, except where the material is heated, burned, combusted or otherwise chemically changed under oxygen deficient conditions by design.
5. emissions of volatile organic compounds resulting from operations which are subject to regulation under 310 CMR 7.24.
6. emissions of volatile organic compounds from operations which since 1990 have been constructed and operated in accordance with the exemptions in 310 CMR 7.03.

(c) Reasonably Available Control Technology Requirements.

1. Unless granted a non-renewable extension by the Department under 310 CMR 7.18(17)(e), no person subject to 310 CMR 7.18(17)(a) shall cause, suffer, allow or permit emissions from the facility in excess of an emission rate achievable through the implementation of reasonably available control technology as required in an emission control plan approved under 310 CMR 7.18(20)(e), according to the following schedule:
   a. On or after December 31, 1986 for any facility with the potential to emit equal to or greater than 100 tons per year of VOC, before the application of air pollution control equipment;

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b. On or after January 1, 1994 for any facility with the potential to emit before application of air pollution control equipment, equal to or greater than 50 tpy, but less than 100 tpy, and which, since 1/1/90 has had actual emissions, before the application of air pollution control equipment, greater than 50 tons per year in any one calendar year;

c. On or after May 31, 1995 for any facility with the potential to emit, before application of air pollution control equipment, equal to or greater than 50 tpy, but less than 100 tpy, and which since 1/1/90 has had actual emissions, before the application of air pollution control equipment, less than or equal to 50 tons per year in any one calendar year;

d. If the Administrator makes a determination under Section 182(g)(3) of the Clean Air Act (CAA) that Massachusetts has failed to meet a milestone, then by May 31, 1997 or two years after the determination, whichever is later, for any facility with the potential to emit, before application of air pollution control equipment equal to or greater than 25 tpy, but less than 50 tpy, and which since 1/1/90 have had actual emissions, before the application of air pollution control equipment, greater than or equal to 25 tons per year in any one calendar year;

e. If the Administrator makes a determination under Section 182(g)(3) of the Clean Air Act (CAA) that Massachusetts has failed to meet a milestone, then by May 31, 1999 or four years after the determination, whichever is later, for any facility with the potential to emit, before application of air pollution control equipment equal to or greater than 25 tpy, but less than 50 tpy, and which since 1/1/90 have had actual emissions, before the application of air pollution control equipment, less than 25 tons per year in any one calendar year;

(d) Plan Submittal Requirements. Any person subject to 310 CMR 7.18(17)(a) must have the RACT emission limit approved by the Department in an emissions control plan approved under 310 CMR 7.18(20), and must submit such plan 180 days prior to the applicable implementation deadline in 310 CMR 7.18(17)(c). The Department must also submit the plan to the EPA for approval as a revision to the Massachusetts State Implementation Plan. However, any person subject to 310 CMR 7.18(17)(a) only if HOC emissions are included in the applicability determination (i.e. the facility's VOC emissions are less than the applicability threshold) is not required to have their emission control plan approved as a revision to the Massachusetts State Implementation Plan.

(e) Extensions.

1. Any person required to implement RACT according to the schedule in 310 CMR 7.18(17)(c) may apply in writing to the Department for a non-renewable extension of the implementation deadline in 310 CMR 7.18(17)(c). The person must apply to the Department for the non-renewable extension at the same time the person submits the emission control plan required by 310 CMR 7.18(20).

2. The Department will consider allowing a non-renewable extension from the original implementation deadline in 310 CMR 7.18(17)(c) which extension will not exceed one calendar year, provided the emission control plan submitted for approval under 7.18(20), meets the following criteria in addition to those of 310 CMR 7.18(20):

a. the emission control plan proposes to reduce emissions through toxics use reduction techniques defined in M.G.L. c. 21I; and,

b. the toxics use reduction techniques contained in the emission control plan are approved by a Toxics Use Reduction Planner certified under M.G.L. c. 21I; (this may be an employee at the facility who is certified as Toxics Use Reduction Planner); and,

c. implementation of the plan will achieve a minimum emission reduction of 85% from the actual emissions reported under 310 CMR 7.18(20)(c)4 through toxics use reduction techniques, as calculated on a mass of VOC emitted per gallon of solids as applied or per unit of production basis; and,

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d. the emission control plan also contains contingency measures to reduce emissions by 90%, as calculated on a mass of VOC emitted per gallon of solids as applied or per unit of production basis, which measures automatically take effect if the emissions reductions achieved through toxics use reduction techniques do not equal 85%, as calculated on a mass of VOC emitted per gallon of solids as applied or per unit of production basis.

3. Notwithstanding the above, no facility subject to the requirements of 310 CMR 7.18(17) prior to February 1, 1993, shall be eligible for any extension of the compliance deadline set forth in 310 CMR 7.18(17)(c)1.a.

(f) Continuous Compliance. Any person required to implement RACT according to the schedule in 310 CMR 7.18(17)(c) shall maintain continuous compliance at all times. Compliance averaging times will be met in accordance with the requirements of 310 CMR 7.18(2)(a). Demonstrations of compliance may include considerations of transfer efficiency provided that the baseline transfer efficiency and transfer efficiency test method are detailed in the emission control plan as approved by the Department and EPA.

(g) Recordkeeping Requirements. Any person required to implement RACT according to the schedule in 310 CMR 7.18(17)(c) shall prepare and maintain daily records sufficient to demonstrate compliance consistent with the applicable averaging time as stated in 310 CMR 7.18(2)(a). Records kept to demonstrate compliance shall be kept on site for five years and shall be made available to representatives of the Department and EPA in accordance with the requirements of an approved emission control plan (310 CMR 7.18(20) or upon request. Such records shall include, but not be limited to:

1. identity, quantity, formulation and density of coating(s) used;
2. identity, quantity, formulation and density of any diluent(s) and clean-up solvent(s) used;
3. solids content of any coating(s) used;
4. actual operational and emissions characteristics of the coating line and any appurtenant emissions capture and control equipment;
5. quantity of product processed;
6. any other requirements specified by the Department in any approval(s) issued under 310 CMR 7.18(20) or any order(s) issued to the person.

(h) Testing Requirements. Any person required to implement RACT according to the schedule in 310 CMR 7.18(17)(c) shall, upon request of the Department, perform or have performed tests to demonstrate compliance with 310 CMR 7.18(17). Testing shall be conducted in accordance with EPA Method 24 and/or Method 25 as described in CFR Title 40 Part 60, or by other methods approved by the Department and EPA.

(18) U Polystyrene Resin Manufacture.

(a) On or after December 31, 1986, no person who owns, leases, operates, or controls a continuous process polystyrene resin manufacturing plant or facility which emits, before any application of air pollution control equipment, in excess of 15 pounds per day of volatile organic compounds, shall cause, suffer, allow or permit emissions from the material recovery section in excess of 0.12 pounds of volatile organic compounds per 1,000 pounds of product.

(b) Any person subject to 310 CMR 7.18(18)(a) shall maintain continuous compliance at all times. Compliance averaging times will be met in accordance with the requirements of 310 CMR 7.18(2)(a).

(c) Any person subject to 310 CMR 7.18(18)(a) shall prepare and maintain daily records sufficient to demonstrate compliance consistent with the applicable averaging time as stated in 310 CMR 7.18(2)(a). Records kept to demonstrate compliance shall be kept on site for three years and shall be made available to representatives of the Department and EPA in accordance with the requirements of an approved compliance plan or upon request. Such records shall include, but are not limited to:

1. properties of the inlet emission stream including temperature, pressure, flow rate and composition;

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2. properties of the inlet coolant including type, temperature and pressure;
3. quantity of product produced;
4. actual operational and emission characteristics of the manufacturing process and any appurtenant emissions capture and control equipment; and
5. any other requirements specified by the Department in any approval(s) and/or order(s) issued to the person.

(d) Persons subject to 310 CMR 7.18(18)(a) shall, upon request of the Department, perform or have performed tests to demonstrate compliance. Testing shall be conducted in accordance with EPA Method 2 and Method 25 as described in CFR Title 40 Part 60, or by other methods approved by the Department and EPA.

(19) Synthetic Organic Chemical Manufacture.

(a) Each person owning, leasing, or controlling the operation of a synthetic organic chemical manufacturing facility shall monitor quarterly the following components in VOC service with an organic detection instrument: each pump in light liquid service; each compressor; each valve in both gas and light liquid service; and each pressure relief valve in gas service.

(b) Each owner or operator shall monitor:

1. each pressure relief valve within 24 hours after it has vented to the atmosphere;
2. within 24 hours of discovery a component which sight, smell, or sound indicates might be leaking;
3. any component that appears to be leaking, on the basis of sight, smell, or sound, including flanges, connections, and equipment in heavy liquid service should be repaired with 15 days of the date the leak is detected.

(c) Each owner or operator shall use a VOC detection instrument and monitoring method in accordance with EPA Reference Method 21, as described in: 40 CFR part 60 Appendix A.

(d) From the date a leaking component is detected, each owner or operator shall:

1. affix within one hour a weatherproof and readily visible tag to the component, bearing an identification number and the date. This tag shall remain in place until the component is repaired.
2. repair the leaking component within 15 days; or
3. repair the leaking component at or before the next scheduled unit turnaround if not able to do so within 15 days.

(e) Each owner or operator shall visually inspect all pumps in light liquid service weekly.

(f) Except for pressure relief valves, an owner or operator shall seal all open-ended valves which are in contact with process fluid on one side of the seat and open to the atmosphere on the other side of the seat. The open-ended valves shall be sealed with one of the following: a second valve, blind flange, cap, or plug. The sealing device may be removed only when a sample is being taken or during maintenance operations.

(g) Each owner or operator shall record in an inspection log the following information for each leaking component found:

1. the tag identification number;
2. the type of component;
3. the date on which the leak was detected for the component;
4. the date on which the component was repaired;
5. identification of those leaking components which cannot be repaired until unit turnaround and the reason why repair must be delayed;
6. the test methods;
7. the result of inspection or monitoring;
8. the type of repair;
9. chemical name used in component;
10. name of individual responsible for repairs;
11. date of next unit turnaround if there is a delay in repair;
12. results of weekly visual leak inspections.

A copy of the inspection log shall be retained at the plant for a minimum of two years after the date on which the report for the inspection period was prepared and shall make the log available to the Department upon request.

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(h) Each owner or operator shall submit to the Department a quarterly report describing the results of the monitoring program required by 310 CMR 7.18(19). As a minimum, this report should include:

1. the number and types of components that were located during the previous monitoring period but were not repaired.

2. the number and types of components inspected, the number and types of leaking components found, the number and types of components repaired, and the time elapsed before each repair was effected.

3. the number of components not repaired within 15 days and the reason why there was a delay.

(i) Any owner or operator of a facility subject to 310 CMR 7.18(19) shall:

1. submit to the Department, a leak detection and repair program by June 1, 1987. This program shall contain, as a minimum, a list of process components, a copy of the log book format, and a description of the proposed monitoring equipment.

2. submit the first quarterly report required by 310 CMR 7.18(19)(i) by December 1, 1987 or within 120 days of the date the owner or operator first becomes subject to 310 CMR 7.18(19).

(j) The Department shall receive notice in writing ten days prior to the scheduled monitoring so that the Department has the opportunity to observe the monitoring procedure as described in 310 CMR 7.18(19)(a) and (b).

(k) The Department will review and make determination on requests for exemptions to 310 CMR 7.18(19) in the following categories:

1. components that are considered unsafe to monitor because of extreme temperatures, pressures, at a height of more than two meters above a permanent support surface, or for other reasons are exempt from quarterly monitoring if the owner requests a waiver from the Department and monitors at least once a year.

2. SOCMI facilities handling less than 980 tons per year (890 Mg/yr) of VOC.

3. To implement a skip period monitoring program the owner or operator will begin with a quarterly leak detection and repair program for valves. If the desired "good performance level" of 2% or less of valves leaking was attained for valves in gas service and light liquid service for five consecutive quarters, then three of the subsequent quarterly leak detection and repair periods for these valves could be skipped. All valves would be monitored again during the fourth quarter. This would permit a process unit which has consistently demonstrated it is meeting the "good performance level" to monitor valves in gas service and valves in light liquid service annually instead of quarterly. If an inspection showed that the "good performance level" was not being achieved, then quarterly inspections of valves would be reinstituted until a "good performance level" was being achieved for five consecutive quarters. At that time the skip period inspection would be resumed. Only valves are allowed to be monitored at skip period intervals; all other equipment components would not skip monitoring intervals and would be subject to their required quarterly monitoring.

(20) Emission Control Plans for Implementation of Reasonably Available Control Technology.

(a) General Applicability and Submittal Requirements. Any person who owns, leases, operates or controls a facility that becomes subject to 310 CMR 7.18 and who is required to submit an emission control plan pursuant to 310 CMR 7.18 after January 1, 1992, shall submit an emission control plan to the Department for review and approval by the Department prior to implementation of RACT. In addition, an emission control plan is required to amend an emissions averaging plan issued pursuant to 310 CMR 7.18(2)(b) or (g), or an approval issued under 310 CMR 7.18(2)(h).

1. The emission control plan must be submitted to the Department within 180 days of the date the facility or part of a facility first meets the applicability requirements of 310 CMR 7.18, or the date of promulgation for that section of 310 CMR 7.18, whichever is latest.

2. An emission control plan is not required if all operations at the facility for which an approval under 310 CMR 7.18(20) would otherwise be required:

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a. are installed in accordance with:
i. a plan approval issued pursuant to 310 CMR 7.02(4) or (5) that meets the standards/limits of 310 CMR 7.18;
ii. the requirements contained in 310 CMR 7.03; or
iii. the requirements of 310 CMR 7.26, or

b. are exempt from filing for plan approval pursuant to 310 CMR 7.02(2)(b), except for 310 CMR 7.02(2)(b)32. This exemption does not apply to construction, substantial reconstruction, or alteration required to comply with the requirements of 310 CMR 7.18.

(b) Other Applicability and Submittal Requirements. Any person subject to 310 CMR 7.18, when so required by the Department in writing, shall submit an emission control plan to the Department for review and approval by the Department.

(c) Emission Control Plan Requirements. The emission control plan must detail how RACT will be implemented at the facility which is subject to 310 CMR 7.18. Each plan submitted under 310 CMR 7.18(20) shall, at a minimum, include the following:

1. a list and description of all the equipment at the facility which has the potential to emit VOC, including any associated plan approvals, dates of installation, any subsequent alterations, etc.;
2. a list of all the VOC emitting equipment at the facility for which the emission control plan is being submitted;
3. the potential to emit, before application of air pollution control equipment, before implementation of RACT, on a daily and annual basis, of all VOC emitting equipment for which the emission control plan is being submitted;
4. the actual emissions before implementation of RACT on a daily and annual basis of all VOC emitting equipment for which the emission control plan is being submitted;
5. if applicable, the designs, specifications and standard operating and maintenance procedures for any VOC emissions capture and control system used to implement RACT;
6. if applicable, the designs and specifications of any low-VOC emitting processes or reformulations used to implement RACT;
7. the testing, monitoring, recordkeeping and reporting procedures used to demonstrate compliance with the applicable sections of 310 CMR 7.18;
8. a schedule for the implementation of RACT at the facility by the deadline contained in the applicable section of 310 CMR 7.18, including provisions for demonstrating to the Department periodic increments of progress;
9. any other information required by the Department, and;
10. the signature of a responsible official.

(d) Additional Requirements for Demonstration of RACT. An emission control plan submitted by any person who owns, leases, operates or controls a facility or part of a facility subject to 310 CMR 7.18(2)(c) or (17), must meet the following requirements, in addition to those of 310 CMR 7.18(20)(c).

1. The plan must contain a demonstration and description of the RACT emission limit(s) for this facility or part of a facility; and,
2. any information necessary to support the demonstration made in 310 CMR 7.18(20)(d)1., such as technological and economic considerations, industry surveys, customer considerations, etc.

(e) Approval of an Emission Control Plan by the Department.

1. For persons not subject to 310 CMR 7.18(2)(b), (c), or (17), the Department shall, within the timetables established in 310 CMR 4.10, issue a final approval or disapproval of the ECP.
2. For persons subject to 310 CMR 7.18(2)(b), (c), or (17) for each ECP application where the information submitted subject to 310 CMR 7.18(20)e.2. is sufficient to support both the determination of RACT and the proposed schedule; the Department shall:
   a. Provide a 30-day period for submittal of public comment;
   b. Post on a public website identified by the Department (which may be the Department's own website), for the duration of the public comment period, the following:
      i. Notice of availability of the Department's proposed decision to approve or deny the ECP application and information on how to submit public comment;
      ii. The Department's proposed decision to approve or deny the ECP application;

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iii. Information on how to access the administrative record for the Department's proposed decision to approve or deny the ECP application.

c. Send a copy of the notice required under 310 CMR 7.18(20)(e)2.b.i. to EPA.

(f) Prohibition. No emissions reductions or any other actions taken at any facility or part of a facility will constitute implementation of RACT at that facility, unless those emission reductions or other actions are part of an emission control plan approved by the Department.

(g) Additional requirements may be included in the emission control plan approval to ensure that emissions from the unit(s) subject to RACT will not cause or contribute to a condition of air pollution or a violation of any other regulation. Such requirements include, but are not limited to, emissions limits on other air contaminants, and additional stack testing or emissions monitoring requirements.

(21) Surface Coating of Plastic Parts.

(a) Applicability.

1. On or after March 9, 2020, any person who owns, leases, operates, or controls plastic parts surface coating operations and related cleaning operations which emit, before any application of add-on air pollution capture and control equipment, equal to or greater than 15 pounds of volatile organic compounds (VOC) per day or, in the alternative, equal to or greater than three tons of VOC per rolling 12-month period shall comply with 310 CMR 7.18(21)(c) through (e) and (g) through (i).

2. On or after March 9, 2020, any person who owns, leases, operates, or controls plastic parts surface coating operations and miscellaneous metal parts and products surface coating operations and related cleaning operations within the same facility, which in total emit, before any application of add-on air pollution capture and control equipment, equal to or greater than 15 pounds of VOC per day or, in the alternative, equal to or greater than three tons of VOC per rolling 12-month period shall comply with 310 CMR 7.18(21)(c) through (e) and (g) through (i). The miscellaneous metal parts and products surface coating operations are subject to 310 CMR 7.18(11).

3. On or after March 9, 2018, any person who owns, leases, operates, or controls plastic parts surface coating operations and miscellaneous metal parts and products surface coating operations and related cleaning operations which emit, before any application of add-on air pollution capture and control equipment, equal to or greater than 15 pounds of VOC per day or, in the alternative, equal to or greater than three tons of VOC per rolling 12-month period shall comply with the work practices of 310 CMR 7.18(21)(f) for coating and cleaning operations.

(b) Exemptions.

1. The plastic parts coatings requirements of 310 CMR 7.18(21)(d)1. and 2. do not apply to:

a. touch-up and repair coatings;

b. stencil coatings applied on clear or transparent substrates;

c. clear or translucent coatings;

d. coatings applied at a paint manufacturing facility while conducting performance tests on the coatings;

e. reflective coating applied to highway cones;

f. mask coatings that are less than 0.5 millimeter thick (dried) and the area coated is less than 25 square inches;

g. EMI/RFI shielding coatings; or

h. heparin-benzalkonium chloride (HBAC)-containing coatings applied to medical devices, provided that the total usage of all such coatings does not exceed 100 gallons per rolling 12-month period, per facility.

2. The automotive/transportation coatings requirements of 310 CMR 7.18(21)(d)1.b. and 2., and the business machine coatings requirements of 310 CMR 7.18(21)(d)1.c. and 2., do not apply to:

a. texture coatings;

b. vacuum metallizing coatings;

c. gloss reducers;

d. texture topcoats;

e. adhesion primers;

f. electrostatic preparation coatings;

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g. resist coatings; or
h. stencil coatings.

3. The requirements of 310 CMR 7.18(21)(e) do not apply to airbrush operations using five gallons or less per rolling 12-month period of coating at a plastic parts coating operation.

4. The requirements of 310 CMR 7.18(21)(e) do not apply to pleasure craft surface coating operations when applying extreme high-gloss coatings.

5. The requirements of 310 CMR 7.18(21)(d) and (e) do not apply to powder coatings or coating application utilizing hand-held aerosol cans.

6. The requirements of 310 CMR 7.18(21)(d), (e), and (f) do not apply to aerospace manufacturing and rework operations.

(c) Extensions. Any person subject to 310 CMR 7.18(21)(a)1. or 2. may apply in writing to the Department for a nonrenewable extension of the implementation deadline in 310 CMR 7.18(21)(a)1. or 2. by complying with 310 CMR 7.18(21)(g).

The Department will consider a nonrenewable extension of the deadline in 310 CMR 7.18(21)(a)1. or 2. for persons applying under 310 CMR 7.18(21)(c) until no later than March 9, 2021, provided the emission control plan submitted for approval under 310 CMR 7.18(20), meets the following criteria in addition to those of 310 CMR 7.18(20):

1. a Toxics Use Reduction Plan or a Resource Conservation Plan completed for the facility in accordance with 310 CMR 50.40 through 50.48 is submitted as part of the emission control plan;

2. the Toxics Use Reduction Plan or Resource Conservation Plan was certified by a Toxics Use Reduction Planner certified under M.G.L. c. 21I, and 310 CMR 50.50 through 50.63;

3. the emission control plan proposes to reduce emissions or natural asset use, from the process or elsewhere in the facility, more than otherwise required pursuant to an applicable regulation or approval of the Department, through toxics use reduction techniques or resource conservation actions as defined in M.G.L. c. 21I; and

4. implementation of the emission control plan meets the emission limitations of 310 CMR 7.18(21)(d).

(d) RACT Emissions Limitations.

1. Any person subject to 310 CMR 7.18(21)(a)1. or 2. shall limit VOC emissions by using only coatings having a VOC content no greater than the emission limitations listed in Tables 310 CMR 7.18(21)(d)1.a. through e. (low-VOC coatings to meet the mass of VOC per volume of coating less water and exempt compounds, as-applied, limits, or low-VOC coatings or a combination of coatings and add-on control equipment on a coating unit to meet the mass of VOC per volume of coating solids limits) or by complying with the requirement in 310 CMR 7.18(21)(d)2. If a coating can be classified in more than one coating category in 310 CMR 7.18(21)(d), then the least stringent coating category limitation shall apply.

Table 310 CMR 7.18(21)(d)1.a.
RACT Emission Limitations for Surface Coating of Miscellaneous Plastic Parts

	Mass of VOC per volume of coating less water and exempt compounds, as applied		Mass of VOC per volume of coating solids, as applied	
Coating Category	kg/l coating	lb/gal coating	kg/l solids	lb/gal solids
General, One Component	0.28	2.3	0.40	3.35
General, Multi-component	0.42	3.5	0.80	6.67
Electric Dissipating Coatings and Shock-free Coatings	0.80	6.7	8.96	74.7
Extreme Performance (two-pack)	0.42	3.5	0.80	6.67
Military Specification (one-pack)	0.34	2.8	0.54	4.52
Military Specification (two-pack)	0.42	3.5	0.80	6.67
Metallic	0.42	3.5	0.80	6.67
Mold-seal	0.76	6.3	5.24	43.7
Multi-colored Coatings	0.68	5.7	3.04	25.3
Optical Coatings	0.80	6.7	8.96	74.7
Vacuum-metallizing	0.80	6.7	8.96	74.7

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Table 310 CMR 7.18(21)(d)1.b. RACT Emission Limitations for Automotive/Transportation Coatings[1]				
	Mass of VOC per volume of coating less water and exempt compounds, as applied		Mass of VOC per volume of coating solids, as applied	
Coating Category	kg/l coating	lb/gal coating	kg/l solids	lb/gal solids
High Bake Coatings - Interior and Exterior Parts				
Flexible Primer	0.54	4.5	1.39	11.58
Non-flexible Primer	0.42	3.5	0.80	6.67
Basecoat	0.52	4.3	1.24	10.34
Clear Coat	0.48	4.0	1.05	8.76
Non-Basecoat/Clear Coat	0.52	4.3	1.24	10.34
Low Bake/Air-dried coatings-Exterior Parts				
Primers	0.58	4.8	1.66	13.80
Basecoat	0.60	5.0	1.87	15.59
Clear Coat	0.54	4.5	1.39	11.58
Non-basecoat/Clear Coat	0.60	5.0	1.87	15.59
Low Bake/Air-dried Coatings - Interior Parts	0.60	5.0	1.87	15.59
Touchup and Repair Coatings	0.62	5.2	2.13	17.72

[1]For automotive coatings which are red, yellow, and black, except touch-up and repair coatings, the limitation is determined by multiplying the appropriate limitation in Table 310 CMR 7.18(21)(d)1.b. by 1.15.

Table 310 CMR 7.18(21)(d)1.c. RACT Emission Limitations for Business Machine Coatings				
	Mass of VOC per volume of coating less water and exempt compounds, as applied		Mass of VOC per volume of coating solids, as applied	
Coating Category	kg/l coating	lb/gal coating	kg/l solids	lb/gal solids
Primers	0.35	2.9	0.57	4.80
Topcoat	0.35	2.9	0.57	4.80
Texture Coat	0.35	2.9	0.57	4.80
Fog Coat[1]	0.26	2.2	0.38	3.14
Touchup and Repair	0.35	2.9	0.57	4.80

[1] A fog coat shall not be applied at a thickness of more than 0.5 mils of coating solids.

Table 310 CMR 7.18(21)(d)1.d. RACT Emission Limitations for Pleasure Craft Surface Coatings				
	Mass of VOC per volume of coating less water and exempt compounds, as applied		Mass of VOC per volume of coating solids, as applied	
Coating Category	kg/l coating	lb/gal coating	kg/l solids	lb/gal solids
Extreme High Gloss Topcoat	0.60	5.0	1.87	15.6
High Gloss Topcoat	0.42	3.5	0.80	6.7
Pretreatment Wash Primers	0.78	6.5	6.67	55.6
Finish Primer/Surfacer	0.42	3.5	0.80	6.7
High Build Primer Surfacer	0.34	2.8	0.55	4.6
Aluminum Substrate Antifoulant Coating	0.56	4.7	1.53	12.8
Antifouling Sealer/Tie Coat	0.42	3.5	0.80	6.7
Other Substrate Antifoulant Coating	0.40	3.4	0.75	6.3
All other pleasure craft surface coatings for metal or plastic	0.42	3.5	0.80	6.7

7.18: continued

Table 310 CMR 7.18(21)(d)1.e. RACT Emission Limitations for Motor Vehicle Materials		
	Mass of VOC per volume of coating less water and exempt compounds, as applied	
Coating Category	kg/l coating	lb/gal coating
Motor vehicle cavity wax; Motor vehicle sealer; Motor vehicle deadener; Motor vehicle underbody coating; Motor vehicle trunk interior coating	0.65	5.4
Motor vehicle bedliner; Motor vehicle gasket/gasket sealing material	0.20	1.7
Motor vehicle lubricating wax/compound	0.70	5.8

2. Any person may achieve an overall VOC control efficiency of at least 90% by weight using add-on air pollution capture and control equipment instead of complying with the requirements of 310 CMR 7.18(21)(d)1.

(e) Application Methods. Unless complying with 310 CMR 7.18(21)(a)1. or 2. by means of 310 CMR 7.18(21)(d)2., all coatings shall be applied using one or more of the following:

1. electrostatic spray application;
2. HVLP spray;
3. flow coat;
4. roller coat;
5. dip coat, including electrodeposition;
6. airless spray;
7. air-assisted airless spray; or
8. a coating application method capable of achieving a transfer efficiency equivalent to or greater than that achieved by HVLP, as approved by EPA.

(f) Work Practices for Coating and Cleaning Operations. Any person subject to 310 CMR 7.18(21) shall comply with the work practices of 310 CMR 7.18(31)(e).

7.18: continued

(g) Plan and Extension Submittal Requirements.

1. Any person subject to 310 CMR 7.18(21)(a)1. or 2. who chooses to install add-on air pollution capture and control equipment to comply with 310 CMR 7.18(21)(d) shall submit an emission control plan in accordance with 310 CMR 7.18(20).

2. Any person subject to 310 CMR 7.18(21)(a)1. or 2. who chooses to apply for an extension under 310 CMR 7.18(21)(c) shall comply with 310 CMR 7.18(20).

(h) Recordkeeping Requirements. Any person subject to 310 CMR 7.18(21)(a) shall prepare and maintain records sufficient to demonstrate compliance consistent with 310 CMR 7.18(2). Records kept to demonstrate compliance shall be kept on site for five years and shall be made available to representatives of the Department and EPA upon request. Such records shall include, but are not limited to:

1. identity, quantity, formulation and density of coating(s) used;
2. identity, quantity, formulation and density of any diluent(s) and clean-up solvent(s) used;
3. solids content of any coating(s) used;
4. actual operational and emissions characteristics of the coating line and any appurtenant emissions capture and control equipment;
5. quantity of product processed, if necessary to determine emissions; and
6. any other requirements specified by the Department in any approval(s) issued under 310 CMR 7.18(20) or any order(s) issued to the person.

(i) Testing Requirements. Any person subject to 310 CMR 7.18(21)(a) shall, upon request of the Department, perform or have performed tests to demonstrate compliance with 310 CMR 7.18(21). Testing shall be conducted in accordance with EPA Method 24 or Method 25 as described in CFR Title 40 Part 60, or by other methods approved by the Department and EPA. If acceptable to the Department and EPA, manufacturer's formulation data may be used to demonstrate compliance with coating VOC content limitations. In the case of a dispute, the VOC content determined using the EPA Method shall prevail, unless a person is able to demonstrate to the satisfaction of the Department and EPA that the manufacturer's formulation data are correct. EPA Method 25A shall be used when:

1. an exhaust concentration of less than or equal to 50 parts per million volume (ppmv) as carbon is required to comply with the applicable limitation;
2. the inlet concentration and the required level of control results in an exhaust concentration of less than or equal to 50 ppmv as carbon; or
3. the high efficiency of the control device alone results in an exhaust concentration of less than or equal to 50 ppmv as carbon.

(22) Leather Surface Coating.

(a) Applicability. 310 CMR 7.18(22) applies in its entirety to any person who owns, leases, operates or controls leather surface coating line(s) which in total have the potential to emit, before the application of air pollution control equipment, equal to or greater than 50 tons per year of volatile organic compounds.

(b) Reasonably Available Control Technology Requirements. On or after January 1, 1994, unless exempted by 310 CMR 7.18(22)(c) or granted a non-renewable extension by the Department under 310 CMR 7.18(22)(d), no person subject to 310 CMR 7.18(22)(a) shall cause, suffer, allow or permit emissions from any leather surface coating line in excess of 27.4 lbs VOC/gallon of solids as applied.

(c) Exemptions. The requirements of 310 CMR 7.18(22)(b) do not apply to:

1. a. any person subject to 310 CMR 7.18(22)(a) who is able to demonstrate to the Department that, since January 1, 1990, the leather surface coating line(s) have not, in total, emitted, before the application of air pollution control equipment, greater than or equal to 50 tons per year of volatile organic compounds; and

   b. provided the person obtains and complies with a federally enforceable emission limit which restricts the potential emissions to below 50 tons per year; and

   c. provided the person complies with of 310 CMR 7.18(22)(h).

2. any person subject to 310 CMR 7.18(22)(a) who, according to the Department, has complied with 310 CMR 7.18(17) prior to January 1, 1993.

7.18: continued

(d) Extensions.

1. Any person subject to 310 CMR 7.18(22)(b) may apply in writing to the Department for a non-renewable extension of the implementation deadline. The person must apply to the Department for the non-renewable extension at the same time the person submits the emission control plan required by 310 CMR 7.18(20).

a. the emission control plan proposes to reduce emissions through toxics use reduction techniques as defined in M.G.L. c. 21I; and,

b. the toxics use reduction techniques contained in the emission control plan are approved by a Toxics Use Reduction Planner certified under M.G.L. c. 21I; (this may be an employee at the facility who is certified as Toxics Use Reduction Planner); and,

c. implementation of the plan must meet the emission limitations of 310 CMR 7.18(22)(b) or achieve a 85% emissions reduction, whichever is greater, through toxics use reduction techniques, as calculated on a mass of VOC emitted per gallons of solids as applied or per unit of production; and,

d. the emission control plan must also contain contingency measures to meet the RACT emission limitation in 310 CMR 7.18(22)(b); such measures must automatically take effect if the emissions reductions through toxics use reduction techniques do not satisfy 310 CMR 7.18(22)(b).

(e) Plan Submittal Requirements. Any person who owns, leases, operates or controls a leather surface coating line(s) subject to 310 CMR 7.18(22)(a) must submit an emissions control plan, and have the plan approved by the Department under 310 CMR 7.18(20).

(f) Continuous Compliance. Any person who owns, leases, operates or controls a leather surface coating line(s) subject to 310 CMR 7.18(22)(a) shall maintain continuous compliance at all times with their approved emissions control plan. Compliance averaging times will be met in accordance with the requirements of 310 CMR 7.18(2)(a). Demonstrations of compliance may include considerations of transfer efficiency provided that the baseline transfer efficiency is equal to or greater than 65%, and the transfer efficiency test method is detailed in the emission control plan (310 CMR 7.18(20)) approved by the Department.

(g) Recordkeeping Requirements. Any person who owns, leases, operates or controls a leather surface coating line(s) subject to 310 CMR 7.18(22)(a) shall prepare and maintain daily records sufficient to demonstrate compliance consistent with the applicable averaging time as stated in 310 CMR 7.18(2)(a). Records kept to demonstrate compliance shall be kept on site for five years and shall be made available to representatives of the Department and EPA in accordance with the requirements of an approved emission control plan (310 CMR 7.18(20) or upon request. Such records shall include, but are not limited to:

1. identity, quantity, formulation and density of coating(s) used;
2. identity, quantity, formulation and density of any diluent(s) and clean-up solvent(s) used;
3. solids content of any coating(s) used;
4. actual operational and emissions characteristics of the coating line and any appurtenant emissions capture and control equipment;
5. quantity of product processed;
6. any other requirements specified by the Department in any approval(s) issued under 310 CMR 7.18(20) or any order(s) issued to the person.

(h) Testing Requirements. Any person who owns, leases, operates or controls a leather surface coating line(s) subject to 310 CMR 7.18(22)(a) shall, upon request of the Department, perform or have performed tests to demonstrate compliance with 310 CMR 7.18(22). Testing shall be conducted in accordance with EPA Method 24 and/or Method 25 as described in CFR Title 40 Part 60, or by other methods approved by the Department and EPA.

(23) Wood Products Surface Coating.

(a) Applicability. 310 CMR 7.18(23) applies in its entirety to any person who owns, leases, operates or controls wood products surface coating line(s) which in total have the potential to emit, before the application of air pollution control equipment, equal to or greater than 50 tons per year of volatile organic compounds.

7.18: continued

(b) Reasonably Available Control Technology Requirements. On or after January 1, 1994, unless exempted by 310 CMR 7.18(23)(c) or granted a non-renewable extension by the Department under 310 CMR 7.18(23)(d), no person subject to 310 CMR 7.18(23)(a) shall cause, suffer, allow or permit emissions from any wood products surface coating line in excess of the emission limitations set forth in 310 CMR 7.18(23)(e).

(c) Exemptions. The requirements of 310 CMR 7.18(23)(b) do not apply to:

1. a. any person subject to 310 CMR 7.18(23)(a) who is able to demonstrate to the Department that, since January 1, 1990, the wood products surface coating line(s) have not, in total, emitted, before the application of air pollution control equipment, greater than or equal to 50 tons per year of volatile organic compounds; and

   b. provided the person obtains and complies with a federally enforceable emission limit which restricts the potential emissions to below 50 tons per year; and

   c. provided the person complies with of 310 CMR 7.18(23)(i).

2. any person subject to 310 CMR 7.18(23)(a) who, according to the Department, has complied with 310 CMR 7.18(17) prior to January 1, 1993.

(d) Extensions.

1. Any person subject to 310 CMR 7.18(23)(b) may apply in writing to the Department for a non-renewable extension of the implementation deadline in 310 CMR 7.18(23)(b). The person must apply to the Department for the non-renewable extension at the same time the person submits the emission control plan required by 310 CMR 7.18(20) and (23)(e).

2. The Department will consider a non-renewable extension of the deadline in 310 CMR 7.18(23)(b) until no later than January 1, 1995, provided the emission control plan submitted for approval 310 CMR 7.18(20), meets the following criteria in addition to those of 310 CMR 7.18(20):

   a. the emission control plan proposes to reduce emissions through toxics use reduction techniques as defined in M.G.L. c. 21I; and,

   b. the toxics use reduction techniques contained in the emission control plan are approved by a Toxics Use Reduction Planner certified under M.G.L. c. 21I; (this may be an employee at the facility who is certified as Toxics Use Reduction Planner); and,

   c. implementation of the plan must meet the emission limitations of 310 CMR 7.18(23)(e) or achieve a 85% reduction in emissions, whichever is greater, through toxics use reduction techniques, as calculated on a mass of VOC emitted per gallon of solids as applied or per unit of production; and,

   d. the emission control plan must also contain contingency measures to meet RACT emission limitations of 310 CMR 7.18(23)(e); such measures must automatically take effect if the emissions reductions achieved through toxics use reduction techniques do not satisfy 310 CMR 7.18(23)(e).

(e) RACT Emissions Limitations. Any person subject to 310 CMR 7.18(23)(b) shall comply with the emissions limitations in Table 310 CMR 7.18(23)(e)1. If more than one emission limitation applies then, the coating must comply with the least stringent emission limitation.

Table 310 CMR 7.18(23)(e)1.
RACT Emission Limitations for Surface Coating of Wood Products

Emission Source	Emission Limitation (lbs VOC/gal solids as applied)
Semitransparent stain	89.4
Wash coat	35.6
Opaque stain	13.0
Sealer	23.4
Pigmented coat	15.6
Clear topcoat	23.4

7.18: continued

(f) Plan Submittal Requirements. Any person who owns, leases, operates or controls a wood products surface coating line(s) subject to 310 CMR 7.18(23)(a) must submit an emissions control plan, and have the plan approved by the Department under 310 CMR 7.18(20).

(g) Continuous Compliance. Any person who owns, leases, operates or controls a wood products surface coating line(s) subject to 310 CMR 7.18(23)(a) shall maintain continuous compliance at all times with their approved emissions control plan. Compliance averaging times will be met in accordance with the requirements of 310 CMR 7.18(2)(a). Demonstrations of compliance may include considerations of transfer efficiency provided that the baseline transfer efficiency is greater than 65%, and the transfer efficiency test method is detailed in the emission control plan (310 CMR 7.18(20)) approved by the Department.

(h) Recordkeeping Requirements. Any person who owns, leases, operates or controls a wood products surface coating line(s) subject to 310 CMR 7.18(23)(a) shall prepare and maintain daily records sufficient to demonstrate compliance consistent with the applicable averaging time as stated in 310 CMR 7.18(2)(a). Records kept to demonstrate compliance shall be kept on site for five years and shall be made available to representatives of the Department and EPA in accordance with the requirements of an approved emission control plan (310 CMR 7.18(20) or upon request. Such records shall include, but are not limited to:

1. identity, quantity, formulation and density of coating(s) used;
2. identity, quantity, formulation and density of any diluent(s) and clean-up solvent(s) used;
3. solids content of any coating(s) used;
4. actual operational and emissions characteristics of the coating line and any appurtenant emissions capture and control equipment;
5. quantity of product processed;
6. any other requirements specified by the Department in any approval(s) issued under 310 CMR 7.18(20) or any order(s) issued to the person.

(i) Testing Requirements. Any person who owns, leases, operates or controls a wood products surface coating line(s) subject to 310 CMR 7.18(23)(a) shall, upon request of the Department, perform or have performed tests to demonstrate compliance with 310 CMR 7.18(23). Testing shall be conducted in accordance with EPA Method 24 and/or Method 25 as described in CFR Title 40 Part 60, or by other methods approved by the Department and EPA.

(24) Flat Wood Paneling Surface Coating.

(a) Applicability.

1. On or after January 1, 1994, and prior to March 9, 2020, 310 CMR 7.18(24)(d)1. and (f) through (h) apply to any person who owns, leases, operates or controls a flat wood paneling surface coating line(s) which emits, before the application of air pollution control equipment, equal to or greater than 15 pounds per day of volatile organic compounds (VOC).
2. On and after March 9, 2020, any person who owns, leases, operates, or controls flat wood paneling surface coating operations and related cleaning operations which emit, before any application of add-on air pollution capture and control equipment, equal to or greater than 15 pounds of VOC per day or, in the alternative, equal to or greater than three tons of VOC per rolling 12 month period shall comply with 310 CMR 7.18(24)(c), (d)2., and (f) through (h).
3. On or after March 9, 2018, any person who owns, leases, operates, or controls flat wood paneling surface coating operations and related cleaning operations which emit, before any application of add-on air pollution capture and control equipment, equal to or greater than 15 pounds of VOC per day or, in the alternative, equal to or greater than three tons of VOC per rolling 12 month period shall comply with the work practices of 310 CMR 7.18(24)(e) for coating and cleaning operations.

(b) Exemptions.

1. The requirements of 310 CMR 7.18(24)(d)1. do not apply to:
   a. any person subject to 310 CMR 7.18(24)(a)1. who is able to demonstrate to the Department that, since January 1, 1990, the flat wood paneling surface coating line(s) have not, in total, emitted, before the application of air pollution control equipment, greater than or equal to 15 pounds per day of volatile organic compounds; and

7.18: continued

b. provided the person obtains and complies with a federally enforceable emission limit which restricts the potential emissions to below 15 pounds per day; and

c. provided the person complies with the requirements of 310 CMR 7.18(24)(h).

2. The requirements of 310 CMR 7.18(24) do not apply to any person subject to 310 CMR 7.18(24)(a)1. who, according to the Department, has complied with 310 CMR 7.18(17) prior to January 1, 1993.

(c) Extensions. Any person subject to 310 CMR 7.18(24)(a)2. may apply in writing to the Department for a nonrenewable extension of the implementation deadline in 310 CMR 7.18(24)(a)2. by complying with 310 CMR 7.18(24)(f). The Department will consider a nonrenewable extension of the deadline in 310 CMR 7.18(24)(a)2. for persons applying under 310 CMR 7.18(24)(c) until no later than March 9, 2021, provided the emission control plan submitted for approval under 310 CMR 7.18(20) meets the following criteria in addition to those of 310 CMR 7.18(20):

1. a Toxics Use Reduction Plan or a Resource Conservation Plan completed for the facility in accordance with 310 CMR 50.40 through 50.48 is submitted as part of the emission control plan;

2. the Toxics Use Reduction Plan or Resource Conservation Plan was certified by a Toxics Use Reduction Planner certified under M.G.L. c. 21I, and 310 CMR 50.50 through 50.63;

3. the emission control plan proposes to reduce emissions or natural asset use, from the process or elsewhere in the facility, more than otherwise required pursuant to an applicable regulation or approval of the Department, through toxics use reduction techniques or resource conservation actions as defined in M.G.L. c. 21I; and

4. implementation of the emission control plan meets the emission limitations of 310 CMR 7.18(24)(d).

(d) Reasonably Available Control Technology Requirements.

1. Any person subject to 310 CMR 7.18(24)(a)1. shall comply with the emissions limits in Table 310 CMR 7.18(24)(d)1. If more than one emission limitation applies then the coating must comply with the least stringent emission limitation.

Table 310 CMR 7.18(24)(d)1.
RACT Emission Limitations for Flat Wood Paneling Surface Coating

Emission Source	Emission Limitation (lbs VOC/1000 square feet coated)
Printed hardwood panels and thin particleboard panels	6.0
Natural finish hardwood plywood panels	12.0
Class II finish on hardboard panels	10.0

2. Any person subject to 310 CMR 7.18(24)(a)2. shall limit VOC emissions by using only coatings having a VOC content no greater than the emission limitations in Table 310 CMR 7.18(24)(d)2. (low-VOC coatings to meet the mass of VOC per volume of coating less water and exempt compounds, as-applied, limits, or low-VOC coatings or a combination of coatings and add-on control equipment on a coating unit to meet the mass of VOC per volume of coating solids limits) or by complying with the requirement in 310 CMR 7.18(24)(d)3.

Table 310 CMR 7.18(24)(d)2.
RACT Emission Limitations for Flat Wood Paneling Surface Coating

Surface Coatings Applied to the Following Flat Wood Paneling Categories	Mass of VOC per volume of coating less water and exempt compounds, as applied		Mass of VOC per volume of coating solids, as applied	
	lb/gal coating	grams/l coating	lb/gal solids	grams/l solids
Printed interior panels made of hardwood, plywood, or thin particleboard; Natural finish hardwood plywood panels; Class II finish on hardboard panels; Tileboard; Exterior siding	2.1	250	2.9	350

7.18: continued

3. Any person may achieve an overall VOC control efficiency of at least 90% by weight using add-on air pollution capture and control equipment instead of complying with the requirements of 310 CMR 7.18(24)(d)2.

(e) Work Practices for Coating and Cleaning Operations. Any person subject to 310 CMR 7.18(24) shall comply with the work practices of 310 CMR 7.18(31)(e).

(f) Plan and Extension Submittal Requirements.

1. Any person subject to 310 CMR 7.18(24)(a)1. or 2. who chooses to install add-on air pollution capture and control equipment to comply with 310 CMR 7.18(24)(d) shall submit an emission control plan in accordance with 310 CMR 7.18(20).

2. Any person subject to 310 CMR 7.18(24)(a)2. who chooses to apply for an extension under 310 CMR 7.18(24)(c) shall comply with 310 CMR 7.18(20).

(g) Recordkeeping Requirements. Any person subject to 310 CMR 7.18(24)(a) shall prepare and maintain records sufficient to demonstrate compliance consistent with 310 CMR 7.18(2). Records kept to demonstrate compliance shall be kept on site for five years and shall be made available to representatives of the Department and EPA in accordance with the requirements of an approved emission control plan pursuant to 310 CMR 7.18(20) or upon request. Such records shall include, but are not limited to:

1. identity, quantity, formulation and density of coating(s) used;

2. identity, quantity, formulation and density of any diluent(s) and clean-up solvent(s) used;

3. solids content of any coating(s) used;

4. actual operational and emissions characteristics of the coating line and any appurtenant emissions capture and control equipment;

5. quantity of product processed, if necessary to determine emissions; and

6. any other requirements specified by the Department in any approval(s) issued under 310 CMR 7.18(20) or any order(s) issued to the person.

(h) Testing Requirements. Any person subject to 310 CMR 7.18(24)(a) shall, upon request of the Department, perform or have performed tests to demonstrate compliance with 310 CMR 7.18(24). Testing shall be conducted in accordance with EPA Method 24 or Method 25 as described in CFR Title 40 Part 60, or by other methods approved by the Department and EPA. EPA Method 25A shall be used when:

1. an exhaust concentration of less than or equal to 50 parts per million volume (ppmv) as carbon is required to comply with the applicable limitation;

2. the inlet concentration and the required level of control results in an exhaust concentration of less than or equal to 50 ppmv as carbon; or

3. the high efficiency of the control device alone results in an exhaust concentration of less than or equal to 50 ppmv as carbon.

(25) Offset Lithographic Printing and Letterpress Printing.

(a) Applicability.

1. On or after January 1, 1994, any person who owns, leases, operates or controls a facility with offset lithographic presses which, in total, have the potential to emit, before the application of air pollution control equipment, equal to or greater than 50 tons per year of volatile organic compounds (VOC) shall comply with 310 CMR 7.18(25)(d) through (k) and (m) through (p). On or after March 9, 2020 any person subject to 310 CMR 7.18(25)(a)1. shall comply with 310 CMR 7.18(25)(l) and is no longer subject to 310 CMR 7.18(25)(e) or (f).

2. On or after March 9, 2020, any person who owns, leases, operates or controls a heatset web offset lithographic printing press or a heatset web letterpress printing press, which has the potential to emit, before any application of add-on air pollution capture and control equipment, equal to or greater than 25 tons per rolling 12 month period of VOC from petroleum heatset inks, shall comply with 310 CMR 7.18(25)(d), (l) and (n) through (p).

3. On or after March 9, 2020, any person who owns, leases, operates or controls offset lithographic printing operations and related cleaning operations, which emit, before any application of add-on air pollution capture and control equipment, equal to or greater than 15 pounds of VOC per day or, in the alternative, equal to or greater than three tons of VOC per rolling 12 month period shall comply with 310 CMR 7.18(25)(d), (g) through (k), (o), and (p).

7.18: continued

4. On or after March 9, 2018, any person who owns, leases, operates or controls offset lithographic printing operations and related cleaning operations, or letterpress printing operations and related cleaning operations, which emit, before any application of add-on air pollution capture and control equipment, equal to or greater than 15 pounds of VOC per day or, in the alternative, equal to or greater than three tons of VOC per rolling 12-month period shall comply with 310 CMR 7.18(25)(m).

(b) Reasonably Available Control Technology Requirements. [Reserved.]

(c) Exemptions.

1. The requirements of 310 CMR 7.18(25)(a)1., with the exception of 310 CMR 7.18(25)(l), do not apply to:

a. i. any person subject to 310 CMR 7.18(25)(a)1. who is able to demonstrate to the Department that, since January 1, 1990, the offset lithographic presses have not, in total, emitted, before the application of air pollution control equipment, greater than or equal to 50 tons per year of volatile organic compounds; and

ii. provided the person obtains and complies with a federally enforceable emission limit which restricts the potential emissions of the offset lithographic presses to below 50 tons per year; and,

iii. provided the person complies with 310 CMR 7.18(25)(k), (m), and (p).

b. any person subject to 310 CMR 7.18(25) (a)1. who, according to the Department, has complied with 310 CMR 7.18(17) prior to January 1, 1993.

2. The requirements of 310 CMR 7.18(25)(a)2. do not apply provided:

a. the person obtains and complies with a federally enforceable emission limitation which restricts the potential emissions of the heatset press to below 25 tons per year;

b. the person is using the heatset press for book printing; or

c. the person is using a heatset press with a maximum web width of 22 inches or less.

3. The requirements of 310 CMR 7.18(25)(a)3. do not apply provided:

a. the person is using a press that has a total fountain solution reservoir of less than one gallon; or

b. the person is using a press that is sheet-fed and has a maximum sheet size of 11 by 17 inches or smaller.

4. Any person subject to 310 CMR 7.18(25)(a)1. or 4. may use up to 110 gallons per rolling 12-month period of cleaning materials that do not meet 310 CMR 7.18(25)(m)2.

(d) Extensions.

1. Any person subject to 310 CMR 7.18(25)(a)2. or 3. may apply in writing to the Department for a non-renewable extension of the implementation deadline in 310 CMR 7.18(25)(a)2. or 3. by complying with 310 CMR 7.18(25)(n).

2. The Department will consider a non-renewable extension of the deadline in 310 CMR 7.18(25)(a)2. or 3. for persons applying under 310 CMR 7.18(25)(d) until no later than March 9, 2021, provided the emission control plan submitted for approval under 310 CMR 7.18(20) meets the following criteria in addition to those of 310 CMR 7.18(20):

a. Toxics Use Reduction Plan or a Resource Conservation Plan completed for the facility in accordance with 310 CMR 50.40 through 50.48 is submitted as part of the emission control plan;

b. the Toxics Use Reduction Plan or Resource Conservation Plan was certified by a Toxics Use Reduction Planner certified under M.G.L. c. 21I and 310 CMR 50.50 through 50.63;

c. the emission control plan proposes to reduce emissions or natural asset use, from the process or elsewhere in the facility, more than otherwise required pursuant to an applicable regulation or approval of the Department, through toxics use reduction techniques or resource conservation actions as defined in M.G.L. c. 21I; and,

d. implementation of the emission control plan meets the emission limitations of 310 CMR 7.18(25)(l) for persons subject to 310 CMR 7.18(25)(a)2. and 310 CMR 7.18(25)(g) through (k) for persons subject to 310 CMR 7.18(25)(a)3.

(e) Heatset Offset Lithographic Requirements. Any person subject to 310 CMR 7.18(25)(a)1. who owns, leases, operates, or controls a heatset offset lithographic printing press which is equipped with an air pollution control device used to reduce VOC emissions, and which device was installed on or before November 1, 1992 shall either:

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1. reduce VOC emissions from the dryer exhaust vent by 85% weight; or,
2. maintain a maximum exhaust VOC concentration of 20 parts per million by volume (ppmv) of non-methane hydrocarbons as carbon in the control device exhaust, whichever is less stringent.

(f) Heatset Offset Lithographic Requirements. Any person subject to 310 CMR 7.18(25)(a)1. who owns, leases, operates, or controls a heatset offset lithographic printing press which is equipped with an air pollution control device used to reduce VOC emissions, and which device was installed after November 1, 1992 shall either:

1. reduce VOC emissions from the dryer exhaust vent by 90% weight; or,
2. maintain a maximum exhaust VOC concentration of 20 parts per million by volume (ppmv) of non-methane hydrocarbons as carbon in the control device exhaust, whichever is less stringent.

(g) Sheet-fed Offset Lithographic Requirements. Any person subject to 310 CMR 7.18(25)(a)1. or 3. who owns, leases, operates, or controls a sheet-fed offset lithographic press, and who uses alcohol in the fountain solution, shall:

1. maintain a VOC concentration of 5% or less by weight, as applied, in the fountain solution; or,
2. maintain a VOC concentration of 8% or less by weight, as applied, in the fountain solution, and refrigerate the fountain solution to a temperature below 60°F.

(h) Heatset Web-fed Offset Lithographic Requirements. Any person subject to 310 CMR 7.18(25)(a)1. or 3., who owns, leases, operates, or controls a heatset web-fed offset lithographic press which uses alcohol in the fountain solution, shall:

1. Maintain a VOC concentration of 1.6% or less by weight, as applied, in the fountain solution; or,
2. Maintain a VOC concentration of 3% or less by weight, as applied, in the fountain solution, and refrigerate the fountain solution to a temperature below 60°F.

(i) Non-heatset Web-fed Offset Lithographic Printing Requirements. Any person subject to 310 CMR 7.18(25)(a)1. or 3., who owns, leases, operates, or controls a non-heatset web-fed offset lithographic printing press, shall use zero percent alcohol in the fountain solution, and shall maintain a total VOC concentration in the fountain solution of 2.5% or less by weight.

(j) Alcohol Substitute Requirements. Any person subject to 310 CMR 7.18(25)(a)1. or 3., who owns, leases, operates, or controls an offset lithographic press with fountain solution with alcohol substitutes, containing a concentration of VOC in the fountain solution at 3.0% by weight or less, shall be considered in compliance with the VOC emission limitations for fountain solutions contained in 310 CMR 7.18(25).

(k) Fountain Solution Mixing Requirements. Any person subject to 310 CMR 7.18(25), who owns, leases, operates, or controls an offset lithographic press shall keep the fountain solution mixing tanks covered, except for necessary operator access.

(l) Heatset Web Offset Lithographic Printing Press and Heatset Web Letterpress Printing Press Requirements. Any person subject to 310 CMR 7.18(25)(a)2. who owns, leases, operates, or controls a heatset web offset lithographic printing press or a heatset web letterpress printing press, shall comply with 310 CMR 7.18(25)(l)1.a. or b. or 310 CMR 7.18(25)(l)2.

1. Press control requirements.
   a. A heatset dryer controlled by an air pollution control device whose first installation date was prior to March 9, 2020 shall achieve at least 90% VOC control efficiency by weight.
   b. A heatset dryer controlled by an air pollution control device whose first installation date was on or after March 9, 2020 shall achieve at least 95% VOC control efficiency by weight.
2. The maximum control device exhaust VOC concentration shall be 20 parts per million by volume dry basis (ppmvd) of VOC as hexane.

(m) Work Practices and Emission Limitations for Printing and Cleaning Operations. Any person subject to 310 CMR 7.18(25), who owns, leases, operates, or controls an offset lithographic press or letterpress printing press, and who uses cleaning solutions containing VOC to wash ink from the blanket or other accessible press components shall meet the following criteria:

1. Any person subject to 310 CMR 7.18(25) shall comply with the work practices of 310 CMR 7.18(31)(e).
2 Any person subject to 310 CMR 7.18(25) shall only use cleanup solutions that either:

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a. do not exceed 70% by weight VOC; or

b. have a VOC composite partial pressure of ten mmHg or less at 20°C (68°F)

(n) Plan and Extension Submittal Requirements.

1. Any person subject to 310 CMR 7.18(25)(a)1., 2. or 3. who chooses to install add-on air pollution capture and control equipment to comply with 310 CMR 7.18(25)(e), (f), or (l) shall submit an emission control plan in accordance with 310 CMR 7.18(20).

2. Any person subject to 310 CMR 7.18(25)(a)2. or 3. who chooses to apply for an extension under 310 CMR 7.18(25)(d) shall comply with 310 CMR 7.18(20).

(o) Recordkeeping Requirements. Any person subject to 310 CMR 7.18(25)(a) shall prepare and maintain records sufficient to demonstrate compliance with 310 CMR 7.18(2). Records kept to demonstrate compliance shall be kept onsite for five years and shall be made available to representatives of the Department or EPA upon request. Such records shall include, but are not limited to:

1. Identity, formulation (as determined by the manufacturer's formulation data), density, and quantity for each VOC containing material used, including but not limited to:

a. alcohol;

b. alcohol substitutes;

c. fountain concentrate;

d. printing Ink; and

e. cleaning Solution.

2. For heatset offset lithographic printing presses and heatset offset letterpress printing presses using emissions control equipment, the recordkeeping requirements specified in 310 CMR 7.18(2)(e);

3. For offset lithographic printing presses the percent of VOC by weight in the fountain solution as monitored whenever new fountain solution is mixed, alcohol is added to the fountain solution;

4. For offset lithographic printing presses subject to the refrigeration requirements of 310 CMR 7.18(25)(g) or (h), the temperature of the fountain solution as recorded on a once per shift basis;

5. Total VOC content of each material used for each printing press subject to 310 CMR 7.18(25) (sum of 310 CMR 7.18(25)(o)1.a. through e.);

6. Total VOC content of all materials used for all printing presses subject to 310 CMR 7.18(25) (sum of 310 CMR 7.18(25)(o)5. for all printing presses); and,

7. any other requirements specified by the Department in any approval(s) issued under 310 CMR 7.18(20) or any order(s) issued to the person.

(p) Testing Requirements. Any person subject to 310 CMR 7.18(25)(a) shall, upon request of the Department, perform or have performed tests to demonstrate compliance with 310 CMR 7.18(25). Testing shall be conducted in accordance with EPA Method 24, Method 25 or Method 25A as described in CFR Title 40 Part 60, or by other methods approved by the Department and EPA. EPA Method 25A shall be used when:

1. An exhaust concentration of less than or equal to 50 parts per million by volume (ppmv) as carbon is required to comply with the applicable limitation;

2. The inlet concentration and the required level of control results in an exhaust concentration of less than or equal to 50 ppmv as carbon; or

3. The high efficiency of the control device alone results in an exhaust concentration of less than or equal to 50 ppmv as carbon.

(26) Textile Finishing.

(a) Applicability. 310 CMR 7.18(26) applies in its entirety to any person who owns, leases, operates or controls a textile finishing facility which has the potential to emit, before the application of air pollution control equipment, equal to or greater than 50 tons per year of volatile organic compounds.

NON-TEXT PAGE

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(b) Reasonably Available Control Technology Requirements. On or after January 1, 1994, unless exempted by 310 CMR 7.18(26)(c), or granted a non-renewable extension by the Department under 310 CMR 7.18(26)(d), no person subject to 310 CMR 7.18(26)(a) shall cause, suffer, allow or permit emissions of volatile organic compounds in excess of the emission limitations set forth in 310 CMR 7.18(26)(e).

(c) Exemptions. The requirements of 310 CMR 7.18(26)(b) do not apply to:

1. a. any person subject to 310 CMR 7.18(26)(a) who is able to demonstrate to the Department that, since January 1, 1990, the textile finishing facility has not emitted, before the application of air pollution control equipment, greater than or equal to 50 tons per years of volatile organic compounds; and

   b. provided the person and complies with a federally enforceable emission limit which restricts the potential emissions to below 50 tons per year; and,

   c. provided the person complies with 310 CMR 7.18(26)(i).

2. any person subject to 310 CMR 7.18(26)(a) who, according to the Department, has complied with 310 CMR 7.18(17) prior to January 1, 1993.

(d) Extensions.

1. Any person subject to 310 CMR 7.18(26)(a) may apply in writing to the Department for a non-renewable extension of the implementation deadline. The person must apply to the Department for the extension at the same time the person submits the emission control plan required by 310 CMR 7.18(20).

2. The Department will consider a non-renewable extension of the deadline in 310 CMR 7.18(26)(a) until no later than January 1, 1995, provided the emission control plan submitted for approval meets the following criteria in addition to those of 310 CMR 7.18(20):

   a. the emission control plan proposes to reduce emissions through toxics use reduction techniques as defined in M.G.L. c. 21I; and,

   b. the toxics use reduction techniques contained in the emission control plan are approved by a Toxics Use Reduction Planner certified under M.G.L. c. 21I; (this may be an employee at the facility who is certified as Toxics Use Reduction Planner); and,

   c. implementation of the plan must meet the emission limitations of 310 CMR 7.18(26)(e) or achieve an 85% emissions reduction, whichever is greater, through toxics use reduction techniques, as calculated on a mass of VOC emitted per gallon of solids as applied or per unit of production; and,

   d. the emission control plan must also contain contingency measures to meet the RACT emission limits of 310 CMR 7.18(26)(e); such measures must automatically take effect if the emissions reductions achieved through toxics use reduction techniques do not satisfy 310 CMR 7.18(26)(e) or achieve an 85% reduction.

(e) RACT Emission Limitations.

1. No person who owns, leases, operates, or controls a rotary screen or roller printing press subject to 7.18(26)(a) shall use a print paste formulation containing greater than 0.5 pound of VOC per pound of solids, as applied.

2. No person who owns, leases, operates, or controls a final finish application line subject to 7.18(26)(a) shall use a finish formulation containing greater than 0.5 pound VOC per pound of solids, as applied.

(f) Plan Submittal Requirement. Any person subject to 310 CMR 7.18(26)(a) must submit an emission control plan, and have the plan approved by the Department under 310 CMR 7.18(20).

(g) Continuous Compliance. Any person subject to 310 CMR 7.18(26)(a) shall maintain continuous compliance at all times with their approved emission control plan. Compliance averaging times will be met in accordance with the requirements of 310 CMR 7.18(2)(a).

(h) Recordkeeping Requirements. Any person subject to 310 CMR 7.18(26)(a) shall maintain records sufficient to demonstrate compliance. Records kept to demonstrate compliance shall be kept on site for five years and shall be made available to representatives of the Department or EPA upon request. Such records shall include, but are not limited to:

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1. identity, quantity, formulation, solids content, and density of VOC containing materials used, including but not limited to:
   a. print pastes
   b. dyeing formulations
   c. finishing formulations
   d. clean up solvents;
2. actual operational and emissions characteristics of the textile finishing process equipment and any appurtenant emissions capture and control equipment;
3. quantity of textile processed; and
4. any other requirements specified by the Department in any approval(s) issued under 310 CMR 7.18(20) or any order(s) issued to the person.

(i) Testing Requirements. Any person subject to 310 CMR 7.18(26)(a) shall, upon request of the Department, perform or have performed tests to demonstrate compliance with 310 CMR 7.18(26). Testing shall be conducted in accordance with EPA Method 24 and/or Method 25 as described in CFR Title 40 Part 60, or by other methods approved by the Department and EPA.

(27) Coating Mixing Tanks.

(a) Applicability. On or after January 1, 1994, no person who owns, leases, operates, or controls a coating mixing tank which emits, before the application of air pollution control equipment, 15 pounds of volatile organic compounds per day shall cause, suffer, allow or permit emissions therefrom, unless the person complies with the standards set forth in 310 CMR 7.18(27)(b) and (c).

(b) Portable Coating Mixing Tank Requirements.

1. Any person subject to 310 CMR 7.18(27)(a) shall keep any portable coating mixing tanks which emits, before application of air pollution control equipment, 15 pounds per day of volatile organic compounds, covered with a lid or other method approved by the Department, except to add ingredients, take samples, or perform maintenance.
2. A lid used to comply with 310 CMR 7.18(27)(b)1. shall:
   a. extend at least 0.5 inch beyond the outer rim of the tank or be attached to the rim of the tank; and,
   b. be maintained so that when in place, the lid maintains contact with the rim of the portable coating mixing tank for at least 90% of the rim's circumference; and,
   c. if necessary, have an opening to allow for insertion of a mixer shaft, which opening shall be covered after insertion of the mixer, except to allow adequate clearance for the mixer shaft.

(c) Stationary Coating Mixing Tank Requirements.

1. Any person subject to 310 CMR 7.18(27)(a) shall keep any stationary coating mixing tank, which emits, before application of air pollution control equipment, 15 pounds per day of volatile organic compounds, covered with a lid or other method approved by the Department, except to add ingredients, take samples, or perform maintenance.
2. A lid used to comply with 310 CMR 7.18(27)(c)1. shall:
   a. extend at least 0.5 inch beyond the outer rim of the tank or be attached to the rim of the tank; and,
   b. be maintained so that when in place, the lid maintains contact with the rim of the portable coating mixing tank for at least 90% of the rim's circumference; and,
   c. if necessary, have an opening to allow for insertion of a mixer shaft, which opening shall be covered after insertion of the mixer, except to allow adequate clearance for the mixer shaft.

(d) Plan Submittal Requirement. Any person subject to 310 CMR 7.18(27)(a), who is:

1. not subject to any other section of 310 CMR 7.18, excluding 310 CMR 7.18(1) and (2); and,
2. who owns, leases, operates or controls a coating mixing tank facility with the potential to emit 50 tons per year of VOC, must submit an emission control plan, and have the plan approved by the Department under 310 CMR 7.18(20). Any person subject to 310 CMR 7.18(27)(a) who does not meet the two above conditions, is not required to submit an emission control plan for approval under 310 CMR 7.18(20).

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(e) Continuous Compliance. Any person subject to 310 CMR 7.18(27)(a) shall maintain continuous compliance at all times.

(f) Recordkeeping Requirements. Any person subject to 310 CMR 7.18(27)(a) shall maintain records sufficient to demonstrate compliance. Records kept to demonstrate compliance shall be kept on site for five years, and shall be made available to representatives of the Department or EPA upon request. Such records shall include, but are not limited to:

1. the date and description of any repair or replacement of a mixing tank lid.
2. any other requirements specified by the Department in any approval(s) issued under 310 CMR 7.18(20) or any order(s) issued to the person.

(28) Automotive Refinishing.

(a) Applicability. 310 CMR 7.18(28) applies to any person who sells, offers for sale, or manufactures automotive refinishing coatings for sale in Massachusetts, or who owns, leases, operates or controls an automotive refinishing facility.

(b) Reasonably Available Control Technology (RACT) Requirements.

1. On or after August 1, 1995, no person subject to 310 CMR 7.18(28)(a) who manufactures automotive refinishing coatings, shall manufacture automotive refinishing coatings for sale in Massachusetts which, when prepared for use according to the manufacturer's instructions, contain VOC in excess of the limitations set forth in 310 CMR 7.18(28)(c).
2. On or after August 1, 1995, no person subject to 310 CMR 7.18(28)(a) who manufactures automotive refinishing coatings, shall manufacture automotive refinishing coating for sale in Massachusetts unless the person complies with 310 CMR 7.18(28)(d) and (k).
3. No person shall sell or offer for sale any automotive refinishing coating manufactured after August 1, 1995, unless the coating satisfies the VOC limitations and labeling requirements specified in 310 CMR 7.18(28)(c) and (d), respectively.
4. On or after August 1, 1995, no person who owns, leases, operates, or controls an automotive refinishing facility shall refinish a vehicle or any part thereof unless the person complies with the standards set forth in 310 CMR 7.18(28)(e) through (h), and any coatings used, which are manufactured after August 1, 1995, satisfy the requirements specified in 310 CMR 7.18(28)(c) and (d).

(c) RACT Emission Limits. No person subject to 310 CMR 7.18(28)(a) shall manufacture for sale in Massachusetts, sell, offer for sale, or apply coatings in Massachusetts which exceed the VOC emission limitations in Table 7.18(28)(c), expressed as pounds of VOC per gallon of coating and grams of VOC per liter of coating, excluding water and exempt solvents. If a coating requires the addition of a reducer, hardener, or other additive, in some combination, the manufacturer's recommended amount(s) of reducer, hardener, or other additive added must not cause the coating, as applied, to exceed the applicable VOC limitation.

TABLE 7.18(28)(c)
RACT Emission Limitations for Automotive Refinishing Products

Coating Type	VOC Emission Limitation	
	grams/liter	lbs/gal
Pretreatment Wash Primer	780	6.5
Primer/Primer Surfacer	575	4.8
Primer Sealer	550	4.6
Single-stage Topcoat	600	5.0
Two-stage Topcoat	600	5.0
Three or Four-Stage Topcoat	620	5.2
Specialty Coating	840	7.0

(d) Labeling Requirements. No person subject to 310 CMR 7.18(28)(a) shall manufacture for sale in Massachusetts, sell, offer for sale, or apply automotive refinishing coatings manufactured after August 1, 1995 in Massachusetts unless:

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1. the containers for all subject automotive refinishing coatings display the month and year on which the contents were manufactured, or a batch number or code which indicates whether the contents were manufactured after August 1, 1995. The manufacturer shall supply an explanation of each code to the Department by August 1, 1995, and thereafter, 30 days before the use of any new code; and

2. the manufacturer provides written instructions for the preparation of all subject automotive refinishing coatings on containers, packaging, or in accompanying literature which includes, but is not limited to, data sheets and wall charts.

3. the facility owner or operator maintains, in the automotive refinishing facility, the manufacturer's written instructions for the preparation of all subject coatings.

(e) Alternative Control Requirements. The emission limitations in 310 CMR 7.18(28)(c) shall not apply to any person who owns, leases, operates, or controls an automotive refinishing facility who installs and operates an emissions control system which has received written approval after submitting an emission control plan pursuant to 310 CMR 7.18(20). No such approval shall be issued unless the VOC emissions from coating use at such facility are determined to be less than or equal to those limits specified in Table 7.18(28)(c).

(f) Good Housekeeping Requirements. In order to minimize solvent evaporation, any person subject to 310 CMR 7.18(28)(a), who owns, leases, operates, or controls an automotive refinishing facility shall:

1. use a surface preparation product containing less than or equal to 1.67 pounds of VOC per gallon of product as applied, including water to clean non-plastic surfaces; and,

2. use a surface preparation product containing less than or equal to 6.5 pounds of VOC per gallon as applied, to clean plastic surfaces, and,

3. ensure that rags used during surface preparation or other solvent cleaning operations, fresh and spent solvent, coatings, and sludge are stored in tightly closed containers and are disposed of or recycled properly.

(g) Equipment Requirements. Any person who is subject to 310 CMR 7.18(28)(a), who owns, leases, operates, or controls an automotive refinishing facility shall comply with the following requirements in addition to 310 CMR 7.18(28)(c) through (f).

1. Coatings must be applied using one of the following methods:
   a. High Volume Low Pressure (HVLP) spray equipment, operated and maintained in accordance with the manufacturer's recommendations;
   b. Electrostatic application equipment, operated and maintained in accordance with the manufacturer's recommendations;
   c. Any other coating application method approved by the Department in writing.
2. Spray guns must be cleaned in a device that:
   a. minimizes solvent evaporation during the cleaning, rinsing, and draining operations;
   b. recirculates solvent during the cleaning operation so that the solvent is reused; and,
   c. collects spent solvent so that it is available for proper disposal or recycling.

(h) Training Requirements. Any person who owns, leases, operates, or controls an automotive refinishing facility shall ensure that, on and after November 1, 1995, all spray equipment operators have received training and instruction in the proper operation and maintenance of the spray equipment and spray equipment cleaning device.

(i) Prohibition of Specification. A person shall not solicit or require for use or specify the application of a coating on a vehicle, or part thereof, if such use or application results in a violation of the provisions of 310 CMR 7.00. The prohibition of 310 CMR 7.18 shall apply to all written or oral contracts under the terms of which any coating which is subject to the provisions of 310 CMR 7.00 is to be applied to any automotive or part thereof within Massachusetts.

(j) Continuous Compliance. Any person subject to 310 CMR 7.18(28)(a) shall maintain continuous compliance at all times with applicable sections. Compliance averaging times will be met in accordance with the requirements of 310 CMR 7.18(2)(a).

(k) Compliance Certification Requirements. Each manufacturer of automotive refinishing coatings subject to 310 CMR 7.18(28)(a) shall submit to the Department by August 1, 1995, and biennially thereafter, or when requested in writing by the Department, a document which certifies that each coating is in compliance with 310 CMR 7.00. The document shall include, at a minimum for each surface preparation product or coating to be manufactured after August 1, 1995, the following:

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1. Signature of the responsible official and the name and title of the designated contact person;
2. Maximum VOC content, including water, of surface preparation products;
3. Coating brand name and category;
4. Coating mixing instructions as stated on the container or in literature supplied with the coating;
5. Maximum VOC content of the coating after mixing according to manufacturer's instructions;
6. Any other requirements specified by the Department.

(l) Testing Requirements. Any person subject to 310 CMR 7.18(28)(a) shall, upon request of the Department, perform or have performed tests to demonstrate compliance with 310 CMR 7.18(28). Testing shall be conducted in accordance with EPA Method 24 and/or Method 25 as described in CFR Title 40 Part 60, or by other methods approved by the Department and EPA.

(m) Good Neighbor Requirements. Any person subject to 310 CMR 7.18(28)(a) who owns, leases, operates, or controls an automotive refinishing facility shall prevent emissions of particulates or odors to the ambient air which create a nuisance or condition of air pollution.

(n) The provisions of 310 CMR 7.18(28)(m) are subject to the enforcement provisions specified in 310 CMR 7.52.

(o) Exemptions.

1. The requirements of 310 CMR 7.18(28)(b) do not apply to:
   a. stencil coatings.
   b. b. coatings that are sold in nonrefillable aerosol containers.
2. The requirements of 310 CMR 7.18(28)(g) do not apply to touch-up coatings.

(p) Recordkeeping Requirements. Any person subject to 310 CMR 7.18(28)(a) must maintain purchase records of coatings and surface preparation products on a monthly basis. The purchase records must be summarized and include:

1. each coating category, coating or coating component, and surface preparation product as identified on the container,
2. the quantity of each coating, and surface preparation product, and
3. the VOC content (pounds per gallon) of each coating, and surface preparation product, after mixing according to the manufacturer's instructions.

Records kept to demonstrate compliance must be kept on site for three years, and must be made available to representatives of the Department upon request.

(29) Bakeries.

(a) Applicability: 310 CMR 7.18(29) applies in its entirety to any person who owns, leases, operates or controls any bakery which has the potential to emit, before the application of air pollution control equipment, equal to or greater than 50 tons per year of volatile organic compounds.

(b) Reasonably Available Control Technology Requirements: On or after May 31, 1995, unless exempted under 310 CMR 7.18(29)(c) or (d), no person subject to 310 CMR 7.18(29)(a) shall cause, suffer, allow or permit emissions from any bakery oven unless in compliance with the requirements set forth in 7.18(29)(e).

(c) Exemption for Small Bakeries: The requirements of 310 CMR 7.18(29) do not apply to:

1. any person who is able to demonstrate to the Department that, since January 1, 1990, the bakery has not emitted, before the application of air pollution control equipment, greater than or equal to 50 tons per year of volatile organic compounds; and
2. provided the person obtains a permit restriction from the Department under 310 CMR 7.02(9) which restricts potential emissions to below 50 tons per year.

(d) Exemption for Small Ovens: Any individual baking oven (at an applicable facility) which has not emitted since January 1, 1990, before application of air pollution control equipment, greater than or equal to 25 tons of VOC in any calendar year, is exempt from the requirements of 310 CMR 7.18(29)(e) and (f).

(e) RACT Requirement: Unless exempted under 310 CMR 7.18(29)(c), no person subject to 310 CMR 7.18(29) shall operate a baking oven unless VOC emissions from such oven are reduced 81% by weight.

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(f) Plan Submittal Requirement: Any person who owns, leases, operates or controls a bakery subject to the requirements of 310 CMR 7.18(29)(e) must submit an emission control plan and have the plan approved by the Department in accordance with the schedule and requirements of 310 CMR 7.18(20), except that bakeries subject to 310 CMR 7.18(29)(e) at the time of promulgation shall submit an emission control plan by April 15, 1995.

(g) Recordkeeping Requirements: Any person operating a bakery applicable to 310 CMR 7.18(29) shall maintain records of operations necessary to demonstrate compliance. Such records shall be retained in the owner's or operator's files for a period of not less than five years and should include, but are not limited to:

1. Monthly records to determine emissions from each oven. Using the formula in EPA's "Alternative Control Technology Document for Bakery Oven Emissions", dated December 1992, or other formula approved by the Department and EPA, such records would include:
   a. formula number;
   b. initial bakers yeast as percent of flour;
   c. total yeast action time;
   d. yeast spike as percent of flour;
   e. spike time;
   f. ethanol emission factor (lbs/ton);
   g. production (tons of bread baked);
   h. total ethanol emissions (tons).
2. Hourly (or continuous) records of control equipment operating parameters such as temperature, pressure drop or other applicable parameters to assure continuous compliance.

(h) Testing Requirements: Any person who owns, leases, operates or controls a bakery subject to 310 CMR 7.18(29) shall, upon request of the Department, perform or have performed tests to demonstrate compliance with 310 CMR 7.18(29). Testing shall be conducted in accordance with EPA Methods 25, 25A, and/or 18 as described in CFR Title 40 Part 60, or by other methods approved by the Department and EPA.

(30) Adhesives and Sealants.

(a) Applicability.

1. Except as provided in 310 CMR 7.18(30)(a)2. through 5., 310 CMR 7.18(30) applies to:
   a. any person who, on or after January 1, 2015, manufactures any adhesive, sealant, adhesive primer, or sealant primer for use in Massachusetts;
   b. any person who, on or after September 1, 2015, sells, supplies, or offers for sale any adhesive, sealant, adhesive primer, or sealant primer for use in Massachusetts; and
   c. any person who, on or after May 1, 2016, uses, applies, or solicits the use or application of any adhesive, sealant, adhesive primer, or sealant primer in Massachusetts.
2. 310 CMR 7.18(30) shall not apply to the use or application of any adhesive, sealant, adhesive primer, or sealant primer by the homeowner(s), renter(s), or other resident(s) at a private residence for personal use and not for a fee, compensation, or other financial gain.
3. 310 CMR 7.18(30) shall not apply to the manufacture, sale, supplying, or offering for sale of an adhesive, sealant, adhesive primer, or sealant primer provided that:
   a. the adhesive, sealant, adhesive primer, or sealant primer is intended exclusively for shipment and use or application outside of Massachusetts;
   b. the manufacturer or distributor keeps records demonstrating that the adhesive, sealant, adhesive primer, or sealant primer is intended exclusively for shipment and use or application outside of Massachusetts; and
   c. the manufacturer or distributor has taken reasonable precautions to assure that the adhesive, sealant, adhesive primer, or sealant primer is not sold, supplied, or offered for sale for use or application within Massachusetts.
4. 310 CMR 7.18(30) shall not apply to the manufacture, sale, supplying, offering for sale, or the use or application of the following:

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a. adhesives, sealants, adhesive primers, and sealant primers that are subject to 310 CMR 7.25(12), Consumer Products;

b. adhesives and sealants that contain less than 20 grams of VOC per liter of adhesive, or sealant, less water and less exempt compounds, as applied;

c. adhesives used in tire repair operations, provided the label of the adhesive states: "For Tire Repair Only"; and

d. adhesives and adhesive primers, used in printing operations that are subject to 310 CMR 7.03(15), Non-heatset Offset Lithographic Printing; 310 CMR 7.03(19), Flexographic, Gravure, Letterpress and Screen Printing; 310 CMR 7.18(12), Packaging Rotogravure and Packaging Flexographic Printing; 310 CMR 7.18(25), Offset Lithographic Printing and Letterpress Printing; and 310 CMR 7.26(20) through (29), Environmental Results Program: Lithographic, Gravure, Letterpress, Flexographic and Screen Printing.

5. 310 CMR 7.18(30) shall not apply to the manufacture, sale, supplying, or offering for sale of the following:

a. cyanoacrylate adhesives;

b. adhesives, sealants, adhesive primers, or sealant primers that are used in assembly, repair and manufacture of aerospace or undersea-based weapon systems components;

c. adhesives, sealants, adhesive primers, or sealant primers that are used in manufacture of medical equipment;

d. adhesives, sealants, adhesive primers, or sealant primers that are used in plaque laminating operations in which adhesives are used to bond clear, polyester acetate laminate to wood with lamination equipment installed prior to July 1, 1992; and

e. adhesives, sealants, adhesive primers, or sealant primers that are supplied or sold by the manufacturer or distributor in containers with a net volume of 16 fluid ounces or less, or a net weight of one pound or less. Plastic cement welding adhesives are excluded from this exemption.

(b) Definitions. Terms used in 310 CMR 7.18(30) are defined at 310 CMR 7.00: *Definitions* or in 310 CMR 7.18(30)(b). Where a term is defined in both 310 CMR 7.00: *Definitions* and in 310 CMR 7.18(30)(b), the definition in 310 CMR 7.18(30)(b) shall apply.

ACRYLONITRILE-BUTADIENE-STYRENE OR ABS WELDING ADHESIVE means any adhesive intended by the manufacturer to weld acrylonitrile-butadiene-styrene pipe, which is made by reacting monomers of acrylonitrile, butadiene and styrene.

ADHESIVE means any chemical substance that is applied for the purpose of bonding two surfaces together other than by mechanical means.

ADHESIVE PRIMER means any product intended by the manufacturer for application to a substrate, prior to the application of an adhesive, to enhance the bonding process.

AEROSOL ADHESIVE means an adhesive packaged as an aerosol product in which the spray mechanism is permanently housed in a non-refillable can designed for handheld application without the need for ancillary hoses or spray equipment.

AEROSPACE COMPONENT means the fabricated part, assembly of parts or completed unit of any aircraft, helicopter, missile, or space vehicle, including passenger safety equipment.

ARCHITECTURAL SEALANT OR PRIMER means any sealant or sealant primer intended by the manufacturer to be applied to stationary structures, including mobile homes and their appurtenances. Appurtenances to a stationary structure include, but are not limited to: hand railings, cabinets, bathroom and kitchen fixtures, fences, rain gutters and downspouts, and windows.

AUTOMOTIVE GLASS ADHESIVE PRIMER means an adhesive primer labeled by the manufacturer to be applied to automotive glass prior to installation of the glass using an adhesive/sealant.

CARB means the California Air Resources Board.

CERAMIC TILE INSTALLATION ADHESIVE means any adhesive intended by the manufacturer for use in the installation of ceramic tiles.

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CHLORINATED POLYVINYL CHLORIDE PLASTIC or CPVC PLASTIC means a polymer of the vinyl chloride monomer that has undergone a post-polymerization chlorination process to increase the chlorine content of the PVC polymer beyond its base chlorine content of 57%. CPVC plastic is normally identified with a CPVC marking.

CHLORINATED POLYVINYL CHLORIDE WELDING ADHESIVE or CPVC WELDING ADHESIVE means an adhesive labeled for welding of chlorinated polyvinyl chloride plastic.

CLEANUP SOLVENT means a VOC-containing material used to remove a loosely held uncured (*i.e.*, not dry to the touch) adhesive or sealant from a substrate, or a VOC-containing material used to clean equipment used in applying a material.

COMPUTER DISKETTE JACKET MANUFACTURING ADHESIVE means any adhesive intended by the manufacturer to glue the fold-over flaps to the body of a vinyl computer diskette jacket.

CONTACT ADHESIVE means an adhesive that:

(a) is designed for application to two surfaces to be bonded together; and

(b) is allowed to dry before the two surfaces are placed in contact with each other; and

(c) forms an immediate bond that is impossible, or difficult, to reposition after both adhesive-coated surfaces are placed in contact with each other; and

(d) does not need sustained pressure or clamping of surfaces after the adhesive-coated surfaces have been brought together using sufficient momentary pressure to establish full contact between both surfaces. Contact adhesive does not include rubber cements that are primarily intended for use on paper substrates. Contact adhesive also does not include vulcanizing fluids that are designed and labeled for tire repair only.

CONTROL TECHNIQUES GUIDELINES or CTG means the Control Techniques Guidelines issued by EPA for Miscellaneous Industrial Adhesives, EPA-453/R-08-005, and published in the Federal Register on October 7, 2008.

COVE BASE means a flooring trim unit, generally made of vinyl or rubber, having a concave radius on one edge and a convex radius on the opposite edge that is used in forming a junction between the bottom wall course and the floor or to form an inside corner.

COVE BASE INSTALLATION ADHESIVE means any adhesive intended by the manufacturer to be used for the installation of cove base or wall base on a wall or vertical surface at floor level.

CTG-AFFECTED FACILITY means a facility in which total actual uncontrolled VOC emissions from all Miscellaneous Industrial Adhesive Application Processes, including related cleaning activities, are equal to or greater than 6.8 kg/day (15 lb/day) or an equivalent level such as 3 tons per 12-month rolling period.

CYANOACRYLATE ADHESIVE means any adhesive with a cyanoacrylate content of at least 95% by weight.

DISTRIBUTOR means any person to whom an adhesive, adhesive primer, sealants, or sealant primer is sold or supplied for the purpose of resale or distribution in commerce, except that manufacturers, retailers, and consumers are not distributors.

DRY WALL INSTALLATION means the installation of gypsum dry wall to studs or solid surfaces using an adhesive formulated for that purpose.

EXEMPT COMPOUND means an organic compound that is excluded from the definition of volatile organic compound in 310 CMR 7.00.

FIBERGLASS means a material consisting of extremely fine glass fibers.

FLEXIBLE VINYL means non-rigid polyvinyl chloride plastic.

7.18: continued

INDOOR FLOOR COVERING INSTALLATION ADHESIVE means any adhesive intended by the manufacturer for use in the installation of wood flooring, carpet, resilient tile, vinyl tile, vinyl backed carpet, resilient sheet and roll, or artificial grass. Adhesives used to install ceramic tile and perimeter bonded sheet flooring with vinyl backing onto a non-porous substrate, such as Flexible Vinyl, are excluded from this category.

LAMINATE means a product made by bonding together two or more layers of material.

LOW-SOLIDS ADHESIVE, SEALANT OR PRIMER means any product that contains 120 grams or less of solids per liter of material.

MANUFACTURER means any person who manufactures, processes, imports, assembles, produces, packages, repackages, or re-labels a product.

MARINE DECK SEALANT or MARINE DECK SEALANT PRIMER means any sealant or sealant primer labeled for application to wooden marine decks.

MEDICAL EQUIPMENT MANUFACTURING means the manufacture of medical devices, such as, but not limited to, catheters, heart valves, blood cardioplegia machines, tracheostomy tubes, blood oxygenators, and cardiatory reservoirs.

METAL TO URETHANE/RUBBER MOLDING OR CASTING ADHESIVE means any adhesive intended by the manufacturer to bond metal to high density or elastomeric urethane or molded rubber materials, in heated molding or casting processes.

MISCELLANEOUS INDUSTRIAL ADHESIVE APPLICATION PROCESS means a process used at an industrial manufacturing or repair facility that is subject to the Control Technique Guidelines (CTG) as defined in 310 CMR 7.18(30).

MULTIPURPOSE CONSTRUCTION ADHESIVE means any adhesive intended by the manufacturer for use in the installation or repair of various construction materials, including but not limited to drywall, subfloor, panel, fiberglass reinforced plastic (FRP), ceiling tile and acoustical tile.

NONMEMBRANE ROOF INSTALLATION/REPAIR ADHESIVE means any adhesive intended by the manufacturer for use in the installation or repair of non-membrane roofs including, but not limited to, plastic or asphalt roof cement, asphalt roof coating and cold application cement. Nonmembrane roof installation/repair adhesive does not include adhesive intended by the manufacturer for use in the installation or repair of prefabricated single-ply flexible roofing membrane.

OUTDOOR FLOOR COVERING INSTALLATION ADHESIVE means any adhesive intended by the manufacturer for use in the installation of floor covering that is not in an enclosure and that is exposed to ambient weather conditions during normal use.

PANEL INSTALLATION means the installation of plywood, pre-decorated hardboard (or tileboard), fiberglass reinforced plastic, and similar pre-decorated or non-decorated panels to studs or solid surfaces using an adhesive formulated for that purpose.

PERIMETER BONDED SHEET FLOORING INSTALLATION means the installation of sheet flooring with vinyl backing onto a nonporous substrate using an adhesive designed to be applied only to a strip of up to four inches wide around the perimeter of the sheet flooring.

PLASTIC means any synthetic material chemically formed by the polymerization of organic (carbon-based) substances. Plastics are usually compounded with modifiers, extenders, and/or reinforcers and are capable of being molded, extruded, cast into various shapes and films or drawn into filaments.

7.18: continued

PLASTIC CEMENT WELDING ADHESIVE means any adhesive intended by the manufacturer for use to dissolve the surface of plastic to form a bond between mating surfaces. Plastic cement welding adhesive does not include ABS welding, PVC welding, or CPVC welding adhesives.

PLASTIC CEMENT WELDING ADHESIVE PRIMER means any primer intended by the manufacturer for use to prepare plastic substrates prior to bonding or welding.

PLASTIC FOAM means foam constructed of plastics.

PLASTICIZER means a material, such as a high boiling point organic solvent, that is incorporated into a vinyl to increase its flexibility, workability, or distensibility, as determined by the applicable ASTM International test method or any other method approved by the Department and EPA.

POLYVINYL CHLORIDE PLASTIC or PVC PLASTIC means a polymer of the chlorinated vinyl monomer, which contains at least 57% chlorine.

POLYVINYL CHLORIDE WELDING ADHESIVE or PVC WELDING ADHESIVE means any adhesive intended by the manufacturer for use in the welding of PVC plastic pipe.

POROUS MATERIAL means a substance that has tiny openings, often microscopic, in which fluids may be absorbed or discharged, including, but not limited to, wood, paper and corrugated paperboard. For the purposes of 310 CMR 7.18(30), porous material does not include wood.

REACTIVE ADHESIVE means adhesive systems composed, in part, of volatile monomers that react during the adhesive curing reaction, and, as a result, do not evolve from the film during use. These volatile components instead become integral parts of the adhesive through chemical reaction. At least 70% of the liquid components of the system, excluding water, react during the process.

REACTIVE DILUENT means a liquid that is a VOC during application and one in that, through chemical and/or physical reactions, such as polymerization, 20% or more of the VOC becomes an integral part of a finished material.

REINFORCED PLASTIC COMPOSITE means a composite material consisting of plastic reinforced with fibers.

ROADWAY SEALANT means any sealant intended by the manufacturer for application to streets, highways and other similar surfaces, including, but not limited to, curbs, berms, driveways, and parking lots.

RUBBER means any natural or manmade rubber substrate, including, but not limited to, styrene-butadiene rubber, polychloroprene (neoprene), butyl rubber, nitrile rubber, chlorosulfonated polyethylene, and ethylene propylene diene terpolymer.

SCAQMD means the South Coast Air Quality Management District of the State of California.

SEALANT means any material with adhesive properties that is formulated primarily to fill, seal, waterproof or weatherproof gaps or joints between two surfaces. Sealants include caulks.

SEALANT PRIMER means any product intended by the manufacturer for application to a substrate, prior to the application of a sealant, to enhance the bonding process.

SHEET RUBBER LINING INSTALLATION means the process of applying sheet rubber liners by hand to metal or plastic substrates to protect the underlying substrate from corrosion or abrasion. These operations also include laminating sheet rubber to fabric by hand.

SINGLE-PLY ROOF MEMBRANE means a prefabricated single sheet of compounded synthetic material such as ethylene propylene diene monomer, polyvinyl chloride, thermal polyolefin, or ketone ethylene ester that is applied in a single layer to a building roof.

7.18: continued

SINGLE-PLY ROOF MEMBRANE ADHESIVE PRIMER means any primer intended by the manufacturer for use to clean and promote adhesion of the single-ply roof membrane seams or splices prior to bonding.

SINGLE-PLY ROOF MEMBRANE INSTALLATION AND REPAIR ADHESIVE means any adhesive intended and labeled by the manufacturer for use in the installation or repair of single-ply roof membrane. Installation includes, at a minimum, attaching the edge of the membrane to the edge of the roof and applying flashings to vents, pipes and ducts that protrude through the membrane. Repair includes, but is not limited to, gluing the edges of torn membrane together, attaching a patch over a hole and reapplying flashings to vents, pipes, or ducts installed through the membrane.

SINGLE-PLY ROOF MEMBRANE SEALANT means any sealant intended by the manufacturer for application to single-ply roof membrane.

SOLVENT means organic compounds that are used as diluents, thinners, dissolvers, viscosity reducers, cleaning agents or other related uses.

STRUCTURAL GLAZING ADHESIVE means any adhesive intended by the manufacturer to apply glass, ceramic, metal, stone, or composite panels to exterior building frames.

SUBFLOOR INSTALLATION means the installation of subflooring material over floor joists, including the construction of any load bearing joists. Subflooring is covered by a finish surface material.

SURFACE PREPARATION SOLVENT means any VOC containing material used to remove dirt, oil and other contaminants from a substrate prior to the application of a primer, adhesive, or sealant.

THIN METAL LAMINATING ADHESIVE means any adhesive intended by the manufacturer for use in bonding multiple layers of metal to metal or metal to Plastic in the production of electronic or magnetic components in which the thickness of the bond line(s) is less than 0.25 mils.

TIRE REPAIR means a process that includes expanding a hole, tear, fissure or blemish in a tire casing by grinding or gouging, applying adhesive, and filling the hole or crevice with rubber.

TIRE RETREAD ADHESIVE means any adhesive intended by the manufacturer for application to the back of pre-cure tread rubber and to the casing and cushion rubber. Tire retread adhesive may also be used to seal buffed tire casings to prevent oxidation while the tire is being prepared for a new tread.

TRAFFIC MARKING TAPE means pre-formed reflective film intended by the manufacturer for application to streets, highways and other traffic-related surfaces, including, but not limited to curbs, berms, driveways and parking lots.

TRAFFIC MARKING TAPE ADHESIVE PRIMER means any primer intended by the manufacturer for application to surfaces prior to installation of traffic marking tape.

UNDERSEA-BASED WEAPONS SYSTEMS COMPONENTS means parts or completed units of any portion of a missile launching system used on undersea ships.

WATERPROOF RESORCINOL GLUE means a two-part resorcinol-resin-based adhesive designed for applications where the bond line must be resistant to conditions of continuous immersion in fresh or salt water.

7.18: continued

(c) VOC Emission Requirements.

1. Except as provided in 310 CMR 7.18(30)(a) and (d), on and after January 1, 2015, no person shall manufacture for sale in Massachusetts any adhesive, sealant, adhesive primer, or sealant primer that contains VOCs in excess of the applicable VOC content limits specified in 310 CMR 7.18(30)(c): *Table 1* and *Table 2*. The VOC content limits specified in 310 CMR 7.18(30)(c): *Table 1* and *Table 2* apply to adhesives, sealants, adhesive primers, and sealant primers as applied.

2. Except as provided in 310 CMR 7.18(30)(a) and (d), on and after September 1, 2015, no person shall sell, supply, or offer for sale in Massachusetts any adhesive, sealant, adhesive primer, or sealant primer that contains VOCs in excess of the applicable VOC content limits specified in 310 CMR 7.18(30)(c): *Table 1* and *Table 2*. The VOC content limits specified in 310 CMR 7.18(30)(c): *Table 1* and *Table 2* apply to adhesives, sealants, adhesive primers, and sealant primers as applied.

3. Except as provided in 310 CMR 7.18(30)(a), (c)7., and (d), on and after May 1, 2016, no person shall use, apply, or solicit the use or application of any adhesive, sealant, adhesive primer, or sealant primer in Massachusetts that contains VOCs in excess of the applicable VOC content limits specified in 310 CMR 7.18(30)(c): *Table 1* and *Table 2*. The VOC content limits specified in 310 CMR 7.18(30)(c): *Table 1* and *Table 2* apply to adhesives, sealants, adhesive primers, and sealant primers as applied.

4. The VOC content limits in 310 CMR 7.18(30)(c): *Table 1* and *Table 2* shall apply as follows:

   a. If an adhesive is used that is subject to a specific VOC content limit for such adhesive in 310 CMR 7.18(30)(c): *Table 1*, such specific limit shall apply rather than an adhesive-to-substrate limit specified in 310 CMR 7.18(30)(c): *Table 2*.

   b. If an adhesive is used to bond dissimilar substrates together, the VOC limit for the applicable substrate category in 310 CMR 7.18(30)(c): *Table 2* with the highest VOC content shall be the limit for such use.

5. No person subject to 310 CMR 7.18(30) shall:

   a. use any surface preparation solvent that contains a VOC content equal to or greater than 70 grams per liter of material except as provided in 310 CMR 7.18(30)(c)5.b. for single-ply roofing;

   b. use any surface preparation solvent with a VOC composite vapor pressure, excluding water and exempt compounds, equal to or greater than 45 millimeter mercury (mm Hg) at 20°C for application of single-ply roofing;

   c. use any material with a VOC composite vapor pressure equal to or greater than 45 mm Hg at 20°C for the removal of adhesives, sealants, adhesive primers, or sealant primers from any surface except as provided in 310 CMR 7.18(30)(c)5.d.;

   d. remove any adhesive, sealant, adhesive primer, or sealant primer from the parts of spray gun equipment unless the operation is performed:

      i. in an enclosed cleaning system, or equivalent cleaning system, which minimizes solvent evaporation during the cleaning, rinsing, and draining operations; and, collects the spent solvent in a container with a tight-fitting cover so that it is available for reuse, recycling, or proper disposal; or

      ii. using a solvent with a VOC content less than or equal to 70 grams of VOC per liter of material; or

      iii. when soaking parts containing dried adhesive, in a closed container that remains closed except when adding or removing parts, and using a solvent with a composite vapor pressure that does not exceed 9.5 mm Hg at 20°C excluding water and exempt compounds.

6. At a CTG-affected facility, any person subject to the requirements in 310 CMR 7.18(30)(c): *Table 1* and *Table 2* shall utilize one of the following application methods in applying an adhesive, sealant, adhesive primer, or sealant primer:

   a. electrostatic spray;

   b. HVLP spray;

   c. flow coat;

   d. roll coat or hand application, including non-spray application methods similar to hand or mechanically powered caulking gun, brush, or direct hand application;

7.18: continued

e. dip coat (including electrodeposition);
f. airless spray;
g. air-assisted airless spray;
h. any adhesive application method capable of achieving a transfer efficiency equivalent to or better than that achieved by HVLP spraying.

7. Any person using or applying an adhesive, sealant, adhesive primer, or sealant primer may comply with 310 CMR 7.18(30)(c)3. and 5. by using add-on air pollution control equipment provided that the following requirements are met:

a. the VOC emissions from the use of all adhesives, sealants, adhesive primers, or sealant primers that exceed the applicable limits in 310 CMR 7.18(30)(c): *Table 1* and *Table 2*, and all surface preparation solvents and cleanup solvents are reduced by an overall capture and control efficiency of at least 85%, by weight;
b. compliance with the requirements for emissions capture and control equipment is demonstrated according to 310 CMR 7.18(2)(e);
c. operation records sufficient to demonstrate compliance with the requirements of 310 CMR 7.18(30)(c)7. are maintained as required by 310 CMR 7.18(30)(e); and
d. an emission control plan (ECP), pursuant to 310 CMR 7.18(20), is submitted to the Department for approval.

8. Any person using or applying adhesives, sealants, adhesive primers, and sealant primers, shall comply with the following work practices:

a. store all VOC-containing adhesives, sealants, adhesive primers, sealant primers, process-related waste materials, and VOC-containing materials used for surface preparation, cleaning, and rework in closed containers;
b. ensure that mixing and storage containers used for VOC-containing adhesives, sealants, adhesive primers, sealant primers, process-related waste materials, and VOC-containing materials used for surface preparation, cleaning and rework are kept closed at all times except when depositing or removing these materials;
c. inimize spills of VOC-containing adhesives, sealants, adhesive primers, sealant primers, process-related waste materials, and VOC-containing materials used for surface preparation, cleaning, and rework;
d. convey VOC-containing adhesives, sealants, adhesive primers, sealant primers, process-related waste materials, and VOC-containing materials used for surface preparation, cleaning, and rework from one location to another in closed containers or pipes;
e. minimize VOC emissions from cleaning of application, storage, mixing, and conveying equipment by ensuring that:
    i. equipment cleaning is performed without atomizing the cleanup solvent; and,
    ii. all spent solvent is captured in closed containers; and
f. store and dispose of all absorbent materials, such as cloth or paper, that are contaminated with VOC-containing adhesives, sealants, adhesive primers, sealant primers, process-related waste materials, or VOC-containing materials used for surface preparation, cleaning, and rework in non-absorbent containers that shall be kept closed except when placing materials in or removing materials from the container.

9. No person shall solicit, require the use of, or specify the use or application of any adhesive, sealant, adhesive primer, or sealant primer if such use or application results in a violation of any provision of 310 CMR 7.18(30)(c). The prohibition of 310 CMR 7.18(30)(c)9. shall apply to all contracts under which any adhesive, sealant, adhesive primer, or sealant primer is to be used at any location in Massachusetts.

7.18: continued

310 CMR 7.18(30)(c): Table 1
VOC Content Limits for Adhesives, Sealants, Adhesive Primers, and Sealant Primers

Adhesive, Sealant, Adhesive Primer or Sealant Primer Category	VOC Content Limit as Applied (grams/liter*)
ADHESIVES ABS Welding Ceramic Tile Installation Computer Diskette Jacket Manufacturing Contact Cove Base Installation CPVC Welding Indoor Floor Covering Installation Metal to Urethane/Rubber Molding or Casting Multipurpose Construction Nonmembrane Roof Installation/Repair Outdoor Floor Covering Installation Perimeter Bonded Sheet Vinyl Flooring Installation Plastic Cement Welding (Non ABS) PVC Welding Sheet Rubber Lining Installation Single-ply Roof Membrane Installation/Repair Structural Glazing Thin Metal Laminating Tire Retread Waterproof Resorcinol Glue	4.00130850250e+59
SEALANTS Architectural Marine Deck Nonmembrane Roof Installation/Repair Roadway Single-ply Roof Membrane Other	250760300250450450
ADHESIVE PRIMERS Automotive Glass Plastic Cement Welding Single-ply Roof Membrane Traffic Marking Tape Other	700650250150250
SEALANT PRIMERS Non-porous Architectural Porous Architectural Marine Deck Other	250775760750

* The VOC content is determined as the weight of volatile compounds, less water and exempt compounds, as specified in 310 CMR 7.18(30)(f): *Compliance Procedures and Test Methods*.

7.18: continued

310 CMR 7.18(30)(c): Table 2
VOC Content Limit for Adhesives Applied to Particular Substrates

Substrate Category	VOC Content Limit as Applied (grams/liter*)
Flexible Vinyl Fiberglass Metal Porous Material Reinforced Plastic Composite Rubber Wood Other Substrates	2502003012020026000000

* The VOC content is determined as the weight of volatile compounds, less water and exempt compounds, as specified in 310 CMR 7.18(30)(f): *Compliance Procedures and Test Methods*.

(d) Exemptions.

1. 310 CMR 7.18(30)(c)1. and 2. shall not apply to the manufacture, sale, supplying, or offering for sale of an adhesive, sealant, adhesive primer, or sealant primer provided that:
   a. the adhesive, sealant, adhesive primer, or sealant primer is for use in a facility that utilizes add-on air pollution control equipment to achieve compliance pursuant to 310 CMR 7.18(30)(c)7.; and
   b. the manufacturer, distributor, seller, supplier and person offering for sale keep records demonstrating that the adhesive, sealant, adhesive primer, or sealant primer is intended for use in a facility that utilizes add-on air pollution control equipment to achieve compliance pursuant to 310 CMR 7.18(30)(c)7.
2. 310 CMR 7.18(30) shall not apply to the manufacture, sale, supplying, offering for sale, or use of adhesives, sealants, adhesive primers, and sealant primers being tested or evaluated in any research and development, quality assurance, or analytical laboratory, except that the requirements of 310 CMR 7.18(30)(c)8. and (e)2. shall apply.
3. 310 CMR 7.18(30) shall not apply to the use or application of:
   a. cyanoacrylate adhesives, except that the requirements of 310 CMR 7.18(30)(c)8. shall apply;
   b. adhesives, sealants, adhesive primers, and sealant primers that are sold or supplied by the manufacturer or distributor in containers with a net volume of 16 fluid ounces or less, or a net weight of one pound or less, except that the requirements of 310 CMR 7.18(30)(c)8. shall apply. This exemption shall not apply to plastic cement welding adhesives.
   c. adhesives, sealants, adhesive primers, and sealant primers that are used in the assembly, repair, and manufacture of aerospace or undersea-based weapon systems components, except that the requirements of 310 CMR 7.18(30)(c)8. shall apply;
   d. adhesives, sealants, adhesive primers, and sealant primers that are used in the manufacture of medical equipment, except that the requirements of 310 CMR 7.18(30)(c)8. shall apply; and
   e. adhesives, sealants, adhesive primers, and sealant primers in plaque laminating operations in which adhesives are used to bond clear, polyester acetate laminate to wood with lamination equipment installed prior to July 1, 1992, except that the requirements of 310 CMR 7.18(30)(c)8. shall apply.
4. 310 CMR 7.18(30)(c)3. and 5. shall not apply to the use or application of adhesives, sealants, adhesive primers, and sealant primers at a facility in which the total facility-wide VOC emissions from all adhesives, sealants, adhesive primers, and sealant primers used are less than 200 pounds per calendar year, or an equivalent volume.

   Any person claiming this exemption shall maintain sufficient monthly operational records in accordance with 310 CMR 7.18(30)(e) to demonstrate compliance with this exemption.

7.18: continued

5. 310 CMR 7.18(30)(c)3. and 5. shall not apply to the use or application of adhesives, sealants, adhesive primers, and sealant primers at a facility in which the facility-wide total volume of adhesives, sealants, adhesive primers, sealant primers, cleanup solvents, and surface preparation solvents does not exceed 55 gallons per calendar year. Any person claiming this exemption shall maintain sufficient monthly operational records in accordance with 310 CMR 7.18(30)(e) to demonstrate compliance with this exemption.

(e) Recordkeeping Requirements.

1. Each person subject to 310 CMR 7.18(30) shall maintain records demonstrating compliance with 310 CMR 7.18(30), including, but not limited to, the following information:

a. for the manufacturer of any adhesive, sealant, adhesive primer, or sealant primer:

i. for each product, the product name, product category according to 310 CMR 7.18(30)(c): *Table 1*, and *Table 2*., the VOC content of each product as supplied, and the type of product application;

ii. the volume of each product sold in Massachusetts in containers with a net volume greater than 16 fluid ounces or a net weight of more than one pound;

iii. all records required pursuant to 310 CMR 7.18(30)(d)1.b.; and

iv. all records pertaining to compliance testing pursuant to 310 CMR 7.18(30)(h);

b. for any person who sells, supplies, or offers for sale any adhesive, sealant, adhesive primer, or sealant primer:

i. for each product, the product name, product category according to 310 CMR 7.18(30)(c): *Table 1*, and *Table 2*., the VOC content of each product as supplied, and the type of product application;

ii. the volume of each product sold in Massachusetts in containers with a net volume greater than 16 fluid ounces or a net weight of more than one pound;

iii. all records required pursuant to 310 CMR 7.18(30)(d)1.b.; and

iv. any information required pursuant to 310 CMR 7.18(30)(e)2., if applicable;

c. for any person who uses, or applies any adhesive, sealant, adhesive primer, or sealant primer:

i. a data sheet or materials list that provides the material name, product category according to 310 CMR 7.18(30)(c): *Table 1*, and *Table 2*., manufacturer identification, the VOC content of each product as supplied, and type of material application;

ii. a list of each adhesive, sealant, adhesive primer, sealant primer, cleanup solvent, and surface preparation solvent in use and in storage;

iii. a list of reducers, catalysts, or other components used and the as applied mix ratio;

iv. the final VOC content of any adhesive, sealant, adhesive primer, or sealant primer as applied;

v. the VOC content and vapor pressure, of any cleanup solvents, surface preparation solvents, reducers and catalysts, and VOC-containing materials used in the preparation, application, rework, and cleaning processes related to use or application of any adhesive, sealant, adhesive primer, or sealant primer;

vi. the monthly volume of each adhesive, sealant, adhesive primer, sealant primer, cleanup solvent, and surface preparation solvent used;

vii. for any person who complies with 310 CMR 7.18(30)(c)3. and 5. through the use of add-on air pollution control equipment, the key operating parameters for the control equipment, including but not limited to, the following information:

(i) the volume used per day of cleanup solvents, surface preparation solvents, and each adhesive, sealant, adhesive primer, and sealant primer that is subject to a VOC content limit specified in 310 CMR 7.18(30)(c): *Table 1* and *Table 2*; and

7.18: continued

(ii) all records sufficient to demonstrate compliance with requirements specified in 310 CMR 7.18(30)(c)7., (2)(e), and (20);

viii. all records pertaining to compliance testing pursuant to 310 CMR 7.18(30)(h); and

ix. the monthly total facility-wide VOC emissions from all adhesives, sealants, adhesive primers, and sealant primers used or applied at any facility where a person is claiming an exemption pursuant to 310 CMR 7.18(30)(d)4.

2. For adhesives, sealants, adhesive primers, and sealant primers exempted under 310 CMR 7.18(30)(d)2., the person supplying the adhesives, sealants, adhesive primers, or sealant primers to the research and development, quality assurance, or analytical laboratory for testing or evaluation shall maintain records of all such materials supplied, including, but not limited to, the product name, the product category of the material, type of application, the VOC content of each material, and the volume of products supplied to the research and development, quality assurance, or analytical laboratory for testing or evaluation.

3. All records required to demonstrate compliance with 310 CMR 7.18(30) shall be maintained for three years from the date such record is created and shall be made available to the Department upon request.

(f) Compliance Procedures And Test Methods.

1. VOC content (grams per liter and percent by weight) shall be determined according to the following calculations:

a. For adhesives, sealants, adhesive primers, and sealant primers that do not contain reactive diluents, grams of VOC per liter of material, less water and exempt compounds, shall be calculated according to the following equation:

Grams of VOC per liter of material = (Ws - Ww - We) / (Vm - Vw - Ve)

Where:

Ws = weight of volatile compounds, in grams

Ww = weight of water, in grams

We = weight of exempt compounds, in grams

Vm = volume of material, in liters

Vw = volume of water, in liters

Ve = volume of exempt compounds, in liters

7.18: continued

b. For adhesives, sealants, adhesive primers, and sealant primers that contain reactive diluents, the VOC content of the material is determined after curing. The grams of VOC per liter of material, less water and exempt compounds, shall be calculated according to the following equation:

Grams of VOC per liter of material = (Wrs - Wrw - Wre) / (Vrm - Vrw - Vre)

Where:

Wrs = weight of volatile compounds not consumed during curing, in grams

Wrw = weight of water not consumed during curing, in grams

Wre = weight of exempt compounds not consumed during curing, in grams

Vrm = volume of material not consumed during curing, in liters

Vrw = volume of water not consumed during curing, in liters

Vre = volume of exempt compounds not consumed during curing, in liters

c. For clean-up solvents, surface preparation solvents, low-solids adhesives, low-solids sealants, low-solids adhesive primers, and low-solids sealant primers, grams of VOC per liter of material shall be calculated according to the following equation:

Grams of VOC per liter of material = (Ws - Ww - We) / Vm

Where:

Ws = weight of volatile compounds, in grams

Ww = weight of water, in grams

We = weight of exempt compounds, in grams

Vm = volume of material, in liters

d. Percent VOC by weight shall be calculated according to the following equation:

% VOC by weight = (Wv / W) x 100

Where:

Wv = weight of VOCs, in grams

W = weight of material, in grams

2. The following tests and procedures shall be used to determine the properties of adhesives, sealants, adhesive primers, sealant primers, cleanup solvents, and surface preparation solvents, and any component thereof for the purpose of compliance verification with 310 CMR 7.18(30):

a. Except as provided in 310 CMR 7.18(30)(f)2.c., and d., the VOC and solids content of all non-aerosol adhesives, adhesive primers, sealants, sealant primers, surface preparation solvents, and cleanup solvents shall be determined using U.S. EPA Reference Method 24, as identified in 40 CFR 60: *Appendix A*, or SCAQMD Method 304. The procedure for reactive adhesives in Appendix A of the NESHAP for surface coating of plastic parts (40 CFR Part 63, Subpart PPPP) shall be used to determine the VOC content of reactive adhesives.

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b. The volatile organic content of exempt compounds shall be determined using the applicable ASTM International test method or any other method approved by the Department and EPA

c. The VOC content of any plastic cement welding adhesive or plastic cement welding primer shall be determined using SCAQMD Method 316A.

d. The amount of the VOC that becomes an integral part of the finished materials shall be determined using SCAQMD Method 316A.

e. The composite vapor pressure of organic compounds in surface preparation solvents and cleanup solvents shall be determined by quantifying the amount of each compound in the blend using the applicable ASTM International gas chromatographic analysis test method for organics and for water content, or any other method approved by the Department and the EPA, and the following equation:

$$Ppc = [\sum_{i=1}^{n}(W_i)(Vp_i)/Mw_i]/[(W_w/Mw_w) + \sum_{i=1}^{n}(W_e/Mw_e) + \sum_{i=1}^{n}(W_i/Mw_i)]$$

Where:

Ppc = VOC composite partial pressure at 20 C, in mm Hg

W_i = Weight of the "i"th VOC compound, in grams, as determined by the applicable ASTM International test method or any other method approved by the Department and EPA

W_w = Weight of water, in grams as determined by the applicable ASTM International test method or any other method approved by the Department and EPA

W_e = Weight of the "i"th exempt compound, in grams, as determined by the applicable ASTM International test method or any other method approved by the Department and the EPA

Mw_i = Molecular weight of the "i"th VOC compound, in grams per g-mole, as given in chemical reference literature

Mw_w = Molecular weight of water, 18 grams per g-mole

Mw_e = Molecular weight of the "i"th exempt compound, in grams per g-mole, as given in chemical reference literature

Vp_i = Vapor pressure of the "i"th VOC compound at 20°C, in mm Hg, as determined by 310 CMR7.18(30)(e)2.f.

f. The vapor pressure of each single component compound may be determined from the applicable ASTM International test method, or any other method approved by the Department and EPA, or may be obtained from any of the following sources:

i. the most recent edition of *The Vapor Pressure of Pure Substances*, Boublik, Fried, and Hala; Elsevier Scientific Publishing Company, New York;

ii. the most recent edition of Perry's *Chemical Engineer's Handbook*, McGraw-Hill Book Company;

iii. the most recent edition of *CRC Handbook of Chemistry and Physics*, Chemical Rubber Publishing Company;

iv. the most recent edition of Lange's *Handbook of Chemistry*, John Dean, editor, McGraw-Hill Book Company; or

v. additional sources approved by the SCAQMD or other California air districts.

3. If air pollution control equipment is used to meet the requirements of 310 CMR 7.18(30), the owner or operator shall make the following determinations:

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a. The measurement of capture efficiency shall be conducted and reported in accordance with the EPA Technical Document, *Guidelines for Determining Capture Efficiency*, issued January 9, 1995; and

b. The control efficiency shall be determined in accordance with U.S. EPA Methods 25, 25A, 25B or CARB Method 100.

(g) Container Labeling.

1. The manufacturer of an adhesive, sealant, adhesive primer, or sealant primer subject to 310 CMR 7.18(30) shall display the following information on the product container or label:

a. a statement of the manufacturer's recommendation regarding thinning, reducing, or mixing of the product, except that:

i. this requirement does not apply to the thinning of a product with water; and

ii. if thinning of the product prior to use is not necessary, the recommendation must specify that the product is to be applied without thinning;

b. the maximum or the actual VOC content of the product in accordance with 310 CMR 7.18(30)(f), as supplied, displayed in grams of VOC per liter of product; and

c. the maximum or the actual VOC content of the product in accordance with 310 CMR 7.18(30)(f), which includes the manufacturer's maximum recommendation for thinning, as applied, displayed in grams of VOC per liter of product.

(h) Compliance Testing Requirements.

1. The manufacturer of an adhesive, adhesive primer, sealant, or sealant primer subject to 310 CMR 7.18(30) shall determine compliance with the VOC content requirements of 310 CMR 7.18(30) in accordance with 310 CMR 7.18(30)(f).

2. Any person who uses or applies an adhesive, adhesive primer, sealant, or sealant primer subject to 310 CMR 7.18(30) shall determine compliance with the VOC content requirements of 310 CMR 7.18(30) according to the following:

a. manufacturer's labeling and product technical data information; or

b. testing in accordance with provisions of 310 CMR 7.18(30)(f).

3. Any person utilizing an air pollution control device shall, upon request of the Department, perform or have performed tests to demonstrate compliance with 310 CMR 7.18(30)(c)7.

4. Any person utilizing a spray gun system shall, upon request of the Department, perform or have performed tests to evaluate the spray gun cleaning system.

(31) U Industrial Cleaning Solvents.

(a) Applicability.

1. On or after March 9, 2020, any person who owns, leases, operates or controls a facility which emits, before any application of add-on air pollution capture and control equipment, equal to or greater than 15 pounds of volatile organic compounds (VOC) per day or, in the alternative, equal to or greater than three tons of VOC per rolling 12 month period from industrial cleaning solvents shall comply with 310 CMR 7.18(31)(c), (d), and (f) through (h).

2. On or after March 9, 2018, any person who owns, leases, operates, or controls a facility which emits, before any application of add-on air pollution capture and control equipment, equal to or greater than 15 pounds of VOC per day or, in the alternative, equal to or greater than three tons of VOC per rolling 12 month period from industrial cleaning solvents shall comply with the work practices of 310 CMR 7.18(31)(e) for cleaning operations.

(b) Exemptions.

1. The requirements of 310 CMR 7.18(31)(d) do not apply to:

a. industrial cleaning solvent usage otherwise subject to an emission limitation in 310 CMR 7.03, 7.18, 7.25 or 7.26;

b. stripping of cured coatings, cured ink, or cured adhesives;

c. cleaning of the following:

i. solar cells;

ii. laser hardware;

iii. scientific instruments;

iv. high-precision optics; and

v. digital printing operations.

7.18: continued

d. cleaning conducted as part of the following:
i. performance laboratory tests on coatings, adhesives, or inks;
ii. research and development programs;
iii. laboratory tests in quality assurance laboratories, excluding commerical laboratories that provide laboratory services for third parties; and
iv. quality assurance / quality control cleaning activities in manufacturing processes;
e. cleaning of paper-based gaskets and clutch assemblies where the rubber is bonded to metal by means of an adhesive;
f. cleaning operations in printing pre-press areas, including the cleaning of film processors, color scanners, plate processors, film cleaning, and plate cleaning;
g. medical device and pharmaceutical manufacturing operations;
h. cleaning of application equipment used to apply coatings on satellites and radiation effect coatings;
i. touch-up cleaning performed on printed circuit boards where surface mounted devices have already been attached;
j. cleaning of ultraviolet or electron beam adhesive application;
k. coating, ink, resin, and adhesive manufacturing.

2. The work practice in 310 CMR 7.18(31)(e)5. does not apply to the cleaning of the nozzle tips of automated spray equipment systems.

3. The requirements of 310 CMR 7.18(31) do not apply to cleaning operations associated with aerospace manufacturing and rework operations, including operations subject to the requirements of 40 CFR part 63 subpart GG, National Emissions Standards for Aerospace Manufacturing and Rework Facilities.

(c) Extensions. Any person subject to 310 CMR 7.18(31)(a)1. may apply in writing to the Department for a nonrenewable extension of the implementation deadline in 310 CMR 7.18(31)(a)1. by complying with 310 CMR 7.18(31)(f). The Department will consider a nonrenewable extension of the deadline in 310 CMR 7.18(31)(a)1. for persons applying under 310 CMR 7.18(31)(c) until no later than March 9, 2021, provided the emission control plan submitted for approval under 310 CMR 7.18(20) meets the following criteria in addition to those of 310 CMR 7.18(20):

1. a Toxics Use Reduction Plan or a Resource Conservation Plan completed for the facility in accordance with 310 CMR 50.40 through 310 CMR 50.48 is submitted as part of the emission control plan;

2. the Toxics Use Reduction Plan or Resource Conservation Plan was certified by a Toxics Use Reduction Planner certified under M.G.L. c. 21I, and 310 CMR 50.50 through 50.63;

3. the emission control plan proposes to reduce emissions or natural asset use, from the process or elsewhere in the facility, more than otherwise required pursuant to an applicable regulation or approval of the Department, through toxics use reduction techniques or resource conservation actions as defined in M.G.L. c. 21I; and

4. implementation of the emission control plan meets the emission limitations of 310 CMR 7.18(31)(d).

(d) Reasonably Available Control Technology Requirements. Any person subject to 310 CMR 7.18(31) shall limit VOC emissions by complying with one or more of the requirements in 310 CMR 7.18(31)(d)1., 2., or 3.

1. VOC Content Limitation. Use industrial cleaning solvents that have a VOC content no greater than the emission limitations listed in Table 310 CMR 7.18(31)(d)1. If an operation can be classified in more than one industrial cleaning solvent operation category in Table 310 CMR 7.18(31)(d)1., then the least stringent category limitation shall apply.

Table 310 CMR 7.18(31)(d)1.
RACT Emission Limitations for Industrial Cleaning Solvent Operations

Industrial Cleaning Solvent Operation Category	VOC content limitation as applied	
	pounds/gallon	grams/liter
Electrical and electronic components	0.83	100
Electronic or electrical cables	3.32	400
Product cleaning during manufacturing process, or repair and maintenance cleaning	0.42	50
Surface preparation for coating or ink application		
Cleaning not otherwise specified		

7.18: continued

2. Vapor Pressure Limitation. Use industrial cleaning solvents that have a VOC composite partial pressure equal to or less than eight mm Hg at 20°C (68°F).

3. Add-on Air Pollution Capture and Control Equipment. Achieve an overall VOC control efficiency of at least 85% by weight using add-on air pollution capture and control equipment.

(e) Work Practices for Cleaning Operations. Any person subject to 310 CMR 7.18(31) shall minimize VOC emissions of industrial cleaning solvents in accordance with, but not limited to, the following practices:

1. covering any container containing solvent or solvent-contaminated material;

2. storing any solvent-contaminated material (such as cleaning rags) or equipment (such as used applicators) in closed containers;

3. cleaning spray guns in an enclosed system or manually cleaning and flushing spray guns without atomizing the cleaning solvent;

4. collecting and storing used solvent in a closed container;

5. not atomizing any cleaning solvent unless the emissions are vented to add-on air pollution capture and control equipment that meets the requirement of 310 CMR 7.18(31)(d)3.;

6. conveying solvent in closed containers or pipes;

7. maintaining cleaning equipment and solvent containers, including repairing solvent leaks;

8. cleaning up any spills immediately; and

9. properly disposing of any solvent and solvent-contaminated waste.

In addition, any person who is directed to comply with 310 CMR 7.18(31)(e) by any other subsection of 310 CMR 7.18, shall utilize the work practices outlined in 310 CMR 7.18(31)(e) to minimize VOC emissions.

(f) Plan and Extension Submittal Requirements.

1. Any person subject to 310 CMR 7.18(31)(a)1. who chooses to install add-on air pollution capture and control equipment to comply with 310 CMR 7.18(31)(d) shall submit an emission control plan in accordance with 310 CMR 7.18(20).

2. Any person subject to 310 CMR 7.18(31)(a)1. who chooses to apply for an extension under 310 CMR 7.18(31)(c) shall comply with 310 CMR 7.18(20).

(g) Recordkeeping Requirements. Any person subject to 310 CMR 7.18(31)(a) shall prepare and maintain records sufficient to demonstrate compliance consistent with 310 CMR 7.18(2). Records kept to demonstrate compliance shall be kept on-site for five years and shall be made available to representatives of the Department and EPA in accordance with the requirements of an approved emission control plan or upon request. Such records shall include, but are not limited to:

1. name, identification, quantity, formulation and density of industrial cleaning solvent(s) used;

2. any other requirements specified by the Department in any approval(s) issued under 310 CMR 7.18(20) or any order(s) issued to the person;

3. when complying through 310 CMR 7.18(31)(d)1., the associated category from Table 310 CMR 7.18(31)(d)1. and the VOC content of each industrial cleaning solvent, in pounds per gallon or grams per liter, as applied;

4. when complying through 310 CMR 7.18(31)(d)2., the VOC composite partial pressure of each industrial cleaning solvent used in the industrial cleaning operation; and

5. when complying through 310 CMR 7.18(31)(d)3., all records required by 310 CMR 7.18(2)(e) necessary to demonstrate the VOC control efficiency.

(h) Testing Requirements. Any person subject to 310 CMR 7.18(31)(a) shall, upon request of the Department, perform or have performed tests to demonstrate compliance with 310 CMR 7.18(31). Testing shall be conducted in accordance with EPA Methods 24, 25, 25A or 25B as described in CFR Title 40 Part 60, or by other methods approved by the Department and EPA. EPA Method 25A shall be used when:

1. an exhaust concentration of less than or equal to 50 parts per million volume (ppmv) as carbon is required to comply with the applicable limitation;

2. the inlet concentration and the required level of control results in an exhaust concentration of less than or equal to 50 ppmv as carbon; or

3. the high efficiency of the control device alone results in an exhaust concentration of less than or equal to 50 ppmv as carbon.

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(32) Fiberglass Boat Manufacturing.

(a) Applicability.

1. On or after March 9, 2020, any person who owns, leases, operates, or controls a fiberglass boat manufacturing facility and related cleaning operations which emit, before any application of add-on air pollution capture and control equipment, equal to or greater than 15 pounds of volatile organic compounds (VOC) per day or, in the alternative, equal to or greater than three tons of VOC per rolling 12 month period shall comply with 310 CMR 7.18(32)(b), (d), (e), (f), (g)3. and 4. and (h) through (j).

2. On or after March 9, 2018, any person who owns, leases, operates, or controls a fiberglass boat manufacturing facility and related cleaning operations which emit, before any application of add-on air pollution capture and control equipment, equal to or greater than 15 pounds of VOC per day or, in the alternative, equal to or greater than three tons of VOC per rolling 12 month period shall comply with the work practices of 310 CMR 7.18(32)(g)1. and 2. for manufacturing and cleaning operations.

3. 310 CMR 7.18(32) does not apply to the following activities:

a. surface coatings applied to fiberglass boats and metal recreational boats or pleasure crafts;

b. closed molding operations; and

c. industrial adhesives used in the assembly of fiberglass boats, with the exception of polyester resin putties used to assemble fiberglass parts, which are not considered adhesives for the purpose of 310 CMR 7.18(32).

(b) Definitions. The definitions found in 310 CMR 7.00 apply to 310 CMR 7.18(32). The following words and phrases shall have the following meanings as they appear in 310 CMR 7.18(32). Where a term is defined in both 310 CMR 7.00: *Definitions* and 310 CMR 7.18(32), the definition in 310 CMR 7.18(32) shall apply.

CLOSED MOLDING means a fiberglass boat manufacturing process by which pressure is used to distribute a resin through reinforcing fabric placed between two mold surfaces to either saturate the fabric or fill the mold cavity. The term includes, but is not limited to, compression molding with sheet molding compound, infusion molding, resin injection molding, vacuum-assisted resin transfer molding, resin transfer molding, and vacuum-assisted compression molding. The term does not include any processes in which a closed mold is used only to compact saturated fabric or remove air or excess resin from the fabric, such as in vacuum bagging.

FIBERGLASS means a material consisting of extremely fine glass fibers.

FIBERGLASS BOAT MANUFACTURING FACILITY means any facility that manufactures hulls, decks, or boats from fiberglass, or builds molds to make fiberglass boat hulls or decks. A facility is not considered a fiberglass boat manufacturing facility if the facility solely manufactures:

1. parts of boats, such as hatches, seats, or lockers; or
2. boat trailers.

FILLED RESIN means a resin to which fillers have been added to achieve certain physical properties, particularly for building fiberglass boat molds.

GEL COAT means a clear or pigmented polyester resin that, when mixed with a hardening catalyst, is applied so that it becomes the outer surface of the finished part or mold.

MONOMER means a VOC that partially combines with itself, or with other similar compounds, by a cross-linking reaction to become a part of the cured resin.

OPEN MOLDING means a family of techniques for composite fabrication which make use of single-cavity molds and require little or no external pressure.

PRODUCTION RESIN or gel coat means a resin or gel coat that is used to fabricate fiberglass boat hulls or decks.

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ROLL-OUT means the process of using rollers, squeegees, or similar tools to compact reinforcing materials saturated with resin to remove trapped air or excess resin.

SKIN COAT means the first layer of resin applied to the gel coat.

TOOLING RESIN or TOOLING GEL COAT means a resin or gel coat used to build molds and which is normally harder, more heat-resistant, and more dimensionally stable than production materials.

VACUUM BAGGING means any molding technique in which the reinforcing fabric is saturated with resin and then covered with a flexible sheet that is sealed to the edge of the mold and where a vacuum is applied under the sheet to compress the laminate, remove excess resin, or remove trapped air from the laminate during curing. Vacuum bagging does not include processes that meet the definition of closed molding.

VINYLESTER RESIN means a thermosetting resin containing esters of acrylic or methacrylic acids and having double-bond and ester linkage sites only at the ends of the resin molecules.

(c) Exemptions. The requirements in 310 CMR 7.18(32)(e) shall not apply to the following:

1. production resins, including skin coat resins, applied with non-atomizing resin application equipment, that must meet specifications under 46 CFR chapter I subchapter Q (Equipment, Construction and Materials: Specifications and Approval) or 46 CFR chapter I subchapter T (Small Passenger Vessels (Under 100 Gross Tons));
2. production and tooling resins, and pigmented, clear, and tooling gel coats used for part or mold repair and touch-up not exceeding one percent by weight of all resins and gel coats used at a fiberglass boat manufacturing facility during any consecutive 12-month period; or
3. 100% vinylester skin coat resins, applied with non-atomizing resin application equipment, that do not exceed five percent by weight of all resins and gel coats used at a fiberglass boat manufacturing facility during any consecutive 12-month period.

(d) Extensions. Any person subject to 310 CMR 7.18(32)(e) may apply in writing to the Department for a non-renewable extension of the implementation deadline in 310 CMR 7.18(32)(a)1. by complying with 310 CMR 7.18(32)(h). The Department will consider a non-renewable extension of the deadline in 310 CMR 7.18(32)(a)1. for persons applying under 310 CMR 7.18(32)(d) until no later than March 9, 2021, provided the emission control plan submitted for approval under 310 CMR 7.18(20) meets the following criteria in addition to those of 310 CMR 7.18(20):

1. a Toxics Use Reduction Plan or a Resource Conservation Plan completed for the facility in accordance with 310 CMR 50.40 through 50.48 is submitted as part of the emission control plan;
2. the Toxics Use Reduction Plan or Resource Conservation Plan was certified by a Toxics Use Reduction Planner certified under M.G.L. c. 21I and 310 CMR 50.50 through 50.63;
3. the emission control plan proposes to reduce emissions or natural asset use, from the process or elsewhere in the facility, more than otherwise required pursuant to an applicable regulation or approval of the Department, through toxics use reduction techniques or resource conservation actions as defined in M.G.L. c. 21I; and
4. implementation of the emission control plan meets the emission limitations of 310 CMR 7.18(32)(e).

(e) Reasonably Available Control Technology Emission Limitations for Resins and Gel Coats. Any person subject to 310 CMR 7.18(32) shall limit VOC emissions by complying with one or more of the requirements in 310 CMR 7.18(32)(e)1. through 4., and complying with 310 CMR 7.18(32)(e)5. and 6. as applicable.

1. Monomer VOC Content Limitations. Use only materials having a VOC content no greater than the limitations in Table 310 CMR 7.18(32)(e)1.

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Table 310 CMR 7.18(32)(e)1. Compliant Materials Monomer VOC Content Limitations for Open Molding Resins and Gel Coats		
Material Used	Application Method	Monomer VOC Content Limitation (weight percent, as applied)
Production Resin	Atomized (spray)	28
Production Resin	Non-atomized	35
Pigmented gel coat	Any method	33
Clear gel coat	Any method	48
Tooling resin	Atomized	30
Tooling resin	Non-atomized	39
Tooling gel coat	Any method	40

2. Weighted-Average Monomer VOC Content. Emit no more, in a consecutive 12-month period, than the applicable monomer VOC content limitation for a specific category and application method in Table 310 CMR 7.18(32)(e)1. determined using Equation 1:

Equation 1: Weighted-average monomer VOC content = $\sum^{n}_{i=1} (M_i\ VOC_i) / \sum^{n}_{i=1} (M_i)$

where:

M_i = the mass of open molding resin or gel coat i used in an operation in the past consecutive 12-month period, in megagrams;

VOC_i = monomer VOC content, by weight percent, of open molding resin or gel coat i used in an operation in the past consecutive 12-month period; and

n = the number of different open molding resins or gel coats used in an operation in the past consecutive 12-month period.

3. Material Emissions Average. Any person subject to 310 CMR 7.18(32) may calculate the weighted-average emission rate that is equivalent to the use of compliant resin and gel coat materials contained in Table 310 CMR 7.18(32)(e)1. For a particular consecutive 12-month period, the actual monomer VOC emissions calculated in Equation 3 shall not exceed the allowable monomer VOC emissions calculated in Equation 2. The allowable monomer VOC emission limitation and the actual monomer VOC emissions shall be re-calculated monthly using the current month's and previous 11 months' actual monomer usage. For each consecutive 12-month period:

a. identify each resin and gel coat material to be included in the calculation;
b. use Equation 2 to determine the allowable monomer VOC emissions limitation;
c. use Equation 3 to determine the actual monomer VOC emissions; and
d. use Equation 4 to determine the weighted-average monomer VOC emission rate (PV_{op}) for each resin and gel coat material operation for the consecutive 12-month period in Equation 3.

Equation 2: Allowable Monomer VOC Limitation = $46(M_R) + 159(M_{PG}) + 291(M_{CG}) + 54(M_{TR}) + 214(M_{TG})$

The numerical coefficients of Equation 2 are the allowable monomer VOC emission rates for the particular materials in units of kg/Mg of material used.

where:

M_R = the mass of production resin used in the past consecutive 12-month period, excluding any materials that are exempt, in megagrams;

M_{PG} = the mass of pigmented gel coat used in the past consecutive 12-month period, excluding any materials that are exempt, in megagrams;

M_{CG} = the mass of clear gel coat used in the past consecutive 12-month period, excluding any materials that are exempt, in megagrams;

M_{TR} = the mass of tooling resin used in the past consecutive 12-month period, excluding any materials that are exempt, in megagrams; and

M_{TG} = the mass of tooling gel coat used in the past consecutive 12-month period, excluding any materials that are exempt, in megagrams.

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Equation 3: Actual Monomer VOC emissions = $(PV_R)(M_R) + (PV_{PG})(M_{PG}) + (PV_{CG})(M_{CG}) + (PV_{TR})(M_{TR}) + (PV_{TG})(M_{TG})$

where:

PV_R = the weighted-average monomer VOC emission rate for production resin used in the past consecutive 12-month period, in kilograms per megagram as calculated using Equation 4;

M_R = the mass of production resin used in the past consecutive 12-month period, in megagrams;

PV_{PG} = the weighted-average monomer VOC emission rate for pigmented gel coat used in the past consecutive 12-month period, in kilograms per megagram as calculated using Equation 4;

M_{PG} = the mass of pigmented gel coat used in the past consecutive 12-month period, in megagrams;

PV_{CG} = the weighted-average monomer VOC emission rate for clear gel coat used in the past consecutive 12-month period, in kilograms per megagram as calculated using Equation 4;

M_{CG} = the mass of clear gel coat used in the past consecutive 12-month period, in megagrams;

PV_{TR} = the weighted-average monomer VOC emission rate for tooling resin used in the past consecutive 12-month period, in kilograms per megagram as calculated using Equation 4;

M_{TR} = the mass of tooling resin used in the past consecutive 12-month period, in megagrams;

PV_{TG} = the weighted-average monomer VOC emission rate for tooling gel coat used in the past consecutive 12-month period, in kilograms per megagram as calculated using Equation 4; and

M_{TG} = the mass of tooling gel coat used in the past consecutive 12-month period, in megagrams.

Equation 4: $PV_{OP} = \sum^{n}_{i=1} (M_i PV_i) / \sum^{n}_{i=1} (M_i)$

where:

M_i = the mass of resin or gel coat i used within an operation in the past consecutive 12-month period, in megagrams;

n = the number of different open molding resins and gel coats used within an operation in the past consecutive 12-month period;

PV_i = the monomer VOC emission rate for resin or gel coat i used within an operation in the past consecutive 12-month period, in kilograms of monomer VOC per megagram of material applied. Use the equations in Table 310 CMR 7.18(32)(e)3. to compute PV_i; and

PV_{OP} = the sum of the products of M_i and PV_i for open molding resin or gel coats one through n, divided by M_i one through n, as in Table 310 CMR 7.18(32)(e)3.

Table 310 CMR 7.18(32)(e)3.
Monomer VOC Emission Rate Equations for Open Molding Operations

Material Used	Application Method	Equation to Calculate Monomer VOC Emission Rate PV_i (kg of monomer VOC per Mg of material applied) =
Production resin, tooling resin	Atomized	$0.014 \times (\text{Resin VOC\%})^{2.425}$
	Atomized, plus vacuum bagging with roll-out	$0.01185 \times (\text{Resin VOC\%})^{2.425}$
	Atomized, plus vacuum bagging without roll-out	$0.00945 \times (\text{Resin VOC\%})^{2.425}$
	Non-atomized	$0.014 \times (\text{Resin VOC\%})^{2.275}$
	Non-atomized, plus vacuum bagging with roll-out	$0.0110 \times (\text{Resin VOC\%})^{2.275}$
	Non-atomized, plus vacuum bagging without roll-out	$0.0076 \times (\text{Resin VOC\%})^{2.275}$
Pigmented gel coat, clear gel coat, tooling gel coat	All methods	$0.445 \times (\text{Gel coat VOC\%})^{1.675}$

7.18: continued

4. Add-on Air Pollution Capture and Control Equipment. Use add-on air pollution capture and control equipment to emit no more than a numerical monomer VOC emission limitation that is determined for each facility in accordance with Equation 2, based on the mix of application methods and materials used at that facility, except that instead of using the mass of each material used over the past consecutive 12-month period, the facility shall use the mass of each material used during the air pollution control device performance test.

5. Filled Resin Emission Rate. In addition to complying with 310 CMR 7.18(32)(e)1., 2., 3. or 4., the following shall be used in calculating the emission rate for the filled resins used at the facility:

a. when using a filled production resin or filled tooling resin, any person subject to 310 CMR 7.18(32) shall calculate the emission rate for the filled material on an as-applied basis using Equation 5:

Equation 5: $PV_F = PV_U \times (100 - \%\ \text{Filler}) / 100$

where:

PV_F = the as-applied monomer VOC emission rate for the filled production resin or tooling resin, kilograms monomer VOC per megagram of filled material;

PV_U = the monomer VOC emission rate for the neat or unfilled resin, before filler is added, as calculated using the equations in Table 310 CMR 7.18(32)(e)3.; and

% Filler = the weight percent of filler in the as-applied filled resin system.

b. If the filled resin is used as a production resin, the value of PV_F calculated using Equation 5 shall not exceed 46 kilograms of monomer VOC per megagram of filled resin applied.

c. If the filled resin is used as a tooling resin, the value of PV_F calculated using Equation 5 shall not exceed 54 kilograms of monomer VOC per megagram of filled resin applied.

d. If the facility includes a filled resin in the facility-specific material emissions averaging procedure, the facility shall use the value of PV_F calculated using Equation 5 for the value of PV_i in 310 CMR 7.18(32)(e)3., Equation 4.

6. Non-monomer VOC Content.

a. Up to 5% by weight of non-monomer VOC content of a resin or gel coat shall be exempt from the VOC content limitations of 310 CMR 7.18(32)(e).

b. If the non-monomer VOC content of a resin or gel coat exceeds five percent by weight, then the excess non-monomer VOC over five percent by weight shall be added to the monomer VOC content in determining compliance with 310 CMR 7.18(32)(e).

(f) Application Methods. Production resins, including skin coat resins, that must meet specifications under 46 CFR chapter I subchapter Q (Equipment, Construction and Materials: Specifications and Approval) or 46 CFR chapter I subchapter T (Small Passenger Vessels (Under 100 Gross Tons)), and that do not meet the requirements in 310 CMR 7.18(32)(e), shall be applied with non-atomizing resin application equipment.

(g) Work Practices and Emission Limitations for Cleaning Operations and Resin and Gel Coat Mixing Containers.

1. Any person subject to 310 CMR 7.18(32) shall comply with the work practices of 310 CMR 7.18(31)(e).

2. Any person subject to 310 CMR 7.18(32) using resin and gel coat mixing containers with a capacity equal to or greater than 208 liters, equivalent to 55 gallons, including those used for on-site mixing of putties and polyputties, shall have a cover with no visible gaps in place at all times, except when material is being manually added to or removed from a container, or when mixing or pumping equipment is being placed in or removed from a container.

3. Any person subject to 310 CMR 7.18(32) shall only use VOC cleaning solvents for routine application equipment cleaning that either:

a. contain no more than five percent VOC by weight; or

b. have a VOC composite partial pressure of no more than 0.50 mm Hg at 68°F.

4. Any person subject to 310 CMR 7.18(32) shall only use non-VOC solvents to remove cured resin and gel coat from application equipment.

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(h) Plan and Extension Submittal Requirements.

1. Any person subject to 310 CMR 7.18(32)(a)1. who chooses to install add-on air pollution capture and control equipment to comply with 310 CMR 7.18(32)(e) shall submit an emission control plan in accordance with 310 CMR 7.18(20).

2. Any person subject to 310 CMR 7.18(32)(a)1. who chooses to apply for an extension under 310 CMR 7.18(32)(d) shall comply with 310 CMR 7.18(20).

(i) Recordkeeping Requirements. Any person subject to 310 CMR 7.18(32)(a) shall prepare and maintain records sufficient to demonstrate compliance consistent with 310 CMR 7.18(2). Records kept to demonstrate compliance shall be kept on site for five years and shall be made available to representatives of the Department and EPA in accordance with the requirements of an approved emission control plan or upon request. Such records shall include, but are not limited to:

1. identity, quantity, formulation and density of resins and gel coat(s) used;
2. identity, quantity, formulation and density of any diluent(s) and clean-up solvent(s) used;
3. solids content of any gel coat(s) or resins used;
4. actual operational and emissions characteristics of the operation and any appurtenant emissions capture and control equipment;
5. quantity of product processed, if necessary to determine emissions; and
6. any other requirements specified by the Department in any approval(s) issued under 310 CMR 7.18(20) or any order(s) issued to the person.

(j) Testing Requirements. Any person subject to 310 CMR 7.18(32)(a) shall, upon request of the Department, perform or have performed the following tests, as applicable, to demonstrate compliance with 310 CMR 7.18(32).

1. Testing to determine the monomer VOC content of resin and gel coat materials shall be conducted in accordance with SCAQMD Method 312-91, Determination of Percent Monomer in Polyester Resins, revised April 1996.

2. Testing to determine the non-monomer VOC content of resin and gel coat materials shall be conducted in accordance with EPA Method 24 as described in CFR Title 40 Part 60, or by other methods approved by the Department and EPA.

3. If acceptable to the Department and EPA, manufacturer's formulation data may be used to demonstrate compliance with monomer and non-monomer VOC content limitations. In the case of a dispute, the VOC content determined using SCAQMD Method 312-91 and EPA Method 24 shall prevail, unless a person is able to demonstrate to the satisfaction of the Department and EPA that the manufacturer's formulation data are correct.

4. EPA Method 25A shall be used when:

   a. an exhaust concentration of less than or equal to 50 parts per million volume (ppmv) as carbon is required to comply with the applicable limitations;

   b. the inlet concentration and the required level of control results in an exhaust concentration of less than or equal to 50 ppmv as carbon; or

   c. the high efficiency of the control device alone results in an exhaust concentration of less than or equal to 50 ppmv as carbon.

7.19: U Reasonably Available Control Technology (RACT) for Sources of Oxides of Nitrogen (NO_x)

(1) Applicability.

(a) 310 CMR 7.19 shall apply in its entirety to any person who owns, leases, operates or controls any facility having potential to emit, before application of air pollution control equipment, greater than or equal to 50 tons per year (TPY) of NO_x.

(b) Any person who owns, leases, operates or controls a facility subject to 310 CMR 7.19, which has had actual emissions greater than or equal to 50 TPY in any year after 1989, shall continue to comply with all requirements of 310 CMR 7.19 even if emissions from the subject facility no longer exceed the 50 TPY applicability threshold in 310 CMR 7.19(1)(a).

(c) The requirements of 310 CMR 7.19 do not apply to:

1. Any person subject to 310 CMR 7.19 who is able to demonstrate to the Department that, after calendar year 1989, the facility has not emitted 50 TPY or more of NO_x, provided that the person obtains a permit restriction from the Department under 310 CMR 7.02(9) (Restricted Emission Status or RES) by May 31, 1995, which restricts the potential emissions to below 50 TPY, and complies with the permit restriction by May 31, 1995. Persons who have obtained an RES prior to May 31, 1995, may notify the Department of their intent to operate in compliance with one of the rolling 12-month emission caps under 310 CMR 7.02(11)(e) or (f) as a means of limiting the facility's potential emissions to 25 TPY or less of NO_x.
2. Any emission unit that has a permit restriction prohibiting it from operating between May 1st and September 30th of each year and restricting potential emissions to less than 50 tons per year of NO_X from the emission unit.
3. Any boiler having an energy input capacity of less than 20,000,000 Btu per hour provided that potential emissions from the emission unit are less than 50 TPY of NO_x.
4. Any stationary combustion turbine having an energy input capacity of less than 25,000,000 Btu per hour.
5. Any stationary reciprocating internal combustion engine having an energy input capacity of less than 3,000,000 Btu per hour.
6. Any glass melting furnace having a maximum production rate of less than 14 tons of glass removed from the furnace per day.
7. Any other furnace, kiln, dryer or oven having potential emissions less than 25 TPY of NO_x.
8. Any municipal waste combustor unit having potential emissions of less than 25 TPY of No_x.
9. Any person who, since January 1, 1990, obtains a plan approval for an emission unit under 310 CMR 7.02 where such approval establishes BACT or LAER to be no less stringent than the RACT applicable to the facility size and type, as defined in 310 CMR 7.19. Such person shall comply with the BACT or LAER established in the plan approval, and is not subject to RACT standards of 310 CMR 7.19 as may otherwise be applicable, until the applicable RACT standards of 310 CMR 7.19 become more stringent than the BACT or LAER established in the plan approval, at which time the person shall become subject to the updated RACT standards.
10. Any large municipal waste combustor unit subject to 310 CMR 7.08(2).
11. Any engine subject to and in compliance with 310 CMR 7.26(43).

(d) Any large boiler subject to 310 CMR 7.19(4)(b), or combustion turbine subject to 310 CMR 7.19(7)(b), that, as of March 9, 2018 has an annual capacity factor of less than 10% averaged over the most recent three year consecutive period, shall not be required to meet the applicable emission standards. If such a boiler or combustion turbine subsequently meets or exceeds the 10% capacity factor based on a three calendar year consecutive period, the owner/operator of the boiler or combustion turbine shall notify the Department in writing, and, if applicable, submit an Emission Control Plan pursuant to 310 CMR 7.19(3)(a)1., within 180 days of the end of the three-year period, and shall comply with the applicable NO_x emission standards within two years of the end of the three-year period.

(2) General Provisions.

(a) After May 31, 1995, any person subject to 310 CMR 7.19 shall achieve and maintain continuous compliance with all requirements of 310 CMR 7.19.

7.19: continued

(b) Any person unable to comply with emission standards under 310 CMR 7.19(4)(b), (7)(b), (8)(d) or (9) may submit an application under 310 CMR 7.19(3) for a source specific alternative RACT. Such application shall be submitted to the Department for approval no later than September 5, 2018. No later than March 10, 2020, a person approved under 310 CMR 7.19(2)(b) must comply with the approved source specific alternative RACT. Such application must evaluate each of the following NO_x controls, where it may be applied, and its technological and economic feasibility.

1. low-NO_x burners;
2. close coupled and separated overfire air;
3. flue gas recirculation;
4. burners out of service;
5. steam/water injection;
6. dry low-NO_x combustors;
7. ignition timing retard;
8. low emission combustion for reciprocating internal combustion engines;
9. separate circuit after-cooling;
10. fuel emulsification;
11. fuel switching;
12. selective noncatalytic reduction (SNCR);
13. selective catalytic reduction (SCR);
14. nonselective catalytic reduction (NSCR).
15. gas reburn; and
16. use of emission reduction credits (ERCs) certified by the Department pursuant to 310 CMR 7.00: *Appendix B*(3), or pursuant to the interstate trading provisions at 310 CMR 7.00: *Appendix B*(3)(f).

Any person approved under 310 CMR 7.19(2)(b) must comply with the requirements of 310 CMR 7.19(13), except as specfied in 310 CMR 7.19(9)(b).

(c) An emission unit subject to 310 CMR 7.19 shall be operated under conditions acceptable to the Department and EPA, and consistent with the operational parameters and limits established in the approved emission control plan.

(d) Any person subject to 310 CMR 7.19 may elect to comply with a more stringent NO_x limit in order to; create Emission Reduction Credits under 310 CMR 7.00: *Appendix* B(3); create emissions offsets for use under the provisions of 310 CMR 7.00: *Appendix* A(6); reduce the net emissions increase below the significance level under 310 CMR 7.00: *Appendix* A(3); emissions average under 310 CMR 7.19(14) and 7.00: *Appendix* B(4).

(e) Any person subject to a more stringent emission standard either contained in a plan approval (issued pursuant to the Department's regulations) or in a PSD permit or contained in a Department regulation shall remain subject to that more stringent emission standard.

(f) Seasonal Fuel Switching. After May 31, 1995 but before March 9, 2018, any person owning, leasing, operating or controlling an emissions unit subject to an emissions standard contained in 310 CMR 7.19 may choose to have the emissions unit comply with 310 CMR 7.19(2)(f) instead of an emissions limit contained in 310 CMR 7.19(4) through (11) by fuel switching.

1. The 12 month rolling average NO_x emissions standard, in pounds per million Btu, shall be less than or equal to the NO_x emissions standard calculated in the following manner.

a. The annual limit shall be determined according to the following equation:

$$AS_{NOx} = \frac{(HI_1)x(ES_1)+ (HI_2)x(ES_2)\ldots. + (HI_N)x(ES_N)}{HI_1 \quad + \quad HI_2 \ldots. \quad + \quad HI_N}$$

AS_{NOx} is the annual standard for nitrogen oxides derived from all fuels fired during the base year.

HI_1 is the heat input for fuel 1 in Btu during the base year.

ES_1 is the emissions standard for fuel 1 contained in 310 CMR 7.19(4) through (11), except that for tangential oil or oil and gas fired boilers, the emissions standard is 0.2 pounds per million Btu.

N is the number of fuels burned during the base year.

7.19: continued

b. The base year shall be 1990. 1991 or 1992 may be used instead if the Department determines 1991 or 1992 is more representative of normal operation.

2. The maximum daily NO_x emissions standard from May 1st through September 30th shall be the emissions standard allowed under 310 CMR 7.19(4) through (11) for the fuel burned in the largest amount, on a Btu basis, during the base year. However, for tangential oil or oil and gas fired boilers, the emissions standard is 0.2 pounds per million Btu.

3. The emission unit(s) must burn only the fuel, of the fuels it is approved to burn, that has the lowest NO_x emissions rate, between May 1 and September 30 of each year unless the fuel is not available.

(g) Emission Reduction Credits. Any facility may comply, either in part, or entirely, with the applicable emissions standard requirement contained in 310 CMR 7.19 through the use of emissions reduction credits (ERCs) certified by the Department pursuant to 310 CMR 7.00: *Appendix* B(3). For any ERCs generated from emissions reductions at a facility that, if it were operating after March 9, 2018, would be subject to 310 CMR 7.19(4)(b), 7.19(7)(b), and 7.19(8)(d), and such ERCs were certified prior to March 9, 2018 in accordance with Appendix B(3), the Department shall devalue the ERCs based on the ratio of the new applicable NO_x RACT emission standard to the lower of the actual emissions or the allowable NO_x RACT emission standard that was used to generate the ERCs.

(3) Emission Control Plans for Implementation of RACT.

(a) 1. General Applicability. After March 9, 2018, any person owning, leasing, operating or controlling a facility subject to 310 CMR 7.19(4)(b), (7)(b), or (8)(d) that requires installation of air pollution controls or retrofitting of air pollution controls, or proposes to use ERCs, to meet applicable emission standards shall submit an Emission Control Plan to the Department within 180 days of March 9, 2018.

2. Any person subject to 310 CMR 7.19(9) shall submit an Emission Control Plan by September 5, 2018 for Department approval in accordance with 310 CMR 7.19(9)(b).

3. Any person using ERCs in accordance with 310 CMR 7.19(2)(b)16. shall submit an Emission Control Plan.

(b) Emission Control Plan Requirements. The emission control plan under 310 CMR 7.19(3) shall be submitted on a Department approved form and shall include, at a minimum, the following:

1. a list and description of all the exempt and non-exempt emission units at the facility having potential to emit NO_x including:

a. any associated plan approvals, dates of installation, any subsequent alterations, *etc.*;

b. the maximum energy input capacity, in millions of Btu per hour, of each emission unit;

c. for fuel utilization facilities, the type of fuel(s) permitted to be burned in each emission unit;

d. the maximum NO_x emissions rate of each unit, in pounds per million Btu, for each fuel burned before and after the application of NO_x RACT;

e. the total actual fuel usage and energy input in million Btu for each fuel for each of the last two years for each emission unit;

f. the energy conversion efficiency (in brake horsepower hour output per million Btu input (HHV)) for each reciprocating internal combustion engine;

g. the O_2 exhaust gas concentration and the dry standard cubic feet per million Btu of energy input for each stationary combustion turbine; and

h. the energy input, million Btu, per ton of glass produced for glass manufacturing furnaces.

2. a demonstration that the provisions of 310 CMR 7.19 can be met by each emission unit included in the emission control plan, including the potential emissions after implementation of RACT of all emission units emitting NO_x for which the emission control plan is being submitted. A demonstration that combustion conditions will not significantly deteriorate shall be included for any emission unit for which a higher CO emission standard is being applied pursuant to 310 CMR 7.19(4)(f).

3. if applicable, the control efficiency, design, specifications, and standard operating and maintenance procedures for any control equipment used to reduce NO_x emissions to implement RACT;

7.19: continued

4. the testing, monitoring, recordkeeping and reporting procedures, as contained in 310 CMR 7.19(13), used to demonstrate compliance with 310 CMR 7.19;
5. a schedule for the implementation of RACT at the facility, including provisions for demonstrating periodic increments of progress and demonstrating compliance;
6. any other information required by the Department; and
7. the signature of a responsible official.

(c) Additional Requirements for Demonstration of RACT. An emission control plan submitted by any person who owns, leases operates or controls a facility or part of a facility subject to 310 CMR 7.19(2)(b), (4)(c) or (12), must meet the following requirements in addition to the requirements under 310 CMR 7.19(3)(b).

1. The plan must demonstrate the emission limits reflecting the application of RACT for that facility or part thereof; and
2. The plan must include pertinent information supporting the demonstration made under 310 CMR 7.19(3)(c)1., including technical and economic considerations.

(d) Approval of an Emission Control Plan. For persons applying under 310 CMR 7.19(2)(b) or (4)(c) or (12) or (14), for each ECP application where the information submitted subject to 310 CMR 7.19(3)(d) is sufficient to support the emissions limits and the proposed schedule, the Department shall:

1. Provide a 30-day period for submittal of public comment;
2. Post on a public website identified by the Department (which may be the Department's own website), for the duration of the public comment period, the following:
   a. Notice of availability of the Department's proposed decision to approve or deny the ECP application and information on how to submit public comment;
   b. The Department's proposed decision to approve or deny the ECP application; and
   c. Information on how to access the administrative record for the Department's proposed decision to approve or deny the ECP application.
3. Send a copy of the notice required under 310 CMR 7.19(3)d.2.a. to EPA.

After the close of the public comment period, the Department shall issue a final approval or disapproval of the ECP.

(e) Prohibition. Except as provided for in 310 CMR 7.19(3)(a), no emission reductions or any other actions taken at any facility or part of a facility will constitute implementation of RACT at that facility unless those emission reductions or other actions are part of an emission control plan approved by the Department.

(f) Additional requirements may be included in the emission control plan approval to assure that emissions from the unit(s) subject to RACT will not cause or contribute to a condition of air pollution or a violation of any other regulation. Such requirements include, but are not limited to, emissions limits on other air contaminants, and additional stack testing or emissions monitoring requirements.

(4) Large Boilers.

(a) Applicability and NO_x RACT. After May 31, 1995, any person owning, leasing, operating or controlling a boiler having an energy input capacity of 100,000,000 Btu per hour or greater, at a facility subject to 310 CMR 7.19, shall comply with the following NO_x emission standards in 310 CMR 7.19(4)(a), except as provided in 310 CMR 7.19(2)(b), 7.19(2)(e), 7.19(2)(f), 7.19(4)(b), 7.19(4)(c) and 7.19(4)(d).

1. For dry bottom boilers burning coal:
   a. for tangential fired boilers, 0.38 pounds per million Btu; and
   b. for face fired boilers, 0.45 pounds per million Btu.
2. For stoker-fired boilers burning other solid fuels, 0.33 pounds per million Btu.
3. For boilers with an energy input capacity greater than or equal to 250 million Btu per hour burning either oil or oil and gas (This includes burning the oil and gas simultaneously or at different times. Boilers approved to burn another fuel, such as coal, are subject to this limit only while burning only oil and/or gas and not the other fuel.):
   a. i. for tangential oil fired boilers, 0.25 pounds per million Btu;
      ii. for tangential gas fired boilers, 0.20 pounds per million Btu; and
   b. for face fired boilers, 0.28 pounds per million Btu.
4. For boilers with an energy input capacity greater than or equal to 100,000,000 Btu per hour and less than 250,000,000 Btu per hour burning either oil or oil and gas:
   a. for boilers with a heat release rate less than or equal to 70,000 Btu/hours-ft^3, 0.30 pounds per million Btu; and
   b. for boilers with a heat release greater than 70,000 Btu/hour-ft^3, 0.40.

7.19: continued

5. For boilers burning only gas, 0.20 pounds per million Btu.

6. The averaging time for determining compliance with 310 CMR 7.19(4)(a) shall be one hour. Except that, for boilers using a continuous emissions monitoring system that satisfies the requirements of 310 CMR 7.19(13)(b) to determine compliance, compliance will be based on a calendar day average.

(b) Applicability and NO_x RACT. On or after two years from March 9, 2018, any person owning, leasing, operating or controlling a boiler having an energy input capacity of 100,000,000 Btu per hour or greater at a facility subject to 310 CMR 7.19 shall comply with the NO_x emission standards in 310 CMR 7.19(4)(b), except as provided in 310 CMR 7.19(1)(d), (2)(b), and (e).

1. For dry bottom boilers burning coal:
   a. for tangential fired boilers, 0.12 pounds per million Btu; and
   b. for face fired boilers, 0.12 pounds per million Btu.
2. For stoker-fired boilers burning other solid fuels, 0.33 pounds per million Btu.
3. For boilers with an energy input capacity greater than or equal to 250 million Btu per hour burning either oil or oil and gas (This includes burning the oil and gas simultaneously or at different times. Boilers approved to burn another fuel, such as coal, are subject to this limit only while burning only oil and/or gas and not the other fuel.):
   a. i. for tangential oil fired boilers, 0.15 pounds per million Btu; and
      ii. for tangential gas fired boilers, 0.08 pounds per million Btu.
   b. for face fired boilers, 0.15 pounds per million Btu.
4. For boilers with an energy input capacity greater than or equal to 100,000,000 Btu per hour and less than 250,000,000 Btu per hour burning either oil or oil and gas:
   a. for boilers with a heat release rate less than or equal to 70,000 Btu/hours-ft^3, 0.15 pounds per million Btu; and
   b. for boilers with a heat release greater than 70,000 Btu/hour-ft^3, 0.15.
5. For boilers burning only gas, 0.06 pounds per million Btu.
6. The averaging time for determining compliance with 310 CMR 7.19(4)(b) shall be one hour. Except that, for boilers using a continuous emissions monitoring system that satisfies the requirements of 310 CMR 7.19(13)(b) to determine compliance, compliance will be based on either a calendar day average or calendar month basis when a facility demonstrates existing controls installed for purposes of 310 CMR 7.29 compliance relied on the longer averaging period.

(c) Alternative NO_x RACT. Any person owning, leasing, operating or controlling a boiler subject to 310 CMR 7.19(4)(a), may choose to have that boiler comply with 310 CMR 7.19(4)(c) instead of 310 CMR 7.19(4)(a).

1. After May 31, 1995, the maximum allowable daily NO_x emission standard, in pounds per million Btu, shall be equal to 0.6 times the worst NO_x emission rate. The worst NO_x emission rate shall be determined in accordance with a methodology specified by the Department for each fuel burned.

2. The Department will approve the boiler to comply with an alternative emission limitation contained in 310 CMR 7.19(4)(c)1. only if a demonstration is contained in the Emission Control Plan that the boiler cannot comply with the emission limitation contained in 310 CMR 7.19(4)(a) through use of available NO_x controls or NO_x ERCs. This may be demonstrated either through technical or economic infeasibility.

(d) Except as provided for under 310 CMR 7.19(2)(f), if more than one fuel is fired simultaneously or during the same hour (or day if an averaging time of 24 hours is used), the allowable NO_x emission standard shall be calculated according to the procedure contained in 310 CMR 7.19(15) using the emission standard from 310 CMR 7.19(4)(a) or (b), as applicable.

(e) Testing, Monitoring, Recordkeeping, Reporting and Emission Control Plan. Any facility subject to 310 CMR 7.19(4), shall comply with any applicable testing, monitoring, recordkeeping, and reporting requirements contained in 310 CMR 7.19(13) and shall submit an emission control plan as required by 310 CMR 7.19(3).

(f) Carbon Monoxide (CO) Limitation. Any facility subject to 310 CMR 7.19(4), shall not exceed a CO exhaust concentration of 200 ppmvd, corrected to 3% oxygen. This shall be based on a one hour averaging time. If a continuous emissions monitoring system is used for determining compliance, the averaging time shall be a calendar day. Not withstanding this CO emission standard, the Department may approve a higher CO emission standard for a large boiler as part of the emission control plan if the facility demonstrates that combustion conditions will not significantly deteriorate with the higher CO emission standard.

7.19: continued

(5) Medium-size Boilers.

(a) Applicability and NO_x RACT. After May 31, 1995, any person owning, leasing, operating or controlling a boiler with an energy input capacity of 50,000,000 Btu per hour or greater and less than 100,000,000 Btu per hour at a facility subject to 310 CMR 7.19, shall comply with the following NO_x emission standard, except as provided for in 310 CMR 7.19(2)(b), (e) and (f).

1. For tangential or face-fired or stoker-fired boilers, burning solid fuel, 0.43 pounds per million Btu, based on a one hour average.
2. For tangential or face fired boilers, based on a one hour average.
   a. burning gas only, 0.1 pounds per million Btu.
   b. burning distillate oil or oil and gas (This includes burning the oil and gas simultaneously or at different times. Boilers approved to burn another fuel such as coal are subject to this limit while only burning oil and/or gas and not coal.) 0.12 pounds per million Btu.
   c. burning residual oil,
      i. 0.3 pounds per million Btu burning residual oil or residual oil and gas (This includes burning the oil and gas simultaneously or at different times. Boilers approved to burn another fuel such as coal are subject to this limit while burning only oil and/or gas and not coal.), or
      ii. recirculate at least 15% of the flue gas and maintain flue gas oxygen concentration at 3% at the boiler exit. The O2 level should not be decreased beyond the point that the CO concentration increases beyond 130 ppmvd, corrected to 3% O2.
3. For boilers using a continuous emissions monitoring system that satisfies the requirements of 310 CMR 7.19(13)(b) to determine compliance, compliance will be based on a calendar day average.

(b) Cofiring Fuels. Except as provided for under 310 CMR 7.19(2)(f), if more than one fuel is fired simultaneously or during the same hour (or day if an averaging time of 24 hours is used), the allowable NO_x emissions standard shall be calculated according to the procedure contained in 310 CMR 7.19(15).

(c) Testing, Monitoring, Recordkeeping, Reporting and Emission Control Plan. Any facility subject to 310 CMR 7.19(5), shall comply with all applicable testing, monitoring, recordkeeping, and reporting requirements contained in 310 CMR 7.19(13) and shall submit an emission control plan as required by 310 CMR 7.19(3).

(d) Carbon Monoxide (CO) Limitation. Any facility subject to 310 CMR 7.19(5), shall not exceed a CO exhaust concentration of 200 ppmvd, corrected to 3% oxygen. This shall be based on a one hour averaging time. If a continuous emissions monitoring system is used for determining compliance, the averaging time shall be a calendar day. Notwithstanding this CO emission standard, the Department may approve a higher CO emission standard for a medium-size boiler as part of the emission control plan if the facility demonstrates that combustion conditions will not significantly deteriorate with the higher CO emission standard.

(6) Small Boilers.

(a) Applicability and NO_x RACT After March 15, 1995, any person owning, leasing, operating or controlling a boiler, with an energy input capacity of less than 50,000,000 Btu per hour and equal to or greater than 20,000,000 Btu per hour or with an energy input capacity less than 20,000,000 Btu per hour with potential emissions greater than 50 TPY of NO_x, at a facility subject to 310 CMR 7.19, shall tune the boiler annually according to the following procedure (tuneup procedure based on *Combustion Efficiency Optimization Manual for Operators of Oil and Gas Fired Boilers* (EPA 340/1-83-023)):

1. Operate the boiler at a firing rate most typical of normal operation. If the boiler experiences significant load variations during normal operation, operate it at its average firing rate.

7.19: continued

2. At this firing rate record stack gas temperature, oxygen concentration, and CO concentration (for gaseous fuels) or smoke-spot number (For liquid fuels, the smoke spot number can be determined with ASTM Test Method D-2156 (Bacharach or equivalent)) and observe flame conditions after boiler operation stabilizes at the firing rate selected. If the excess oxygen in the stack gas is at the lower end of the range of typical minimum values (typical minimum oxygen levels for boilers at high firing rates are: for natural gas 0.5-3.0%; for liquid fuels 2.0-4.0%. The O_2 level should be reduced below this range with caution). If the CO emissions are low and there is no smoke, the boiler is probably operating at near optimum efficiency at this particular firing rate. However, complete the remaining portion of this procedure at 310 CMR 7.19(6)(a)3. through 10. to determine whether still lower oxygen levels are practical.

3. Increase combustion air flow to the boiler until stack gas oxygen levels increase by 1 to 2% over the level measured in 310 CMR 7.19(6)(a)2. As in 310 CMR 7.19(6)(a)2., record the stack gas temperature, CO concentration (for gaseous fuels) and smoke-spot number (for liquid fuels), and observe flame conditions for these higher oxygen levels after boiler operation stabilizes.

4. Decrease combustion air flow until the stack gas oxygen concentration is at the level measured in 310 CMR 7.19(6)(a)2. From this level gradually reduce the combustion air flow, in small increments. After each increment, record the stack gas temperature, oxygen concentration, CO concentration (for gaseous fuels) and smoke-spot number (for liquid fuels). Also observe the flame and record any changes in its condition.

5. Continue to reduce combustion air flow stepwise, until one of these limits is reached:

   a. Unacceptable flame conditions - such as flame impingement on furnace walls or burner parts, excessive flame carryover, or flame instability.

   b. Stack gas CO concentrations greater than 400 ppm for gaseous fuels.

   c. Smoking at the stack for liquid fuels.

   d. Equipment-related limitation - such as low windbox/furnace pressure differential, built in air-flow limits, etc.

6. Develop an O_2/CO curve (for gaseous fuels) or O_2/smoke curve (for liquid fuels) similar to those shown in figures 310 CMR 7.19(6)-1 and 2 using the excess oxygen and CO or smoke-spot number data obtained at each combustion air flow setting.

7. From the curves prepared in 310 CMR 7.19(6)(a)6., find the stack gas oxygen levels where the CO emission or smoke spot number equals the following values:

Fuel	Measurement	Value
Gaseous	CO emissions	400 ppm
#1 & #2 oils	smoke-spot number	number 1
#4 oil	smoke-spot number	number 2
#5 oil	smoke-spot number	number 3
#6 oil	smoke-spot number	number 4

The above conditions are referred to as CO or smoke threshold, or as the minimum excess oxygen level. Compare this minimum value of excess oxygen to the expected value provided by the combustion unit manufacturer. If the minimum level found is substantially higher than the value provided by the combustion unit manufacturer, the owner or operator should improve fuel and air mixing, thereby allowing operation with less air.

8. Add 0.5 to 2.0% to the minimum excess oxygen level found in 310 CMR 7.19(6)(a)7. and reset burner controls to operate automatically at this higher stack gas oxygen level. This margin above the minimum oxygen level accounts for fuel variations, variations in atmospheric conditions, load changes, and non-repeatability or play in automatic controls.

7.19: continued

9. If the load of the combustion unit varies significantly during normal operation, repeat 310 CMR 7.19(6)(a)1. through 8. for firing rates that represent the upper and lower limits of the range of the load. Because control adjustment at one firing rate may effect conditions at other firing rates, it may not be possible to establish the optimum excess oxygen level at all firing rates. If this is the case, choose the burner control settings that give best performance over the range of firing rates. If one firing rate predominates, settings should optimize conditions at that rate.

10. Verify that the new settings can accommodate the sudden changes that may occur in daily operation without adverse effects. Do this by increasing and decreasing load rapidly while observing the flame and stack. If any of the conditions in 310 CMR 7.19(6)(a)5. result, reset the combustion controls to provide a slightly higher level of excess oxygen at the affected firing rates. Next, verify these new settings in a similar fashion. Then make sure that the final control settings are recorded at steady-state operating conditions for future reference.

11. Alternatively, another tune-up procedure, such as found in MACT subpart JJJJJJ [40 CFR 63.11223(b) and Table 2] or MACT Subpart DDDDD [40 CFR 63.7540(a)(10) and Table 3], may be used if approved in writing by the Department and EPA.

12. Nothing in any tune-up procedure shall be construed to require any act or omission that would result in unsafe conditions or would be in violation of any regulation or requirement established by National Fire Prevention Association, Federal Occupational Safety and Health Administration, or other applicable regulations or requirements.

(b) Testing, Recordkeeping, and Notification. Any person subject to 310 CMR 7.19(6) shall:

1. provide written notification to the Department by January 1, 1995 that the facility is subject to, and will comply with 310 CMR 7.19(6).
2. maintain records for five years of the tune-up, including:
   a. date of tune-up;
   b. person(s) conducting tune-up;
   c. O_2/CO (for gas) or O_2/smoke spot (for oil) correlations obtained during tune-up;
   d. boiler/burner manufacturer's recommended set-points;
   e. final boiler set-points as result of tune-up;
   f. normal boiler/burner maintenance records.
   g. at least once per month verify that the settings determined during the tune-up have not changed.

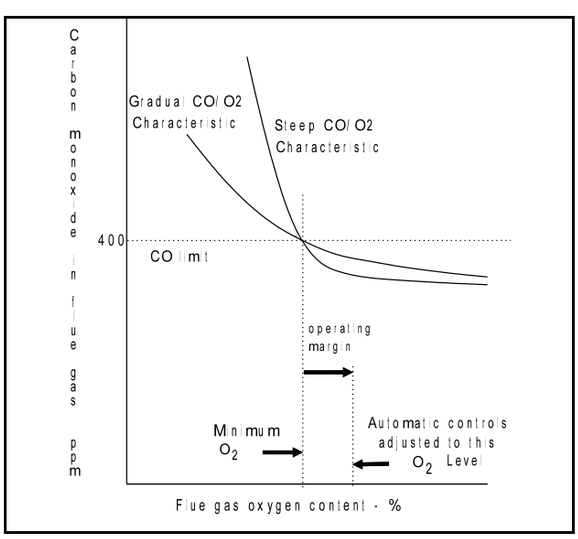


Figure 310 CMR 7.19(6) - 1

7.19: continued

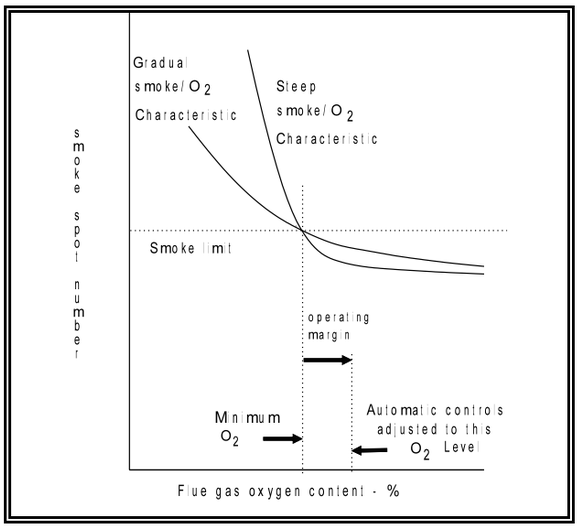


Figure 310 CMR 7.19(6) - 2

(7) Stationary Combustion Turbines.

(a) Applicability and NO_x RACT. After May 31, 1995, any person owning, leasing, operating or controlling any stationary combustion turbine having an energy input capacity of 25,000,000 Btu per hour or greater at a facility subject to 310 CMR 7.19, shall comply with the following NO_x and CO emission standards in 310 CMR 7.19(7)(a), except as provided for in 310 CMR 7.19(2)(b), 7.19(2)(e), and 7.19(2)(f).

1. For combined cycle stationary combustion turbines, based on a one-hour average:
   a. 42 ppmvd NO_x, corrected to 15% O_2, when firing gas, and
   b. 65 ppmvd NO_x, corrected to 15% O_2, when firing oil, and
   c. 50 ppmvd CO, corrected to 15% O_2, when firing oil and/or gas.
2. For simple cycle stationary combustion turbines, based on a one hour average:
   a. 65 ppmvd NO_x, corrected to 15% O_2, when firing gas, and
   b. 100 ppmvd NO_x, corrected to 15% O_2, when firing oil, and
   c. 100 ppmvd CO, corrected to 15% O_2, when firing oil and/or gas.
3. For stationary combustion turbines using a monitoring system that satisfies the requirements of 310 CMR 7.19(13)(b) to determine compliance, compliance will be based on a calendar day average.
4. Notwithstanding the CO emission standard stated in 310 CMR 7.19(7)(a)1.c. and 2.c., the Department may approve a higher CO emission standard for a stationary combustion turbine if it is demonstrated that combustion conditions will not significantly deteriorate with a higher CO emission standard.

(b) Applicability and NO_x RACT. On or after two years from March 9, 2018, any person owning, leasing, operating or controlling any stationary combustion turbine having an energy input capacity of 25,000,000 Btu per hour or greater at a facility subject to 310 CMR 7.19 shall comply with the NO_x and CO emission standards in 310 CMR 7.19(7)(b), except as provided in 310 CMR 7.19(1)(d)., 7.19(2)(b), and 7.19(2)(e).

1. For combined cycle stationary combustion turbines, based on a one-hour average:
   a. 25 ppmvd NO_x, corrected to 15% O_2, when firing gas, and
   b. 42 ppmvd NO_X, corrected to 15% O_2, when firing oil, and
   c. 50 ppmvd CO, corrected to 15% O_2, when firing oil and/or gas.
2. For simple cycle stationary combustion turbines, based on a one hour average:
   a. 40 ppmvd NO_x, corrected to 15% O_2, when firing gas, and
   b. 50 ppmvd NO_x, corrected to 15% O_2, when firing oil, and
   c. 100 ppmvd CO, corrected to 15% O_2, when firing oil and/or gas.
3. For stationary combustion turbines using a monitoring system that satisfies the requirements of 310 CMR 7.19(13)(b) to determine compliance, compliance will be based on a calendar day average.

(c) Testing, Monitoring, Recordkeeping, Reporting and Emission Control Plan. Any facility subject to 310 CMR 7.19(7), shall comply with all applicable testing, monitoring, recordkeeping, and reporting requirements contained in 310 CMR 7.19(13) and shall submit an emission control plan as required by 310 CMR 7.19(3).

7.19: continued

(8) Stationary Reciprocating Internal Combustion Engines.

(a) Applicability and NO_x RACT. After May 31, 1995, any person owning, leasing, operating or controlling a reciprocating internal combustion engine having energy input capacity of 3,000,000 Btu per hour or greater at a facility subject to 310 CMR 7.19, is subject to 310 CMR 7.19(8) and shall comply with NO_x RACT as defined in 310 CMR 7.19(8)(c), (d) or (e) as applicable, except as provided for in 310 CMR 7.19(2)(b), 7.19(2)(e) and 7.19(2)(f).

(b) Exemption. An engine installed and operated in compliance with 310 CMR 7.02(8)(i), 310 CMR 7.03(10), or 310 CMR 7.26(42) is exempt from the requirements of 310 CMR 7.19(8).

(c) For a stationary reciprocating internal combustion engine that has operated 1000 hours or more during any consecutive 12-month period since January 1, 1990, but has not operated 1000 hours or more during any consecutive 12-month period after March 9, 2018, the NO_x emission standard shall be:

1. For rich burn, gas-fired reciprocating internal combustion engines, 1.5 grams per bhp-hr, based on a one hour average.
2. For lean burn, gas-fired reciprocating internal combustion engines, 3.0 grams per bhp-hr, based on a one hour average.
3. For lean burn, oil-fired or dual fuel reciprocating internal combustion engines, 9.0 grams per bhp-hr, based on a one hour average.
4. For stationary reciprocating internal combustion engine using a monitoring system that satisfies the requirements of 310 CMR 7.19(13)(b) to determine compliance, compliance will be based on a calendar day average.

(d) For a stationary reciprocating internal combustion engine that has operated 1000 hours or more during any consecutive 12-month period since March 9, 2018, the owner/operator of such engine shall have until two years after the 12-month consecutive period that exceeded the 1000 hours of operation to comply with the applicable NO_x emission standards below:

1. For rich burn, gas-fired reciprocating internal combustion engines, 1.5 grams per bhp-hr, based on a one hour average.
2. For lean burn, gas-fired reciprocating internal combustion engines, 1.5 grams per bhp-hr, based on a one hour average.
3. For lean burn, oil-fired or dual fuel reciprocating internal combustion engines, 2.3 grams per bhp-hr, based on a one hour average.
4. For stationary reciprocating internal combustion engines using a monitoring system that satisfies the requirements of 310 CMR 7.19(13)(b) to determine compliance, compliance will be based on a calendar day average.

(e) For a stationary reciprocating internal combustion engine that has not operated 1000 hours or more during any consecutive 12 month period since January 1, 1990, the NO_x emission standard shall be:

1. the emission standard in 310 CMR 7.19(8)(c) or (d), as applicable; or, set and maintain the ignition timing of the engine four degrees retarded relative to standard timing; provided the ignition timing shall not be retarded beyond the point that:
   a. the CO emission concentration increases by 100 ppmvd, corrected to 15% O2, or
   b. the turbocharger speed is increased beyond the maximum operating speed recommended by the manufacturer, or
   c. the exhaust port temperature increases beyond the manufacturer's recommended maximum operating temperature.
2. install and maintain an elapsed time meter to indicate, in cumulative hours, the elapsed engine operating time for the previous 12 months;
3. determine the hours of operation for each engine for the previous 12-month period on a monthly basis;
4. notify the Department if the operation exceeds 1000 hours for any consecutive 12-month period, and the facility is subject to the emission standard in 310 CMR 7.19(8)(c) or (d), as applicable.
5. maintain records to certify that the ignition timing of the engine has been inspected and adjusted at least once every three years.

(f) Testing, Monitoring, Recordkeeping, Reporting and Emission Control Plan. Any facility subject to 310 CMR 7.19(8), shall comply with all applicable testing, monitoring, recordkeeping, and reporting requirements contained in 310 CMR 7.19(13) and shall submit an emission control plan as required by 310 CMR 7.19(3).

7.19: continued

(9) Small Municipal Waste Combustor Units.

(a) Applicability and NO_x RACT. Any person owning, leasing, operating or controlling a small municipal waste combustor unit as defined in 310 CMR 7.08(2) with potential emissions of NO_x equal to or greater than 25 tons per year at a facility having potential emissions, before application of air pollution control equipment, greater than or equal to 50 tons per year of NO_x shall comply with 310 CMR 7.19(9).

1. Until the dates specified in 310 CMR 7.19(9)(a)2.a. and b., the NO_x emission standard for a municipal waste combustor unit subject to 310 CMR 7.19(9) is 0.6 pounds per million Btu, based on a one hour average, while burning municipal waste, except as provided for in 310 CMR 7.19(2)(b), (2)(e) and (2)(f). However, for any municipal waste combustor unit equipped with a continuous emissions monitoring system, the averaging time shall be based on a calendar day average.

2. Beginning on the dates specified in 310 CMR 7.19(9)(a)2.a. and b., the NO_x emission standard for a municipal waste combustor unit subject to 310 CMR 7.19(9) is 167 parts per million corrected to 7% oxygen by volume, based on a calendar day average, while burning municipal waste, except as provided for in 310 CMR 7.19(2)(b), (2)(e) and (2)(f).

a. For any person subject to 310 CMR 7.19(9) not submitting an emission control plan application as specified in 310 CMR 7.19(9)(b), the standard in 310 CMR 7.19(9)(a)1. is in effect until June 7, 2018 and the standard in 310 CMR 7.19(9)(a)2. is in effect beginning June 8, 2018.

b. For any person subject to 310 CMR 7.19(9) submitting an emission control plan application as specified in 310 CMR 7.19(9)(b), the standard in 310 CMR 7.19(9)(a)1. is in effect until one year after issuance of the Department approval and the standard in 310 CMR 7.19(9)(a)2. is in effect beginning one year and one day after issuance of the Department approval, but no later than March 10, 2020.

(b) Testing, Monitoring, Recordkeeping Reporting and Emission Control Plan. Any person subject to 310 CMR 7.19(9) shall either comply with the applicable testing, monitoring, recordkeeping, and reporting requirements contained in 310 CMR 7.19(13) or comply with the applicable testing, monitoring, recordkeeping, and reporting requirements contained in 310 CMR 7.08(2) and shall submit an emissions control plan as required by 310 CMR 7.19(3) or submit a notification to the Department no later than April 9, 2018 stating that the facility as currently equipped is in compliance with the requirements of 310 CMR 7.19(9).

(c) Ammonia. No later than the dates specified in the approval issued by the Department under 310 CMR 7.19(2)(b) or (3)(a), any person subject to 310 CMR 7.19(9) utilizing ammonia or urea for NO_x control shall:

1. conduct ammonia optimization testing;
2. submit a report to the Department correlating NOx emissions and ammonia slip;
3. propose an ammonia emissions limit that the Department will review and may modify before incorporating in the unit's approval; and
4. if using an ammonia continuous emission monitoring system to demonstrate compliance, obtain, at a minimum, valid hourly averages based on at least two data points per hour, for at least 90% of the operating hours per calendar quarter and 95% of the operating hours per calendar year that the affected facility is combusting municipal solid waste.

((10) Reserved)

(11) Glass Melting Furnaces.

(a) Applicability and NO_x RACT. After May 31, 1995, any person owning, leasing, operating or controlling a container glass melting furnace having a maximum production rate of 14 tons of glass removed from the furnace per day or greater, at a facility subject to 310 CMR 7.19, shall comply with an emission standard of 5.3 pounds of NO_x per ton of glass removed from the furnace based on a calendar day average, except as provided for in 310 CMR 7.19(2)(b), (e) and (f).

(b) Testing, Monitoring, Recordkeeping, Reporting and Emission Control Plan Any facility subject to 310 CMR 7.19(11), shall comply with any applicable testing, monitoring, recordkeeping, and reporting requirements contained in 310 CMR 7.19(13) and shall submit an emission control plan as required by 310 CMR 7.19(3).

7.19: continued

(12) Miscellaneous RACT.

(a) Applicability. Any emissions unit with potential emissions of NO_x equal to or greater than 25 tons per year at a facility having potential emissions, before application of air pollution control equipment, greater than or equal to 50 tons per year of NO_x is subject to 310 CMR 7.19(12) and shall comply with the source specific RACT for that emissions unit.

(b) Emissions Exemptions.

1. RACT is not required to be defined under 310 CMR 7.19(12) for any emissions unit that since January 1, 1990 has been approved as Best Available Control Technology or Lowest Achievable Emission Rate in an approval containing specific emission limits or work practice standards issued under a federally enforceable regulation.

2. RACT is not required to be defined under 310 CMR 7.19(12) for any emissions unit either subject to a RACT standard under 310 CMR 7.19(4), (5), (6), (7), (8), or (11) or exempt under 310 CMR 7.19(1)(c)2. through 8.

(c) NO_x Reasonably Available Control Technology Requirements. After May 31, 1995, no person subject to the requirements of 310 CMR 7.19(12) shall cause, suffer, allow or permit emissions from the facility in excess of an emission rate achievable through the implementation of reasonably available control technology as required in an emission control plan approved under 310 CMR 7.19(3).

(d) Emission Control Plan Requirements. Any person subject to 310 CMR 7.19(12)(a) must submit an emission control plan as required by 310 CMR 7.19(3) by April 1, 1994 to demonstrate how compliance will be achieved. The emission control plan and the plan approval issued by the Department under 310 CMR 7.19(3) must also be approved by the EPA as a Massachusetts SIP revision.

(e) Testing, Monitoring, Recordkeeping, Reporting and Emission Control Plan. Any facility subject to 310 CMR 7.19(12), shall comply with any applicable testing, monitoring, recordkeeping, and reporting requirements contained in 310 CMR 7.19(13) and shall submit an emission control plan as required by 310 CMR 7.19(3).

(13) Testing, Monitoring, Recordkeeping, and Reporting Requirements.

(a) Applicability. Any person subject to 310 CMR 7.19(2)(b), (4), (5), (7), (8), (9), (10), (11), (12) or (14) shall comply with 310 CMR 7.19(13). For any variance of a requirement under 310 CMR 7.19(13), the variance must be made federally enforceable. A variance from the requirement will be given only where it will not adversely impact the ability to monitor emissions. Regardless of the Department's determination in the emission control plan, any facility that is subject to 40 CFR Parts 60 and 75 must still comply with those requirements.

1. For boilers with an energy input capacity greater than or equal to 250,000,000 Btu per hour, compliance with the NO_x and CO emission standards shall be demonstrated with a continuous emissions monitoring system (CEMS) as specified in 310 CMR 7.19(13)(b), and recordkeeping and reporting as specified in 310 CMR 7.19(13)(d).

2. For boilers with an energy input capacity equal to or greater than 100,000,000 Btu per hour and less than 250,000,000 Btu per hour, compliance with the NO_x and CO emission standards shall be demonstrated by performing an annual stack test as specified in 310 CMR 7.19(13)(c), and recordkeeping and reporting as specified in 310 CMR 7.19(13)(d). The annual stack test requirement is waived for boilers equipped with a CEMS satisfying the requirements of 310 CMR 7.19(13)(b).

3. For multiple emission units that are complying with 310 CMR 7.19(14), compliance with the CO (as applicable) and NO_x emission standards shall be demonstrated:

a. with a continuous emissions monitoring system (CEMS) as specified in 310 CMR 7.19(13)(b), or

b. for emission unit(s) not required by 310 CMR 7.19(13)(a) to use CEMS to determine compliance, by performing an annual stack test as specified in 310 CMR 7.19(13)(c). The emission rate from the stack tested emission unit shall be adjusted by a compliance assurance multiplier determined by the Department within the range of 1.1-1.25.

c. for emission unit(s) not generating surplus emission reductions to be used by another emission unit in the average, compliance may alternatively be determined by the procedure contained in 310 CMR 7.19(13)(a) for similar emission units (*e.g.*, a stationary combustion turbine burning the same fuel with the same energy input) that are not emissions averaging to determine compliance.

7.19: continued

4. a. For boilers with an energy input capacity equal to or greater than 50,000,000 Btu per hour and less than 100,000,000 Btu per hour, compliance with the NO_x and CO emission standards shall be demonstrated by performing an initial stack test as specified in 310 CMR 7.19(13)(c). The recordkeeping in 310 CMR 7.19(13)(d) shall apply.

   b. For boilers complying with the requirement on allowable oxygen level, an oxygen analyzer and recorder shall be utilized. The recordkeeping in 310 CMR 7.19(13)(d) shall apply.

5. For combined cycle combustion turbines with an energy input capacity greater than or equal to 100,000,000 Btu per hour, compliance with the NO_x and CO emission standards shall be demonstrated with a continuous emission monitoring system (CEMS) as specified in 310 CMR 7.19(13)(b) and recordkeeping as specified in 310 CMR 7.19(13)(d).

6. For combined cycle combustion turbines with an energy input capacity less than 100,000,000 Btu per hour, compliance with the NO_x and CO emission standards shall be demonstrated by performing an annual stack test as specified in 310 CMR 7.19(13)(c). The annual stack test requirement is waived for combined cycle combustion turbines equipped with a monitoring system satisfying the requirements of 310 CMR 7.19(13)(b).

7. For simple cycle combustion turbines, compliance with the NO_x and CO emission standards shall be demonstrated by performing an annual stack test as specified in 310 CMR 7.19(13)(c).

8. For stationary reciprocating internal combustion engines with an energy input capacity greater than or equal to 30,000,000 Btu per hour, compliance with the NO_x emission standards shall be demonstrated with a continuous emissions monitoring system (CEMS) as specified in 310 CMR 7.19(13)(b) and recordkeeping as specified in 310 CMR 7.19(13)(d). For engines operating less than 1000 hours per year in this size range compliance shall be determined by recordkeeping as required in 310 CMR 7.19(8)(e).

9. For stationary reciprocating internal combustion engines with an energy input capacity less than 30,000,000 Btu per hour and operating 1000 hours or more in any consecutive 12 month period, compliance with the applicable emission standard shall be demonstrated by performing an initial stack test as as specified in 310 CMR 7.19(13)(c), and recordkeeping as specified in 310 CMR 7.19(13)(d). For engines operating less than 1000 hours per year in this size range compliance shall be determined by recordkeeping as required in 310 CMR 7.19(8)(e).

10. For glass melting furnaces, compliance with the applicable emission standard shall be demonstrated by performing an annual stack test as specified in 310 CMR 7.19(13)(c), and recordkeeping and reporting as specified in 310 CMR 7.19(13)(d). The annual stack test requirement is waived for glass melting furnaces equipped with a CEMS satisfying the requirements of 310 CMR 7.19(13)(b).

11. For emission units subject to 310 CMR 7.19(2)(b) or 7.19(12), compliance with the applicable emission standard shall be demonstrated through a combination of continuous emissions monitoring, stack testing and/or recordkeeping specified in the approved emission control plan.

12. The Department or EPA may require compliance stack testing beyond that listed above.

13. For municipal waste combustors with potential emissions greater than 25 tons per year of NO_x, compliance with the applicable NO_x emissions standard shall be demonstrated by performing an annual stack test as specified in 310 CMR 7.19(13)(c), and recordkeeping and reporting as specified in 310 CMR 7.19(13)(d). However, for any municipal waste combustor unit that in May 1995 is equipped with a continuous emissions monitoring system (CEMS), compliance shall be demonstrated with a CEMS as specified in 310 CMR 7.19(13)(b) and recordkeeping and reporting as specified in 310 CMR 7.19(13)(d).

7.19: continued

(b) Continuous Emissions Monitoring Systems (CEMS). Any person required to monitor NOx emissions (*i.e.*, through NOx concentrations and the associated diluent concentrations) pursuant to 40 CFR 75, shall use the procedures contained either therein or in 310 CMR 7.19(13)(b)1. through (b)14. to gather and analyze data and provide quality assurance and quality control in order to determine compliance with 310 CMR 7.19, except that missing data routines and bias adjustment factors do not need to be applied. Any person subject to 40 CFR 75 for NOx also may monitor CO emissions using 40 CFR 75 procedures to gather and analyze data and provide quality assurance and quality control in order to determine compliance with 310 CMR 7.19, except that CO quality assurance performance specifications shall comply with 40 CFR 60: *Appendix B* as an alternative to compliance with 310 CMR 7.19(13)(b)1. through (b)14. Any person subject to 310 CMR 7.19(13)(b) shall comply with 310 CMR 7.19(13)(b)9., 10., 11., and 12. for data averaging, hourly data validity, and data capture requirements. Any person operating a CEMS subject to 40 CFR 75 for NO_x may conduct Quarterly Quality Assurance activities for CO in accordance with the same 40 CFR 75 timelines as NO_x. Any person subject to 310 CMR 7.19(13)(b)1. through (b)14., but not 40 CFR 75, may choose to use 40 CFR 75 procedures to gather and analyze data and provide quality assurance and quality control for NOx and CO emissions (*i.e.*, pollutant and diluents) in accordance with 40 CFR 75 as described above; however, the CEMS first must be re-certified in accordance with 40 CFR 75 for NO_x and CO, except that CO quality assurance performance specifications in 40 CFR 60: *Appendix B* shall apply. Any person demonstrating compliance with 310 CMR 7.19 for emission units using CEMS who is not subject to or choosing to follow 40 CFR 75 shall:

1. for any emission unit either already having a CEMS in place or having a CEMS being procured or installed, submit a preliminary CEMS monitoring plan for Department approval as part of the emission control plan required in 310 CMR 7.19(3), unless the CEMS is already certified and approved by the Department or EPA;
2. for any emission unit not covered under 310 CMR 7.19(13)(b)1., submit a preliminary CEMS monitoring plan for Department approval at least 180 days prior to equipment installation;
3. include the following information in the preliminary CEMS monitoring plan: source identification, source description, control technology description, the applicable regulations, the type of monitor, a monitoring system flow diagram, a description of the data handling system, and a sample calculation demonstrating compliance with the emission limits using conversion factors from 40 CFR 60 or approved by the Department and EPA;
4. submit a CEMS certification protocol at least 90 days prior to certification testing for the CEMS, and submit any proposed adjustment to the certification testing at least seven days in advance;
5. include the following information in the certification protocol, which must be found acceptable by the Department: the location of and specifications for each instrument or device, as well as procedures for calibration, operation, data evaluation and data reporting;
6. install, calibrate, maintain and operate a CEMS for measuring NO_x, and CO, and either O^2 or CO_2 at locations approved in the Department's approval of the CEMS certification protocol and record the output of each CEMS;
7. submit a certification report within 60 days of the completion of the certification test for review and written Department approval;
8. certify each CEMS in accordance with the performance specifications contained in 40 CFR 60: *Appendix B* and quality assurance and quality control procedures contained in 40 CFR 60: *Appendix F* and continue to comply with the requirements of 40 CFR 60 *Appendix F*;
9. calculate a calendar month average from each operating day average within the applicable month; an operating day must consist of at least four operating hours, including startup and shutdown time;
10. calculate a calendar day average for each operating day from a block hourly average for each hour the emissions unit is operating;
11. calculate a block hourly average from at least three data points, generated by a CEMS at 15 minute intervals over each one-hour period or in accordance with 40 CFR 60.13(h)(2);

7.19: continued

12. operate each continuous emission monitoring system at all times that the emissions unit(s) is operating except for periods of CEMS calibrations checks, zero span adjustment, and preventive maintenance as described in the preliminary monitoring plan submitted to the Department and as determined during certification. Notwithstanding such exceptions, in all cases obtain valid data for at least 75% of the hours per operating day, 75% of the operating days per month, and 95% of the hours per quarter during which the emission unit is operating;

13. use only valid data to calculate the emissions rate averages using conversion factors from 40 CFR 60 or approved by the Department and EPA; and

14. Any person required to utilize a monitoring system to determine compliance of a stationary reciprocating engine or stationary combustion turbine with the applicable NO_x emissions standard may monitor process or control device parameters provided it is demonstrated to the Department, and the Department approves in writing, that the parametric monitoring system (PMS) provides an equivalent degree assurance of compliance with the emissions standard. Alternatively, the Department or EPA may approve a predictive emission monitoring system that meets EPA performance specification PS-16. The Department or EPA may require any conditions it deems necessary to assure continuous compliance.

(c) Stack Testing Any person required to demonstrate compliance with a NO_x emission standard contained in 310 CMR 7.19 by stack testing shall comply with 310 CMR 7.19(13)(c). That person shall:

1. submit a pretest protocol for the required emission test for review and Department approval at least 60 days prior to the anticipated date of testing;

2. include in the pretest protocol, a description of sampling point locations, sampling equipment, sampling and analytical procedures, and the operating conditions for the required testing;

3. conduct compliance stack testing in accordance with procedures set forth in Appendix A of 40 CFR Part 60 or another method approved by the Department and EPA;

4. perform the initial compliance stack test on the emission unit before August 1, 1995 for existing emission units, or within 90 days of continuous operation for new emission units to demonstrate compliance;

5. perform the annual compliance test, where annual compliance stack testing is required either by 310 CMR 7.00 or in the approved emission control plan, on the emission unit prior to October 1st of each year beginning 1995;

6. submit the emission test report for the review and written Department approval within 60 days of the completion of the compliance stack testing.

(d) Recordkeeping and Reporting. Any person required to demonstrate compliance with 310 CMR 7.19 by recordkeeping and reporting shall comply with 310 CMR 7.19(13)(d). That person:

1. shall maintain a record of all measurements, performance evaluations, calibration checks, and maintenance or adjustments for each continuous emission monitor;

2. shall submit to the Department's regional office by the 30th day of April, July, October, and January of each calendar year, a report showing any excess emissions as measured by a CEMS within the previous calendar quarter (January-March, April-June, *etc*.) and shall include:

a. the date and time of commencement and completion of each period of excess emissions and the magnitude of the excess emissions for each hour;

b. identification of the suspected reason for the excess emissions and any corrective action taken;

c. the date and time that any CEMS stopped collecting valid data and when it started to collect valid data again, except for zero and span checks; and

d. the nature and date of system repairs; or

In the event none of the above items have occurred such information shall be stated in the report; or

3. shall measure and record for each unit on a daily basis: type fuel(s) burned each day, heat content of each fuel, the total heating value of the fuel consumed for each day, the actual emission rate (for emissions units demonstrating compliance with CEMS), and the allowable emission rate. For units complying with 310 CMR 7.19(14), daily records should also include a summation of these values for all units included in the average, as well as any other data needed to demonstrate compliance.

7.19: continued

4. shall submit to the Department the necessary information (calculations and data) to demonstrate an applicable emission unit has an annual capacity factor of less than 10% in accordance with 310 CMR 7.19(1)(d). This documentation shall be provided to the Department in the first quarter of each year (*i.e.*, no later than March 31st), and may be included in the fourth quarter RACT quarterly report (due January 30th) if the facility operates other RACT sources.

5. shall obtain a certification from the fuel supplier for each shipment of residual oil that includes the following information:

a. the name of the oil supplier;

b. the nitrogen content of each oil shipment (acceptable test methods for determining nitrogen content of the oil are ASTM methods D3228 and D4629 or any other method approved by the Department and EPA);

c. the location where the sample was drawn for analysis to determine the nitrogen content of the oil, specifically including whether the oil was sampled as delivered to the affected facility or whether the sample was drawn from oil in storage at the oil supplier's or oil refiner's facility or another location;

6. may, as an alternative to the fuel supplier certification required in 310 CMR 7.19(13)(d)5., elect to sample and analyze the residual oil immediately after the fuel tank is filled and before any oil is combusted for each new shipment according to methods approved by the Department;