

Attachments 1-5

This document contains the attachments to the Massachusetts Reasonably Available Control Technology State Implementation Plan Revision For the 2008 and 2015 Ozone National Ambient Air Quality Standards.

Attachment 1 Amendments to 310 CMR 7.00 Air Pollution Control Regarding RACT
(Redline/Strikeout excerpts)

7.00: Definitions

HIGH PRECISION PRODUCTS means products for which contamination must be minimized in accordance with a customer or other specification including but not limited to:

- (a) Products for use in extreme environments;
- (b) Products covered by rigorous military or commercial specifications that require extremely accurate and quality controlled manufacturing; and
- (c) Products with quality standards that do not allow for potential excess contamination.

7.18: U Volatile and Halogenated Organic Compounds(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 310 CMR 7.18(8)(a)3.

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; ~~and~~

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

e.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, which draining, the clean parts are enclosed for 15 seconds or until dripping ceases, whichever is longer;
- c. Each cold cleaning degreaser is designed with:
 - i. emission control equipment design specifications; or
 - ii. emission control equipment capture and/or destruction efficiency standards; or
 - iii. emission limits (except emission limits per year or rolling 12 month average);or
- d. The covers of each cold 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,
 - 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
 - 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), (b), and (c):
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) ~~or (d)~~ 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:
 - i. 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;
 - ii. Use a solvent with a VOC content less than 7.7 pounds per gallon in such operations; and
 - iii. Prepare and maintain records sufficient to demonstrate compliance with 310 CMR 7.18(8)(e)3.i. and ii. 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) ~~or (d)~~ shall maintain instantaneous and continuous compliance at all times.
- (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 ~~three~~ 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.

TEXT deleted is ~~struck out and bold~~. Text added is **bold** and single underlined (for text) or double underlined (for headers).

Amend 310 CMR Title page

7.03: U Plan Approval ~~Application~~ Exemption; Construction Requirements

Amend 310 CMR 7.00 Definitions by adding the following definitions in alphabetical order to the existing list of defined terms:

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

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

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

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

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

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

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

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

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

BLACK COATING means a coating which meets the following criteria:

1. Maximum lightness: 23 units.

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

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

BUSINESS MACHINE means a device that uses electronic or mechanical methods to process information, perform calculations, print or copy information, or convert sound into electrical

impulses for transmission, including devices listed in North American Industry Classification System (NAICS) numbers 333318, 334112, 334118, 334210, and photocopy machines, a subcategory of products classified under NAICS code 333316.

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

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

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

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

DIGITAL PRINTING means a method of printing in which an electronic output device transfers variable data, in the form of an image, from a computer to a variety of substrates.

DIP COATING means a method of applying coatings to a substrate by submersion into and removal from a coating bath.

DRUM means any cylindrical metal shipping container larger than 12 gallons capacity but no larger than 110 gallons capacity.

ELECTRIC DISSIPATING COATING means a coating that rapidly dissipates a high voltage electric charge.

ELECTRICAL AND ELECTRONIC COMPONENTS for purposes of 310 CMR 7.18(31) means components and assemblies of components that generate, convert, transmit, or modify electrical energy. Electrical and electronic components include, but are not limited to, wires, windings, stators, rotors, magnets, contacts, relays, printed circuit boards, printed wire assemblies, wiring boards, integrated circuits, resistors, capacitors, and transistors. Cabinets in which electrical and electronic components are housed are not considered electrical and electronic components.

ELECTRIC-INSULATING AND THERMAL-CONDUCTING COATING means a coating that displays an electrical insulation of at least 1000 volts DC per mil on a flat test plate and an average thermal conductivity of at least 0.27 BTU per hour-foot-°F.

ELECTRIC-INSULATING VARNISH means a non-convertible-type coating applied to electric motors, components of electric motors, or power transformers, to provide electrical, mechanical, and environmental protection or resistance.

ELECTRODEPOSITION means a specialized form of dip coating where opposite electric charges are applied to the coating and the part.

ELECTROSTATIC PREPARATION COATING means a coating that is applied to a plastic part solely to provide conductivity for the subsequent application of a primer, a topcoat, or other coating through the use of electrostatic application methods. An electrostatic preparation coating is clearly identified as an electrostatic preparation coating on its accompanying safety data sheet.

EMI/RFI SHIELDING COATING means a coating used on electrical or electronic equipment to provide shielding against electromagnetic interference (EMI), radio frequency interference (RFI), or static discharge.

ETCHING FILLER means a coating that contains less than 23% solids by weight and at least ½% acid by weight, and is used instead of applying a pretreatment coating followed by a primer.

EXTREME HIGH-GLOSS COATING for purposes of 310 CMR 7.18(11)(d)2.a. and b. means a coating which, when tested by ASTM standard D523-14, shows a reflectance of 75% or more on a 60° meter.

EXTREME HIGH-GLOSS COATING for purposes of 310 CMR 7.18(11)(b)4. and (d)2.c. means a coating which, when tested by ASTM standard D523-14, shows a reflectance of 90% or more on a 60° meter.

EXTREME PERFORMANCE COATING for purposes of 310 CMR 7.18(11)(d)2.a. and b. means a coating used on a metal or plastic surface where the coated surface is, in its intended use, exposed to extreme environmental conditions such as those listed in (a) through (c). The term includes, but is not limited to, coatings applied to locomotives, railroad cars, farm machinery, and heavy duty trucks. Extreme environmental conditions include, but are not limited to, any of the following:

- (a) Chronic exposure to corrosive, caustic, or acidic agents, chemicals, chemical fumes, chemical mixtures, or solutions;**
- (b) Repeated exposure to temperatures in excess of 121°C (250°F); or**
- (c) Repeated heavy abrasion, including mechanical wear and repeated scrubbing with industrial grade solvents, cleansers, or scouring agents.**

FINISH PRIMER/SURFACER means a coating applied with a wet film thickness of less than ten mils prior to the application of a topcoat for purposes of providing corrosion resistance, adhesion of subsequent coatings, a moisture barrier, or promotion of a uniform surface necessary for filling in surface imperfections.

FLEXIBLE COATING means any coating that is required to comply with engineering specifications for impact resistance, mandrel bend, or elongation as defined by the original equipment manufacturer.

FLOW COATING means a coating labeled and formulated exclusively for use by electric power companies or their subcontractors to maintain the protective coating systems present on utility transformer units.

FOG COATING means a coating that is applied to a plastic part for the purpose of color matching without masking a molded-in texture.

GLOSS REDUCER means a coating that is applied to a plastic part solely to reduce the shine of the part. A gloss reducer shall not be applied at a thickness of more than 0.5 mils of coating solids.

HEAT-RESISTANT COATING means a coating intended to withstand a temperature of at least 204°C (400°F), during normal use.

HEATSET PRINTING means a process that requires heat to set or dry the ink.

HIGH BAKE coating means a coating which is designed to cure only at temperatures of more than 90°C (194°F).

HIGH BUILD PRIMER/SURFACER means a coating applied with a wet film thickness of ten mils or more prior to the application of a topcoat for purposes of providing corrosion resistance, adhesion of subsequent coatings, or a moisture barrier, or promoting a uniform surface necessary for filling in surface imperfections.

HIGH GLOSS COATING means any coating which achieves at least 85% reflectance on a 60° meter when tested by ASTM D 523-14.

HIGH-PERFORMANCE ARCHITECTURAL COATING means a coating used to protect architectural subsections and which meets the requirements of the American Architectural Manufacturers Association's publication number AAMA 2604-17 (Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels) or 2605-17 (Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels).

HIGH-PRECISION OPTICS for purposes of 310 CMR 7.18(31) means the optical elements used in electro-optical devices that are designed to sense, detect, or transmit light energy, including specific wavelengths of light energy and changes of light energy levels.

HIGH-TEMPERATURE COATING means a coating that is certified to withstand a temperature of 1000°F for 24 hours.

INDUSTRIAL CLEANING SOLVENT for purposes of 310 CMR 7.18(31) means liquid used to clean parts, products, tools, machinery, equipment, and general work areas, including cleanup solutions and degreasing agents. Industrial cleaning solvent does not include janitorial supplies used for cleaning offices, bathrooms or other similar areas. Industrial cleaning solvent does not include solvent used in cold cleaning degreasing, vapor degreasing, or conveyORIZED degreasing at a facility subject to 310 CMR 7.18(8).

LETTERPRESS PRINTING means a method where the image area is raised relative to the non-image area and the ink is transferred to the substrate directly from the image surface.

MASK COATING means thin film coating applied through a template to coat a small portion of a substrate.

MEDICAL DEVICE for purposes of 310 CMR 7.18(31) means an instrument, apparatus, implement, machine, contrivance, implant, in vitro reagent or other similar article, including any component or accessory that is:

1. intended for use in the diagnosis of disease or other conditions, or in the cure, mitigation, treatment, or prevention of diseases;
2. intended to affect the structure or any function of the body; or

3. defined in the National Formulary or the United States Pharmacopoeia or any supplement to it.

METALLIC COATING means a coating that contains more than 5 grams total of pure elemental metal or a combination of elemental metals per liter of coating as applied.

MILITARY SPECIFICATION COATING means a coating that has a formulation approved by a United States military agency for use on military equipment.

MOLD-SEAL COATING means the initial coating applied to a new mold or a repaired mold to provide a smooth surface which, when coated with a mold release coating, prevents products from sticking to the mold.

MOTOR VEHICLE BEDLINER means a multi-component coating, used at a facility that is not an automobile or light-duty truck assembly coating facility, applied to a cargo bed after the application of topcoat to provide additional durability and chip resistance.

MOTOR VEHICLE CAVITY WAX means a coating, used at a facility that is not an automobile or light-duty truck assembly coating facility, applied into the cavities of the vehicle primarily for the purpose of enhancing corrosion protection.

MOTOR VEHICLE DEADENER means a coating, used at a facility that is not an automobile or light-duty truck assembly coating facility, applied to selected vehicle surfaces primarily for the purpose of reducing the sound of road noise in the passenger compartment.

MOTOR VEHICLE GASKET/SEALING MATERIAL means a fluid, used at a facility that is not an automobile or light-duty truck assembly coating facility, applied to coat a gasket or replace and perform the same function as a gasket. Automobile and light-duty truck gasket/gasket sealing material includes room temperature vulcanization (RTV) seal material.

MOTOR VEHICLE LUBRICATING WAX/COMPOUND means a protective lubricating material, used at a facility that is not an automobile or light-duty truck assembly coating facility, applied to vehicle hubs and hinges.

MOTOR VEHICLE SEALER means a high viscosity material, used at a facility that is not an automobile or light-duty truck assembly coating facility, generally, but not always, applied in the paint shop after the body has received an electrodeposition primer coating and before the application of subsequent coatings (e.g., primer-surfacer). The primary purpose of automobile and light-duty truck sealer is to fill body joints completely so that there is no intrusion of water, gases or corrosive materials into the passenger area of the body compartment. Such materials are also referred to as sealant, sealant primer, or caulk.

MOTOR VEHICLE TRUNK INTERIOR COATING means a coating, used at a facility that is not an automobile or light-duty truck assembly coating facility, applied to the trunk interior to provide chip protection.

MOTOR VEHICLE UNDERBODY COATING means a coating, used at a facility that is not an automobile or light-duty truck assembly coating facility, applied to the undercarriage or firewall to prevent corrosion and/or provide chip protection.

MULTI-COLORED COATING means a coating which exhibits more than one color when applied, and is packaged in a single container and applied in a single coat.

MULTI-COMPONENT COATING means a coating requiring the addition, before application, of a separate reactive resin, commonly known as a catalyst or hardener, in order to form an acceptable dry film.

ONE-COMPONENT COATING means a coating that is ready for application as it comes out of its container to form an acceptable dry film. A thinner, necessary to reduce the viscosity, is not considered a component.

OPTICAL COATING means a coating applied to an optical lens.

PAN-BACKING COATING means a coating applied to the surface of pots, pans, or other cooking implements that are exposed directly to a flame or other heating elements.

PETROLEUM HEATSET INK means an ink that is not a water-based, UV-cured, or electron beam-cured ink.

PLEASURE CRAFT means a vessel which is manufactured or operated primarily for recreational purposes, or leased, rented, or chartered to a person or business for recreational purposes. The owner or operator of such vessels shall be responsible for certifying that the intended use is for recreational purposes.

PLEASURE CRAFT SURFACE COATING means any marine coating, except unsaturated polyester resin (fiberglass) coatings, applied by brush, spray, roller, or other means to a pleasure craft.

PREFABRICATED ARCHITECTURAL COMPONENT COATINGS means coatings applied to metal parts and products that are to be used as an architectural structure.

PRESSURE SENSITIVE TAPE means a flexible backing material with a pressure-sensitive adhesive coating on one or both sides of the backing. Examples include, but are not limited to, duct/duct insulation tape and medical tape.

PRETREATMENT COATING means a coating which contains no more than 12% solids, by weight, and at least ½% acid, by weight; is used to provide surface etching; and is applied directly to metal surfaces to provide corrosion resistance, adhesion, and ease of stripping.

PRETREATMENT WASH PRIMER for purposes of 310 CMR 7.18(11) and (21) means a coating which contains no more than 12% solids, by weight, and at least ½% acids, by weight; is used to provide surface etching; and is applied directly to fiberglass and metal surfaces to provide corrosion resistance and adhesion of subsequent coatings.

RADIATION EFFECT COATING for purposes of 310 CMR 7.18(31) means a material that prevents radar detection.

RED COATING means a coating which meets all of the following criteria:

- 1. Yellow limit: the hue of hostaperm scarlet.**
- 2. Blue limit: the hue of monastral red-violet.**
- 3. Lightness limit for metallics: 35% aluminum flake.**

4. Lightness limit for solids: 50% titanium dioxide white.

5. Solid reds: hue angle of -11 to 38 degrees and maximum lightness of 23 to 45 units.

6. Metallic reds: hue angle of -16 to 35 degrees and maximum lightness of 28 to 45 units.

These criteria are based on Cielab color space, 0/45 geometry. For spherical geometry, specular included, the upper limit is 49 units. The maximum lightness varies as the hue moves from violet to orange. This is a natural consequence of the strength of the colorants, and real colors show this effect.

REPAIR COATING means a coating used to re-coat portions of a previously coated product which had sustained mechanical damage to the coating.

RESIST COAT means a coating that is applied to a plastic part before metallic plating to prevent deposits of metal on portions of the plastic part.

SAFETY-INDICATING COATING means a coating that changes physical characteristics, such as color, to indicate unsafe conditions.

SHOCK-FREE COATING means a coating applied to electrical components to protect the user from electric shock. The coating has characteristics of being of low capacitance and high resistance, and having resistance to breaking down under high voltage.

SILICONE-RELEASE COATING means any coating which contains silicone resin and is intended to prevent food from sticking to metal surfaces such as baking pans.

SOLAR-ABSORBENT COATING means a coating which has as its prime purpose the absorption of solar radiation.

SOLID-FILM LUBRICANT means a very thin coating consisting of a binder system containing as its chief pigment material one or more of molybdenum disulfide, graphite, polytetrafluoroethylene (PTFE), or other solids that act as a dry lubricant between faying surfaces.

STENCIL COATING for purposes of 310 CMR 7.18(11)(b)2. and (21)(b)1. means an ink or a pigmented coating which is rolled or brushed onto a template or stamp in order to add identifying letters, symbols, and/or numbers.

STENCIL COATING for purposes of 310 CMR 7.18(21)(b)2. means a coating that is applied over a stencil to a plastic part at a thickness of 1 mil or less of coating solids. Stencil coatings are most frequently letters, numbers, or decorative designs.

TEXTURE COATING means a coating that is applied to a plastic part which, in its finished form, consists of discrete raised spots of the coating.

TOUCH-UP COATING for purposes of 310 CMR 7.18(11) and (21) means a coating used to cover minor coating imperfections that appear after the main coating operation is completed.

TRANSLUCENT COATING means a coating which contains binders and pigment, and is formulated to form a colored, but not opaque, film.

VACUUM METALLIZING means a process whereby metal is vaporized and deposited on a substrate in a vacuum chamber.

VACUUM-METALLIZING COATING means: (a) the undercoat applied to a substrate on which the metal is deposited; or (b) the overcoat applied directly to the metal film.

WATER-BASED INK/COATING/ADHESIVES means an ink, coating, or adhesive with a VOC content less than or equal to 10% by weight as applied.

Amend 310 CMR 7.00 Definitions by deleting the following definitions:

~~**AUTOMOTIVE SURFACE COATING** means the coating at automobile assembly plants of bodies and front end sheet metal (hood and fenders) of passenger cars capable of seating 12 or fewer passengers or light duty vehicles rated at 8500 pounds gross weight or less or derivatives of such vehicles.~~

~~**MANUFACTURING PLANT** for purposes of 310 CMR 7.18(7), means a stationary source where automobile or light duty truck bodies are manufactured and/or finished.~~

~~**PROPANOL SUBSTITUTE** means a non-propanol additive that contains volatile organic compounds and is used in fountain solution. Additives are used to reduce surface tension and increase viscosity of the fountain solution.~~

Amend 310 CMR 7.00 Definitions by amending the following definitions:

CLASS II HARDBOARD PANELING FINISH means a finish that meets the class II specifications of ANSI A135.5-2012 Voluntary Product Standard PS-59-73 as approved by the American National Standards Institute (ANSI).

NON-HEATSET OFFSET LITHOGRAPHIC PRINTING means an offset lithographic process that does not require heat to set or dry the ink. UV-cured and electron beam-cured inks are considered non-heatset.

PACKAGING ROTOGRAVURE PRINTING OR PACKAGING FLEXOGRAPHIC PRINTING means rotogravure or flexographic printing upon paper, paper board, metal foil, plastic films, and other substrates which are, in subsequent operations, formed into packaging products and labels for articles to be sold.

PAPER, FILM, AND FOIL SURFACE COATING means the coating, including specialty printing, of paper with organic solvent borne material for a variety of decorative and functional products, including but not limited to, adhesive tapes, adhesive labels, metal foil, decorated, coated and glazed paper, book covers, office copier paper (zinc oxide coated), carbon paper, typewriter ribbons, and photographic films. Coating performed on or in-line with any offset lithographic, screen, letterpress, flexographic, rotogravure, or digital printing press is part of a printing process and is not part of the paper, film, and foil surface coating category.

PUBLICATION ROTOGRAVURE PRINTING OR PUBLICATION FLEXOGRAPHIC PRINTING ~~M~~ means rotogravure or flexographic printing upon paper which is subsequently formed into books, magazines, catalogues, brochures, directories, newspaper supplements, and other types of printed materials.

SPECIALTY PRINTING means all gravure and flexographic operations which print a design or image, excluding packaging rotogravure printing, packaging flexographic printing, and publication

rotogravure printing, **and publication flexographic printing**. Specialty printing operations include, but are not limited to, printing on paper cups and plates, patterned gift wrap, wall paper, and floor coverings.

VOLATILE ORGANIC COMPOUND (VOC) is means any compound of carbon which participates in atmospheric photochemical reactions. For the purpose of determining compliance, VOC is measured by the applicable reference test methods specified in 40 CFR 60. ~~310 CMR 7.00: VOLATILE ORGANIC COMPOUND VOC~~ includes all organic compounds except the following:

<u>CAS Number</u>	<u>Chemical Name</u>
67641	acetone,
<u>124685</u>	<u>AMP (2-amino-2-methyl-1-propanol),</u>
506876	ammonium carbonate,
<u>540885</u>	<u>t-butyl acetate</u>
630080	carbon monoxide,
...	
<u>75467</u>	<u>FC-23 (trifluoromethane),</u>
...	
507551	HCFC-225cb (1,3-dichloro-1,1,2,2,3-pentafluoropropane),
<u>75467</u>	<u>HFC-23 (trifluoromethane),</u>
75105	HFC-32 (difluoromethane),
...	
138495428	HFC 43-10mee (1,1,1,2,3,4,4,5,5,5-decafluoropentane),
<u>1691174</u>	<u>HFE-134 (HCF₂OCF₂H),</u>
<u>78522471</u>	<u>HFE-236cal2 (HCF₂OCF₂OCF₂H),</u>
<u>188690780</u>	<u>HFE-338pcc13 (HCF₂OCF₂CF₂OCF₂H),</u>
<u>188690779</u>	<u>H-Galden 1040X or H-Galden ZT 130 (or 150 or 180),</u>
	<u>(HCF₂OCF₂OCF₂CF₂OCF₂H),</u>
75031	HFE-7000 or n-C3F7OCH3 (1,1,1,2,2,3,3-heptafluoro-3-methoxy-propane),
...	
297730939	HFE-7500 or HFE-s702 or T-7145 or L-15381 (3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-(trifluoromethyl) hexane),
<u>754121</u>	<u>HFO-1234yf (2,3,3,3-tetrafluoropropene),</u>
<u>29118249</u>	<u>HFO-1234ze (trans-1,3,3,3-tetrafluoropropene),</u>
N/A	Cyclic, branched, or linear, completely fluorinated alkanes,
...	
N/A	Cyclic, branched, or linear, completely methylated siloxanes,
<u>102687650</u>	<u>Solstice™ 1233zd(E) (trans-1-chloro-3,3,3-trifluoroprop-1-ene),</u>
N/A	Sulfur containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine.

The following compound(s) are Volatile Organic Compounds (VOC) for the purpose of all recordkeeping, emission reporting, photochemical modeling, and inventory requirements which apply to VOC and shall be uniquely identified in emission reports but are not VOC for the purposes of VOC emission limitations or VOC content requirements:

540885 ————— t-butyl acetate

Amend 310 CMR 7.18, as follows:

Add new subsection 310 CMR 7.18 (1)(g) as follows:

(1) U Applicability and Handling Requirements.

...

(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.

...

Amend Subsection 310 CMR 7.18(2) as follows:

(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 ~~averaging times are~~ **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:

<u>Compliance or Control Method</u>	<u>EPA Reference Test Method (or other as indicated)</u>	<u>Test Method Sampling Duration Averaging Time</u>
<u>Volatile organic compound leak detection</u>	<u>21</u>	<u>as specified in Test Method</u>
<u>Coatings, Inks and Related Materials Ref</u> Formulation	<u>24¹, 24A</u>	instantaneous <u>grab sample</u>
<u>Solvent destruction or solvent recovery Exhaust measurement</u> except carbon adsorption	<u>18</u>	<u>as specified in Test Method</u>
	<u>25, 25A, 25B, California Air Resources Board (CARB) Method 100</u>	<u>3three hours (as three one-hour runs)</u>
Carbon adsorption	<u>18</u>	<u>as specified in Test Method</u>
	25 or other as appropriate	the length on the adsorption cycle or 24-hours, whichever is less.

¹ ~~Reference Method 24 shall use a 60 minute bake time at 110°C ± 5°C.~~

~~(b) Persons owning, leasing, or controlling the operation at a specific site location of any individual or combination of coating lines described in 310 CMR 7.18(3) through (7), (10) through (12), (14) through (16), and (21) through (24) may, for compliance with dates specified in 310 CMR 7.18(3) through (7), (10) through (12), (14) through (16), and (21) through (24), and the emissions limitations contained in 310 CMR 7.18(3) through (7), (10) through (12), (14) through (16), and (21) through (24), submit a proposed plan containing a mix of emission limits for such coating lines such that the total emissions from all coating lines is less than or equal to the sum of emissions that would result from each individual coating line complying with the applicable emission limitation contained in 310 CMR 7.18(3) through (7), (10) through (12), (14) through (16), and (21) through (24).~~

~~Submittal of such a proposed plan is subject to review and approval by the Department and must provide for compliance consistent with 310 CMR 7.18(3) through (7), (10) through (12), (14) through (16), and (21) through (24).~~

Any person proposing to comply with the requirements of 310 CMR 7.18 by emissions averaging ~~under 310 CMR 7.18(2)(b)~~, is also subject to the requirements of 310 CMR 7.00: *Appendix B(4)*.

...

(e) Any person owning, leasing, operating, or controlling a facility using air pollution capture and control equipment to comply with ~~subject to~~ 310 CMR 7.18(3) through (7), (10) through (12), (14) through (16), or (30) shall ~~demonstrate compliance with the requirements for emissions capture and control equipment by~~ continuously monitoring and maintaining records on the following parameters:

...

Amend subsection 310 CMR 7.18(3) as follows:

(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 there from in excess of 5.1 pounds of VOC per gallon of solids applied 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 or, in the alternative, equal to or greater than three3 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.

(c) Extensions. Any person subject to 310 CMR 7.18(3)(a)2. may apply in writing to the Department for a non-renewable 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 non-renewable 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. or b. 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

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).

~~(b) Any person subject to 310 CMR 7.18(3)(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.~~

(eh) Recordkeeping Requirements. Any person subject to 310 CMR 7.18(3)(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~~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) ~~and~~ or order(s) issued to the person.

(d) Testing Requirements. ~~Any P~~persons 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 ~~and~~ 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.

...

Amend subsection 310 CMR 7.18(5) as follows:

(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 ~~there from~~ in excess of ~~4.5 pounds of volatile organic compounds per gallon of solids applied~~ 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).
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 non-renewable 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 non-renewable 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. or b. 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.**

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).

~~(b) Any person subject to 310 CMR 7.18(5)(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.~~

(eh) Recordkeeping Requirements. Any person subject to 310 CMR 7.18(5)(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-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) ~~and/or~~ order(s) issued to the person.

~~(d)~~ **Testing Requirements.** ~~Any P~~persons 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 ~~and/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.

...

Delete subsection 310 CMR 7.18(7) and reserve it for future use:

~~(7) (Reserved) U Automobile Surface Coating.~~

~~(a) No person who owns, leases, operates, or controls an automobile and/or light duty truck manufacturing plant, which emits 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, on a daily weighted average basis, and within the schedule contained in 310 CMR 7.18(7)(b).~~

~~(b)~~

**Emissions Limitations
Automotive Surface Coating**

Coating Line	Emission Limitation (*)	Compliance Date
Primer Application	1.4 lbs. of VOC/gallon of solids applied	December 31, 1982
Primer-surfacer Application	4.5 lbs. of VOC/gallon of solids applied	December 31, 1985
Topcoat Application	15 lbs. of VOC/gallon of solids deposited (**)	December 31, 1985
Final Repair Application	13.8 lbs. of VOC/gallon of solids applied	December 31, 1985

~~* Compliance is determined on a line-by-line basis through the daily weighted average of the coatings used in each category for each separate line.~~

~~** The emission limitation for topcoat application is equivalent to 4.5 lbs of VOC/gallon of solids applied at a transfer efficiency of 30%.~~

~~(c) Any person subject to 310 CMR 7.18(7)(a) shall maintain continuous compliance at all times, and is subject to a daily compliance averaging time. Demonstrations of compliance may include~~

~~considerations of transfer efficiency provided that the baseline transfer efficiency and the transfer efficiency test method are approved by the Department and EPA.~~

~~(d) Any person subject to 310 CMR 7.18(7)(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.~~

~~(e) Persons subject to 310 CMR 7.18(7)(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. Testing to determine topecoat emission rates, transfer efficiency, and other relevant criteria shall be conducted in accordance with the protocols described in EPA document 450/3-88-018, or by other methods approved by the Department and EPA.~~

...

Amend subsection 310 CMR 7.18(11) as follows:

(11) U Surface Coating of Miscellaneous Metal Parts and Products.

(a) Applicability.

1. On or after December 31, 1982~~unless granted an extension by the Department to December 31, 1985~~, 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)(~~bd~~)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. Emissions of volatile organic compounds from coatings used in small amounts are exempt from the emissions limitations of 310 CMR 7.18(11)(b). The sum of all coatings exempted from the emission limitations of 310 CMR 7.18(11)(b) shall not exceed 55 gallons per year at any facility. Usage of exempt coatings shall be reported to the Department in accordance with 310 CMR 7.12.~~

~~12.~~ 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)(~~bd~~)1.

~~3. Any facility subject to 310 CMR 7.18(11) as of July 1, 1991, which was not subject to 310 CMR 7.18(11) prior to July 1, 1991, shall achieve compliance with the applicable sections of 310 CMR 7.18(11) by July 1, 1992.~~

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.

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.

(c) Extensions. Any person subject to 310 CMR 7.18(11)(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(11)(a)2. or 3. by complying with 310 CMR 7.18(11)(g). The Department will consider a non-renewable 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).

(~~bd~~) 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.

<u>Table 310 CMR 7.18(11)(d)1.</u> 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. through d. 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.

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

Table 310 CMR 7.18(11)(d)2.c. RACT Emission Limitations for Pleasure Craft Surface Coatings				
Coating Category	Mass of VOC per volume of coating less water and exempt compounds, as applied		Mass of VOC per volume of coating solids, as applied	
	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		
Coating Category	Mass of VOC per volume of coating less water and exempt compounds, as applied	
	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).

~~(e) Any person subject to 310 CMR 7.18(11)(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.~~
(dh) Recordkeeping Requirements. Any person subject to 310 CMR 7.18(11)(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~~ **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) ~~and~~ or order(s) issued to the person.

(ei) Testing Requirements. ~~Any P~~persons 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 ~~and~~ 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.**

Amend subsection 310 CMR 7.18(12) as follows:

(12) U Packaging Rotogravure and Packaging Flexographic PrintingGraphic Arts.

(a) Applicability.

- 1. On or after January 1, 1994, and before March 9, 2020, no person who owns, leases, operates or controls packaging rotogravure or publication rotogravure printing lines (except such printing presses or operations at a facility subject to 310 CMR 7.26(20) through (29)), 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;

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.

1a. 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,

2b. The ink (less water) as it is applied to the substrate contains 60.0% by volume or more non-volatile materials; or,

3c. The owner or operator installs and operates:

ai. A carbon adsorption system which reduces the volatile organic emissions by at least 90.0% by weight; or,

bii. an incinerator system which oxidizes at least 90.0% by weight of the volatile organic compounds emitted; or,

ei. an alternative volatile organic compound emission reduction system demonstrated to have at least 90.0% reduction efficiency by weight; and,

div. A capture system must be used in conjunction with any emission control systems installed pursuant to 310 CMR 7.18(12)(ad)1.c.i.3.a. through ~~iii.3.e. inclusive~~. 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: ~~75.0% where publication rotogravure process is employed;~~ 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).

(c) 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).**
- 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 ~~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~~**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 ~~cop~~**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) ~~and/or~~ order(s) issued to the person.

(h) Testing Requirements. ~~Any p~~Persons 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 ~~and/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.

~~(e) The Department reserves the right to initiate enforcement action against any person who failed to meet the previous requirements of 310 CMR 7.18(12) in effect from January 1, 1983 until January 1, 1994, where the facility size cutoff in 310 CMR 7.18(12)(a) was 100 tons per year.~~

Amend subsection 310 CMR 7.18(14) as follows:

(14) U Paper, Film, and Foil Surface Coating.

(a) Applicability.

1. On or after December 31, 1982, unless granted an extension by the Department until January 1, 1987, or unless the facility is subject to 310 CMR 7.26(20) through (29), 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 therefrom in excess of 4.8 pounds of volatile organic compounds per gallon of solids applied 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) Any person subject to 310 CMR 7.18(14)(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.~~

(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.

(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).

(g) Recordkeeping Requirements. Any person subject to 310 CMR 7.18(14)(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~~ 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, if necessary to determine emissions; and

6. any other requirements specified by the Department in any approval(s) ~~and~~/or order(s) issued to the person.

(dh) Testing Requirements. Any p~~Persons~~ 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 ~~and~~/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.

Amend subsection 310 CMR 7.18(20) as follows:

(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(2)(b), (2)(c), (2)(g), (2)(h), (17), (21) through (27), (28)(c), (29), or (30)(e)7.~~ 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, a~~An~~ emission control plan is required to amend an emissions averaging plan issued pursuant to 310 CMR 7.18(2)(b) or 310 CMR 7.18(2)(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 ~~were installed in accordance with an approval issued pursuant to 310 CMR 7.02(4) or (5) that meets the standards/limits of 310 CMR 7.18 and/or the requirements contained in 310 CMR 7.03.;~~
 - 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.

Amend subsection 310 CMR 7.18(21) as follows:

(21) Surface Coating of Plastic Parts.

(a) Applicability. ~~310 CMR 7.18(21) applies in its entirety to any person who owns, leases, operates or controls plastic parts 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.~~

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) Reasonably Available Control Technology Requirements. On or after January 1, 1994, unless exempted under 310 CMR 7.18(21)(c), or granted a non-renewable extension by the Department under 310 CMR 7.18(21)(d), no person subject to 310 CMR 7.18(21)(a) shall cause, suffer, allow or permit emissions from any plastic parts coating line in excess of the emission limitations set forth in 310 CMR 7.18(21)(c).~~

~~(e) Exemptions. The requirements of 310 CMR 7.18(21)(b) do not apply to:~~

- ~~1. a. any person subject to 310 CMR 7.18(21)(a) who is able to demonstrate to the Department that, since January 1, 1990, the plastic parts 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(21)(i).~~

~~2. any person subject to 310 CMR 7.18(21)(a) who, according to the Department, has complied with 310 CMR 7.18(17) prior to January 1, 1993.~~

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;
- 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.

~~(d)~~ Extensions. ~~1. Any person subject to 310 CMR 7.18(21)(b)1. or 2. may apply in writing to the Department for a non-renewable extension of the implementation deadline in 310 CMR 7.18(21)(b)1. or 2. by complying with 310 CMR 7.18(21)(g). 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 310 CMR 7.18(21)(f).~~

~~2. The Department will consider a non-renewable extension of the deadline in 310 CMR 7.18(21)(b)1. or 2. for persons applying under 310 CMR 7.18(21)(c) until no later than March 9, 2021 January 1, 1995, 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. 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(21)(e)2. through toxics use reduction techniques; and,~~
- ~~d. the emission control plan must also contain contingency measures to meet the RACT emission limits of 310 CMR 7.18(21)(e)1.; such measures must automatically take effect if the emissions reductions achieved by toxics use reduction techniques do not satisfy 310 CMR 7.18(21)(e)2.~~

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).

~~(e)~~ RACT Emissions Limitations.

~~1. If a person subject to 310 CMR 7.18(21)(b) does not use add-on air pollution control equipment to implement RACT, then the person shall comply with the emissions limitations in Table 310 CMR 7.18(21)(e)1. If more than one emission limitation applies to any one coating, then that coating must comply with the least stringent emission limitation.~~

Table 310 CMR 7.18(21)(e)1. RACT Emission Limitation for Surface Coating of Plastic Parts using Low/no VOC Coatings	
Emission Source	Emission Limitation (lbs VOC/gal solids as applied)
Business Machines/Miscellaneous Plastic Parts	
— Color coating	3.4
— Color/texture coating	3.4
— Primer Coating	1.4
— EMI/RFI	8.8
Automotive Interior Parts Coating	
— Colorecoat	5.7
— Primer	6.7
Automotive Exterior Flexible Parts Coating	
— Colorecoat	9.3
— Clearcoat	6.7
— Primer	11.6
Automotive Exterior Rigid (non-flexible) Parts Coating	
— Colorecoat	9.3
— Clearcoat	6.7
— Primer	6.7

2. If a person subject to 310 CMR 7.18(21)(b) does use add-on air pollution control equipment to implement RACT, then the person shall comply with the emissions limitations in Table 310 CMR 7.18(21)(e)2. If more than one emission limitation applies to anyone coating, then that coating must comply with the least stringent emission limitation.

Table 310 CMR 7.18(21)(e)2. RACT Emission Limitation for Surface Coating of Plastic Parts using Add-on Air Pollution Controls	
Emission Source	Emission Limitation (lbs VOC/gal solids as applied)
Business Machines/Miscellaneous Plastic Parts	
— Color coating	1.7
— Color/texture coating	1.7
— Primer Coating	1.4
— EMI/RFI	1.9
Automotive Exterior Flexible Parts Coating	
— Colorecoat	2.8
— Clearcoat	2.4
— Primer	4.8
Automotive Exterior Rigid (non-flexible) Parts Coating	
— Colorecoat	2.8
— Clearcoat	2.4
— Primer	3.6

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. 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 (2-pack)	0.42	3.5	0.80	6.67
Military Specification (1-pack)	0.34	2.8	0.54	4.52
Military Specification (2-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

Table 310 CMR 7.18(21)(d)1.b. RACT Emission Limitations for Automotive/Transportation Coatings¹				
	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

¹For 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 Coat¹	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

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).

(f) Plan Submittal Requirements. Any person who owns, leases, operates or controls a plastic parts coating line(s) subject to 310 CMR 7.18(21)(a) must submit an emissions control plan, and have the plan approved by the Department under 310 CMR 7.18(20).

(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).**

(g) Continuous Compliance. Any person who owns, leases, operates or controls a coating line(s) subject to 310 CMR 7.18(21)(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 approved by the Department.

(h) Recordkeeping Requirements. Any person ~~who owns, leases, operates or controls a coating line(s)~~ subject to 310 CMR 7.18(21)(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 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 ~~who owns, leases, operates or controls a coating line(s)~~ 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 ~~and/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.

Amend subsection 310 CMR 7.18(24) as follows:

(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~~ies in its entirety~~ 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) Reasonably Available Control Technology Requirements. On or after January 1, 1994, unless exempted by 310 CMR 7.18(24)(e) or granted a non-renewable extension by the Department under 310 CMR 7.18(24)(d), no person subject to 310 CMR 7.18(24)(a) shall cause, suffer, allow or permit emissions flat wood paneling surface coating line in excess of the emission limitations set forth in either 310 CMR 7.18(24)(e).~~

~~(e)~~ Exemptions.

1. The requirements of 310 CMR 7.18(24)(b)1. do not apply to:
 - ~~1.~~ 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
 - 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)(i).
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.

~~(d)~~ Extensions.

1. Any person subject to 310 CMR 7.18(24)(b) may apply in writing to the Department for a non-renewable extension of the implementation deadline in 310 CMR 7.18(24)(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 310 CMR 7.18(24)(f).

~~2. The Department will consider a non-renewable extension of the deadline in 310 CMR 7.18(24)(b) until no later than January 1, 1995, provided the emission control plan submitted for approval 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(24)(c) 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(24)(c); such measures must automatically take effect if the emissions reductions achieved through toxics use reduction techniques do not satisfy 310 CMR 7.18(24)(c).~~

Any person subject to 310 CMR 7.18(24)(a)2. may apply in writing to the Department for a non-renewable 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 non-renewable 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).

(ed) Reasonably Available Control Technology Requirements.

- 1. Any person subject to 310 CMR 7.18(24)(~~ba~~)1. shall comply with the emissions limits in Table 310 CMR 7.18(24)(~~ed~~)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)(ed) <u>1</u> . RACT Emission Limitations for <u>Flat Wood Paneling</u> Surface Coating of Flat Wood Panels	
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. 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

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).

(f) Plan Submittal Requirements. Any person who owns, leases, operates or controls a flat wood paneling surface coating line(s) subject to 310 CMR 7.18(24)(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 flat wood paneling surface coating line(s) subject to 310 CMR 7.18(24)(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.

(hg) Recordkeeping Requirements. Any person who owns, leases, operates or controls a flat wood paneling surface coating line(s) subject to 310 CMR 7.18(24)(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 (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.

(ih) Testing Requirements. Any person ~~who owns, leases, operates or controls a flat wood paneling surface coating line(s)~~ 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 ~~and/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.

Amend subsection 310 CMR 7.18(25) as follows:

(25) Offset Lithographic Printing and Letterpress Printing.

(a) Applicability.

1. On or after January 1, 1994, ~~310 CMR 7.18(25) applies in its entirety to~~ 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). Facilities subject to 310 CMR 7.26(20) are not subject to 310 CMR 7.18(25)
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).
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.] On or after January 1, 1994, unless exempted by 310 CMR 7.18(25)(e), or granted a non-renewable extension by the Department under 310 CMR 7.18(25)(d), no person subject to 310 CMR 7.18(25)(a) shall cause, suffer, allow, or permit emissions of volatile organic compounds in excess of the emission limitations and standards set forth in 310 CMR 7.18(25)(e) through (l).~~

(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:

- a1. ia. 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~~**b.** 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~~**e.** provided the person complies with 310 CMR 7.18(25)(k), (~~m~~**l**), and (p).

~~b~~**2.** any person subject to 310 CMR 7.18(25) (~~a~~**b**)**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). 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 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 January 1, 1995 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,

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,

ed. implementation of the **emission control** plan ~~must~~ **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) through (f) 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(25)(e) through (f); such measures must automatically take

~~effect if the emissions reductions achieved through toxics use reduction techniques do not satisfy 310 CMR 7.18(25)(e) through (l) or achieve an 85% reduction.~~

(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:

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 alcohopropanol in the fountain solution, shall:

1. maintain a VOC concentration of 5% or less by volume, as applied, in the fountain solution; or,
2. maintain a VOC concentration of 8% or less by volume, 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 alcohopropanol in the fountain solution, shall:

1. Maintain a VOC concentration of 1.6% or less by volume, as applied, in the fountain solution; or,
2. Maintain a VOC concentration of 3% or less by volume, 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 per cent alcohopropanol in the fountain solution, and shall maintain a total VOC concentration in the fountain solution of 2.5% ~~cent~~ or less by weight.

(j) Alcohopropanol 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 alcohopropanol substitutes, containing a concentration of VOC in the fountain solution at 3.0% by volume 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)(a), 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.

(ml) Work Practices and Emission Limitations for Printing and Cleaning Operations Cleaning Solution Requirements. Any person subject to 310 CMR 7.18(25)(a), 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 **and/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). Cleaning solutions shall be transported and stored in tightly covered containers; and,**
2. **Cleaning rags used in conjunction with the cleaning solutions shall be placed, when not in use, in tightly covered containers and collected for proper disposal or recycle.**
3. **Any person subject to 310 CMR 7.18(25) shall only use c**Cleanup solutions **as used at the press shall that** either:
 - a. **(i) do** not exceed **30**70% by weight VOC; or
 - b. **(ii) have** a VOC composite partial pressure of 10 mmHg or less at 20°C (68°F).

(nm) 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 must submit an emission control plan, and have the plan approved by the Department under** 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).**

(n) Continuous Compliance. Any person subject to 310 CMR 7.18(25)(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).**

(o) Recordkeeping Requirements. Any person subject to 310 CMR 7.18(25)(a) shall **prepare and** maintain **daily** 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. **alcoh**Propanol;
 - b. **alcoh**Propanol substitutes;
 - c. **F**fountain concentrate;
 - d. **P**printing Ink; **and**
 - e. **C**leaning 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); **and,**
3. For offset lithographic printing presses the percent of VOC by volume in the fountain solution as monitored whenever new fountain solution is mixed, **alcohpropanol** is added to the fountain solution, or daily, whichever is more frequent; **and,**
4. For offset lithographic printing presses subject to the refrigeration requirements of 310 CMR 7.18(25)(**fg**) or (h), the temperature of the fountain solution as recorded on a once per shift basis; **and,**
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.); **and,**
6. Total VOC content of **all** materials **all** 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 ~~and~~ 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.**

Amend subsection 310 CMR 7.18(30) as follows:

(30) **Adhesives and Sealants**

(a) **Applicability**

...

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:
 - 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; ~~and~~
 - 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.**

Add a new subsection 310 CMR 7.18(31) as follows:

(31) **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.
- d. cleaning conducted as part of the following:
 - i. performance laboratory tests on coatings, adhesives, or inks;
 - ii. research and development programs; and
 - iii. laboratory tests in quality assurance laboratories, excluding commercial laboratories that provide laboratory services for third parties;
- 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; and
- 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.
- (c) Extensions. Any person subject to 310 CMR 7.18(31)(a)1. may apply in writing to the Department for a non-renewable 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 non-renewable 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.

<u>Table 310 CMR 7.18(31)(d)1.</u>		
<u>RACT Emission Limitations for Industrial Cleaning Solvent Operations</u>		
<u>Industrial Cleaning Solvent Operation Category</u>	<u>VOC content limitation as applied</u>	
	<u>pounds/gallon</u>	<u>grams/liter</u>
<u>Electrical and electronic components</u>	<u>0.83</u>	<u>100</u>
<u>Electronic or electrical cables</u>	<u>3.32</u>	<u>400</u>
<u>Product cleaning during manufacturing process, or repair and maintenance cleaning</u>	<u>0.42</u>	<u>50</u>
<u>Surface preparation for coating or ink application</u>		
<u>Cleaning not otherwise specified</u>		

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.

Add a new subsection 310 CMR 7.18(32) as follows:

(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 this regulation.

(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.

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-percent 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.

<u>Table 310 CMR 7.18(32)(e)1.</u>		
<u>Compliant Materials Monomer VOC Content Limitations for Open Molding Resins and Gel Coats</u>		
<u>Material Used</u>	<u>Application Method</u>	<u>Monomer VOC Content Limitation (weight percent, as applied)</u>
<u>Production Resin</u>	<u>Atomized (spray)</u>	<u>28</u>
<u>Production Resin</u>	<u>Non-atomized</u>	<u>35</u>
<u>Pigmented gel coat</u>	<u>Any method</u>	<u>33</u>
<u>Clear gel coat</u>	<u>Any method</u>	<u>48</u>
<u>Tooling resin</u>	<u>Atomized</u>	<u>30</u>
<u>Tooling resin</u>	<u>Non-atomized</u>	<u>39</u>
<u>Tooling gel coat</u>	<u>Any method</u>	<u>40</u>

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:

$$\text{Weighted-average monomer VOC content} = \sum_{i=1}^n (M_i \text{ VOC}_i) / \sum_{i=1}^n (M_i)$$

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:

$$\text{Allowable Monomer VOC Limitation} = 46(M_R) + 159(M_{PG}) + 291(M_{CG}) + 54(M_{TR}) + 214(M_{TG})$$

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.

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

\equiv consecutive 12-month period, in kilograms per megagram as calculated using Equation 4;
 $M_{PG} \equiv$ the mass of pigmented gel coat used in the past consecutive 12-month period, in megagrams;
 $PV_{CG} \equiv$ 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;
 $M_{CG} \equiv$ the mass of clear gel coat used in the past consecutive 12-month period, in megagrams;
 $PV_{TR} \equiv$ 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;
 $M_{TR} \equiv$ the mass of tooling resin used in the past consecutive 12-month period, in megagrams;
 $PV_{TG} \equiv$ 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;
 \equiv and
 $M_{TG} \equiv$ the mass of tooling gel coat used in the past consecutive 12-month period, in megagrams.

Equation 4:

$$PV_{OP} = \sum_{i=1}^n (M_i PV_i) / \sum_{i=1}^n (M_i)$$

where:

$M_i \equiv$ the mass of resin or gel coat i used within an operation in the past consecutive 12-month period, in megagrams;
 $n \equiv$ the number of different open molding resins and gel coats used within an operation in the past consecutive 12-month period;
 $PV_i \equiv$ 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
 $PV_{OP} \equiv$ 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		
<u>Material Used</u>	<u>Application Method</u>	<u>Equation to Calculate Monomer VOC Emission Rate PV_i (kg of monomer VOC per Mg of material applied) \equiv</u>
<u>Production resin, tooling resin</u>	<u>Atomized</u>	<u>$0.014 \times (\text{Resin VOC}\%)^{2.425}$</u>
	<u>Atomized, plus vacuum bagging with roll-out</u>	<u>$0.01185 \times (\text{Resin VOC}\%)^{2.425}$</u>
	<u>Atomized, plus vacuum bagging without roll-out</u>	<u>$0.00945 \times (\text{Resin VOC}\%)^{2.425}$</u>
	<u>Non-atomized</u>	<u>$0.014 \times (\text{Resin VOC}\%)^{2.275}$</u>
	<u>Non-atomized, plus vacuum bagging with roll-out</u>	<u>$0.0110 \times (\text{Resin VOC}\%)^{2.275}$</u>
	<u>Non-atomized, plus vacuum bagging without roll-out</u>	<u>$0.0076 \times (\text{Resin VOC}\%)^{2.275}$</u>
<u>Pigmented gel coat, clear gel coat, tooling gel coat</u>	<u>All methods</u>	<u>$0.445 \times (\text{Gel coat VOC}\%)^{1.675}$</u>

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 five percent 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.

(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; 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.

Amend subsections 310 CMR 7.26(20) – (29) as follows:

(20) Environmental Results Program: Lithographic, ~~Gravure, Letterpress, Flexographic~~Graphic Arts, and Screen Printing.

(a) 310 CMR 7.26(20) through (29) sets forth performance standards and recordkeeping requirements for lithographic, ~~gravure, letterpress, flexographic~~graphic arts and screen printing at facilities subject to 310 CMR 7.26(20) through (29) pursuant to 310 CMR 7.26(21).

(b) ~~Facilities subject to 310 CMR 7.26(20) through (29) are not subject to 310 CMR 7.18(12), (14) and (25)[Reserved].~~

(c) By complying with the recordkeeping requirements contained in 310 CMR 7.26(20) through (29), and with the certification requirements contained in 310 CMR 70.00, and by maintaining actual emissions below the levels contained in 310 CMR 7.26(20)(c)1. through 4., the owner/operator of a facility subject to 310 CMR 7.26(20) through (29) restricts the federal potential emissions of the facility to below the applicable major source thresholds. ~~As such, the operations will not be subject to 310 CMR 7.00: Appendix A (Emission Offsets and Nonattainment Review), 310 CMR 7.00: Appendix C (Operating Permit Program), 40 CFR 52.21 (Prevention of Significant Deterioration), and 40 CFR 63 (Maximum Achievable Control Technology).~~ For every rolling 12-month period as defined in 310 CMR 7.26(22), the potential and actual emissions of the facility shall be less than the following limitations:

1. 50 tons of VOC or NO_x, or 100 tons of any other regulated air pollutant;
2. 10 tons ~~per year~~ of any HAP;
3. 25 tons ~~per year~~ of a combination of HAPs; and
4. Any lesser threshold for a single HAP that the EPA may establish by rule.

(21) Applicability.

(a) The provisions of 310 CMR 7.26(20) through (29) apply to the owner or operator of each facility ~~in 310 CMR 7.26(20) with; except those facilities subject to 310 CMR 7.00: Appendix C:~~

- ~~1. with one or more screen or lithographic printing presses with a primary Standard Industrial Classification code of 23, 27 or under the new North American Industry Classification System (NAICS); 323110, or 323119,~~
- ~~2. with one or more gravure, flexographic, or letterpress printing presses with a primary Standard Industrial Classification code of 27 or under the new NAICS; 323111, 323112, or 323119, or,~~
- ~~3. with one or more printing presses with a primary Standard Industrial Classification code of 26 or under the new NAICS; 323113 or 323119.~~

1. a primary 2012 North American Industry Classification System (NAICS) code of 323111 "Commercial Printing (except Screen and Books)," 323113 "Commercial Screen Printing," or 323117 "Books Printing;" and

2. one or more screen, lithographic, gravure, flexographic, or letterpress printing presses.

(b) The provisions of 310 CMR 7.26(20) through (29) do not apply to the owner or operator of a facility that performs lithographic, gravure, flexographic, letterpress, or screen printing with a primary ~~Standard Industrial Classification code or~~ 2012 NAICS code different from those listed in 310 CMR 7.26(21)(a).

(22) Definitions: The definitions found in 310 CMR 7.00 apply to 310 CMR 7.26(20) through (29). The following words and phrases shall have the following meanings as they appear in 310 CMR 7.26(20) through (29). Where a term is defined in the 310 CMR 7.00 Definitions section and the definition also appears in 310 CMR 7.26(22), the definition found in 310 CMR 7.26(22) controls.

...

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

...

Large Printer means a printer that

(a) uses a total of more than 3,000 gallons of cleanup solution and inks/coatings/adhesives with a VOC content greater than 10% by weight as applied, per rolling 12 month period or

(b) after March 9, 2020, emits more than ten tons of VOC facility-wide per rolling 12 month period based on materials used before the application of air pollution control equipment.

Incidental material, ink used in non-heatset offset lithographic printing, water-based ink/coating/adhesive, plastisol, electron beam ink and ultraviolet ink are excluded from this calculation.

...

Midsize Printer means a printer that

(a) uses a total of more than 275 and no more than 3000 gallons of cleanup solution and inks/coatings/adhesives with a VOC content greater than 10% by weight as applied, per rolling 12 month period;~~;~~ **or that**

(b) uses a total of more than 55 gallons of alcohol per rolling 12 month period and a total of no more than 3000 gallons of cleanup solution, and inks/coatings/adhesives with a VOC content greater than 10% by weight as applied, per rolling 12 month period; **or**

(c) **after March 9, 2020, does not meet the definition of a large printer and 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 offset lithographic printing operations and related cleaning operations, or letterpress printing operations and related cleaning operations.**

Incidental material, ink used in non-heatset offset lithographic printing, water-based ink/coating/adhesive, plastisol, electron beam ink and ultraviolet ink are excluded from this calculation.

Non-conforming Operation means a press or presses that use(s) ink, coating, or adhesive which do not meet the standards established in 310 CMR 7.26(24)(d), 310 CMR 7.26(25)(a), or 310 CMR 7.26(26)(a) at a printer who has demonstrated that it is technically or economically infeasible to use ink, coating, or adhesive that meets those standards.

...

Rolling 12 Month Period ~~or Rolling 12 Month Period~~ means any consecutive 12 month period of time.

SDS means a Safety Data Sheet.

...

Small Printer means a printer; **that**

(a) **does not qualify as a Very Small Printer; and that**

(b) 1. uses a total of no more than 275 gallons of cleanup solution and inks/coatings/adhesives with a VOC content greater than 10% by weight as applied per rolling 12 month period;~~;~~ **and that**

2. uses less than or equal to 55 gallons of alcohol per rolling 12 month period.

Incidental material, ink used in non-heatset offset lithographic printing, water-based ink/coating/adhesive, plastisol, electron beam ink and ultraviolet ink are excluded from this calculation.

...

[Note to reviewer: a related "Very Small Printer" definition is included in a related proposed ERP regulation package.]

Very Small Printer means a printer that

(a) **is connected to municipal sewer;**

(b) **uses a total of no more than 55 gallons of cleanup solution and inks/coatings/adhesives with a VOC content greater than 10% by weight as applied per rolling 12 month period;**

(c) **uses no more than 55 gallons of alcohol per rolling 12 month period; and**

(d) **generates no more than 55 gallons of hazardous waste per rolling 12 month period.**

Incidental material, ink used in non-heatset offset lithographic printing, water-based ink/coating/adhesive, plastisol, electron beam ink and ultraviolet ink are excluded from the calculation in (b).

(23) Rules for Permitted Facilities:

(a) Each printing press shall be operated on or after May 1, 1998 in compliance with the standards and requirements set forth in 310 CMR 7.26(20) through (29) except in the following situations:

1. ~~[Reserved.] if a non-heatset press or conforming operation is covered by a plan approval pursuant to 310 CMR 7.02(1) or a permit pursuant to 310 CMR 7.02(9) issued prior to May 1, 1998, then the non-heatset press or conforming operation may be operated in compliance with that plan approval or permit in lieu of operating in compliance with 310 CMR 7.26(20)~~

~~through (28) until May 1, 2001, at which time the non-heatset press or conforming operation shall be operated in compliance with 310 CMR 7.26(20) through (29), and the conditions of the plan approval or permit as it pertains to the non-heatset or conforming operation shall automatically expire.~~

2. if a heatset press or non-conforming operation at a facility that, based on materials used before the application of air pollution control equipment, emits no more than ten tons of VOCs facility-wide on a rolling 12 month period, is covered by a plan approval pursuant to 310 CMR 7.02(1) issued prior to May 1, 1998, then the heatset press or non-conforming operation may either be operated in compliance with that plan approval or operated in compliance with the applicable requirements set forth in 310 CMR 7.26(27)(a)1. and 2., **except to the extent applicable requirements of 310 CMR 7.18 become more stringent than those in the plan approval or 310 CMR 7.26.**

3. if a heatset press or non-conforming operation at a facility that, based on materials used before the application of air pollution control equipment, emits more than ten tons of VOCs facility-wide on a rolling 12 month period, is covered by a plan approval pursuant to 310 CMR 7.02(1) or a permit pursuant to 310 CMR 7.02(9), then that heatset press or nonconforming operation shall be operated in compliance with the terms and conditions of that plan approval or permit, **except to the extent applicable requirements of 310 CMR 7.18 or 7.26 become more stringent than those in the plan approval or permit.**

4. The following provisions take effect on March 9, 2020: 310 CMR 7.26(24)(a)1.b., (24)(a)2.a.ii., (25)(b)2.b., (28)(b)5., and (28)(c)6.

(24) Standards for Non-heatset Offset Lithographic Printing:

(a) Fountain solution standards for midsize and large printers: The following standards apply to midsize and large printers, except that they do not apply to the fountain solution in a press with a fountain solution reservoir that holds less than or equal to one gallon. Printers may calculate the percent of alcohol in fountain solution using the methodology set forth in 310 CMR 7.26(24)(a)3.:

1. For Web-fed Presses: fountain solution shall

a. not contain any alcohol; and

b. contain no more than 5% alcohol substitutes by weight as applied.

2. For Sheet-fed Presses, **except for a sheet-fed press with maximum sheet size of 11 by 17 inches or smaller:**

a. unrefrigerated fountain solution ~~containing alcohol~~ shall **either:**

i. contain no more than 5.0% VOC by weight as applied; including but not limited to alcohol; or

ii. contain no more than 5% alcohol substitutes by weight as applied and contain no alcohol; and;

b. refrigerated fountain solution ~~containing alcohol~~ shall contain no more than 8% VOC by weight **as applied, including but not limited to alcohol,** and shall be refrigerated to a temperature of less than 60° F.

3. Fountain Solution Weekly Averaging: ~~A printer may elect to meet a calendar week average VOC content for fountain solution at an individual press in demonstrating compliance with 310 CMR 7.26(24)(a)2.. In doing so, a printer shall calculate the average VOC content for fountain solution per calendar week using the following formula:~~

$$VOC_w = \frac{W_1Voc + W_2Voc + W_3Voc}{W_T}$$

where:

VOC_w = Weight percent of VOC

W_1Voc = Weight of VOC in Concentrate

W_2Voc = Weight of VOC in Additive

W_3Voc = Weight of VOC added

W_T = Total Weight of fountain solution

(b) Fountain solution tank standard: Fountain solution mixing and storage tanks shall be covered, except when adding or removing solution.

(c) Work Practices and Emission Limitations for Printing and Cleaning Operations Cleanup solution standard:

1. Any person subject to 310 CMR 7.26(20) shall comply with the work practices of 310 CMR 7.18(31)(e).

2. Cleanup solution used to clean an offset lithographic printing press shall meet at least one of the following standards, except that these standards do not apply to incidental materials:

cleanup solution either

a. shall not exceed ~~30~~ 70% VOC by weight as applied, calculated pursuant to EPA test method 24,² or

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

2. cleanup solution shall be kept in covered containers during transport and storage, and

3. shop towels contaminated with cleanup solution shall be kept, when not in use, in covered containers.

(d) Adhesive standard for midsize and large printers: Adhesives shall meet the following limit for VOC content, expressed in grams VOC per liter of product as applied (pounds per gallon), less water:

Adhesive	300 (2.5)
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(25) Graphic Arts Printing: Gravure, Letterpress, and Flexographic Printing:

(a) Ink, coating, and adhesive standards for midsize and large printers: The following standards apply to midsize and large printers. Inks, coatings, and adhesives, except incidental materials, shall meet the following limits for VOC content, expressed in grams VOC per liter of product as applied (pounds per gallon), less water:

Ink	300 (2.5)
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Coating	300 (2.5)
---------	-----------

Adhesive	150 (1.25)
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(b) Work Practices and Emission Limitations for Printing and Cleaning Operations Cleanup solution standard:

1. Any person subject to 310 CMR 7.26(20) shall comply with the work practices of 310 CMR 7.18(31)(e).

2. Cleanup solution ~~used to clean a flexographic, gravure, or letterpress printing press~~ shall meet the following standards, except that these standards do not apply to incidental materials:

a1. cleanup solution shall have a VOC composite partial pressure of 25 mm Hg or less at 20°C (68°F);² and

b. cleanup solution used to clean a letterpress printing press at a midsize or large printer, as of the effective date in 310 CMR 7.26(23)(a)4., shall:

i. have a VOC composite partial pressure of less than 10 mm Hg at 20°C (68°F); or

ii. contain less than 70% VOC by weight.

2. cleanup solution shall be kept in covered containers during transport and storage, and

3. shop towels contaminated with cleanup solution shall be kept, when not in use, in covered containers.

(26) Screen Printing:

(a) Ink, coating, and adhesive standards for midsize and large printers: The following standard applies to midsize and large printers. Inks, coatings, and adhesives, except incidental materials, used in screen printing shall meet the following limits for VOC content, expressed in grams VOC per liter of product as applied (pounds per gallon), less water:

Ink	400 (3.3)
-----	-----------

Coating	400 (3.3)
---------	-----------

Adhesive	400 (3.3)
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Extreme Performance Ink/Coating	800 (6.7)
Metallic Ink	400 (3.3)
Conductive Ink	850 (7.1)

(b) **Work Practices and Emission Limitations for Printing and Cleaning Operations Cleanup solution standard:**

1. Any person subject to 310 CMR 7.26(20) shall comply with the work practices of 310 CMR 7.18(31)(e).

2. Cleanup solution used in screen printing shall have a VOC composite partial pressure of 5.0 mm Hg or less at 20°C (68°F) meet the following standards, except that these standards does not apply to incidental materials:

1. cleanup solution shall have a VOC composite partial pressure of 5.0 mm Hg or less at 20°C (68°F),

2. cleanup solution shall be kept in covered containers during transport and storage, and

3. shop towels contaminated with cleanup solution shall be kept, when not in use, in covered containers.

(27) **Printers with Heatset Presses or Non-conforming Operations:**

...

(b) A printer that emits no more than ten tons of actual VOCs facility-wide on a rolling 12 month period based on approved control equipment or other enforceable restrictions contained in a plan approval or permit issued pursuant to 310 CMR 7.02(1) or 310 CMR 7.02(9), including but not limited to production and operational restrictions, may install one or more heatset presses or non-conforming operations without obtaining a plan approval or permit pursuant to 310 CMR 7.02(1) or 310 CMR 7.02(9) for the new press(es) or operation(s) provided that:

1. installation of the new heatset press(es) or non-conforming operation(s) will not result in more than ten tons per year (TPY) of actual VOC emissions facility-wide on a rolling 12 month period based on:

ai. raw material inputs associated with the new press(es) or operation(s); and

bii. with respect to existing heatset press(es) or non-conforming operation(s), approved control equipment or other enforceable restrictions, including but not limited to production and operational restrictions; and,

2. with respect to the new press(es) or operation(s), the printer complies with the requirements set forth in 310 CMR 7.26(27)(a)1. and 2.;

(c) A printer that emits more than ten tons of actual VOCs facility-wide on a rolling 12 month period based on raw material inputs or enforceable restrictions contained in a plan approval or permit issued pursuant to 310 CMR 7.02(1) or 310 CMR 7.02(9), including but not limited to production and operational restrictions, shall, with respect to heatset press(es) or non-conforming operation(s), comply with the terms and conditions of a plan approval or permit issued pursuant to 310 CMR 7.02(1) or 310 CMR 7.02(9), **except to the extent applicable requirements of 310 CMR 7.18 or 7.26 become more stringent than those in the plan approval or permit.**

...

(28) **Recordkeeping:** Each printer shall maintain records sufficient to demonstrate compliance. Such records shall be kept on-site for at least ~~three~~five years, and shall be made available to representatives of the Department upon request. Such records shall include, but are not limited to, the following:

(a) Each small printer **and very small printer** shall maintain:

1. monthly purchase or usage records sufficient to demonstrate that the printer is a small printer **or very small printer**, including but not limited to records concerning cleanup solutions, alcohol, inks, coatings, adhesives and incidental materials, excluding water-based inks/coatings/adhesives, **electron beam inks**, ultraviolet inks, plastisol inks, and inks used in non-heatset offset lithographic printing;

...

3. for water-based inks/coatings/adhesives, **electron beam inks**, ultraviolet inks, and plastisol inks, ~~MSDSs~~ or other records demonstrating that the ink/coating/adhesive is water-based, **electron beam**, ultraviolet, or plastisol as applicable.

(b) Each midsize printer shall maintain:

1. monthly purchase or usage records sufficient to demonstrate that the printer is a midsize printer, including but not limited to records concerning cleanup solutions, inks, coatings, adhesives, and incidental materials, excluding water-based inks/coatings/adhesives, **electron beam inks**, ultraviolet inks, plastisol inks, and inks used in non-heatset offset lithographic printing;

...

4. ~~calculations performed pursuant to 310 CMR 7.26(24)(a)3;~~

~~5.~~ the daily temperature of fountain solutions required to be refrigerated pursuant to 310 CMR 7.26(24)(a)2.b. when alcohol content is greater than 5% by weight;

5. records of the percent by weight of alcohol substitutes in fountain solution as determined each time alcohol substitutes are used to mix a new batch of fountain solution and each time alcohol substitutes are added to fountain solution on-press, based on analytical data, and the proportions of the constituents mixed;

6. for water-based inks/coatings/adhesives, **electron beam inks**, ultraviolet inks, and plastisol inks, ~~MSDSs~~ or other records demonstrating that the ink/coating/adhesive is water-based, **electron beam**, ultraviolet, or plastisol as applicable; and,

7. printers using alcohol-free fountain solution on web-fed or sheetfed non-heatset offset lithographic printing presses, records (e.g., ~~MSDSs~~) demonstrating that the fountain solution constituents are alcohol-free.

(c) Each large printer shall maintain:

1. monthly purchase or usage records sufficient to demonstrate that the printer is a large printer, including but not limited to records concerning cleanup solutions, inks, coatings, adhesives and incidental materials, excluding water based inks/coatings/adhesives, **electron beam inks**, ultraviolet inks, plastisol inks, and inks used in non-heatset offset lithographic printing;

...

3. a calculation of actual emissions per calendar month based on ~~all~~ all VOC and each HAP containing compounds used at the facility. VOC emissions from non-heatset, **non-vegetable-based** inks used in lithography shall be calculated by assuming that 5% of the inks' VOCs are emitted to the atmosphere and 95% are retained in the paper. VOC emissions from heatset, **non-vegetable-based** inks used in lithography shall be calculated by assuming that 80% of the inks' VOCs are emitted to the atmosphere and 20% are retained in the paper. **VOC emissions from vegetable-based inks used in lithography shall be calculated by assuming that none of the inks' VOCs are emitted to the atmosphere and 100% are retained in the paper. VOC emissions from cleaning materials in shop towels shall be calculated by assuming that 50% of the VOCs are emitted to the atmosphere and 50% are retained in the towels, only if VOC composite vapor pressure of the cleaning material is less than 10 mm Hg at 20 °C and cleaning materials and used shop towels are kept in closed containers;**

4. the percent by weight of VOC in fountain solution as ~~measured~~ **determined** each time alcohol or alcohol mix is used to mix a new batch of fountain solution and each time it is added to fountain solution on-press, based on analytical data and the proportions of the constituents mixed;

5. ~~calculations performed pursuant to 310 CMR 7.26(24)(a)3;~~

~~6.~~ the daily temperature of fountain solutions required to be refrigerated pursuant to 310 CMR 7.26(24)(a)2.b. when alcohol content is greater than 5% by weight;

67. records of the percent by weight of alcohol substitutes in fountain solution as determined each time alcohol substitutes are used to mix a new batch of fountain solution

and each time alcohol substitutes are added to fountain solution on-press, based on analytical data, and the proportions of the constituents mixed;

- 7.** for water-based inks/coatings/adhesives, **electron beam inks**, ultraviolet inks, and plastisol inks, **MSDSs** or other records demonstrating that the ink/coating/adhesive is water-based, **electron beam**, ultraviolet, or plastisol as applicable; and,
8. printers using alcohol-free fountain solution on web-fed or sheetfed non-heatset offset lithographic printing presses, records (*e.g.*, **MSDSs**) demonstrating that the fountain solution constituents are alcohol-free.

(29) **Compliance Certification Requirement:**

(a) Beginning on September 15, 2006, each printer, **except very small printers**, shall submit to the Department a compliance certification **on a form prescribed by the Department**, in accordance with 310 CMR 70.00 and 310 CMR 7.26(29). As part of the certification, each large printer shall submit information the Department may specify, including:

1. the nature and amounts of emissions from the facility,
2. information which may be needed to determine the nature and amounts of emissions from the facility, and
3. any other information pertaining to the facility which the Department requires.

(b) **1.** If, during the course of the certification period, a printer installs a new printing press or makes operational changes which will cause a modification of its size classification, the printer shall, within 60 days of operation of the new press or actual operational changes respectively, notify the Department in writing. Such printer shall comply with 310 CMR 7.26(20) through (29) based on the applicable new size classification as soon as the new press is operating or the operational change is made.

2. If, on March 9, 2020 a printer that formerly met the definition of a very small printer or small printer meets the definition of a midsize printer or a large printer, the printer shall, on or before March 9, 2020, notify the Department in writing. Such printer shall comply with 310 CMR 7.26(20) through (29) based on the applicable new size classification on and after March 9, 2020.

(c) If, during the course of the certification period, a printer relinquishes an existing plan approval in accordance with 310 CMR 7.26(23)(a)(~~1~~ or ~~2~~), then within 30 days of such change the printer shall notify the Department in writing.

Amend 310 CMR 7.00: Appendix B, as follows:

(4)(b) **Applicability.**

1. 310 CMR Appendix B(4) applies to any person who operates or controls a facility(ies) subject to either 310 CMR 7.18-(3) through (~~67~~), (10) through (12), (14) through (16), (21) through (~~267~~), (~~30~~)(c)7., (~~31~~) or 310 CMR 7.19(4), (5), (7), (8), (12), that set an emission limitation in either pounds of VOC per gallon of solids applied or pounds of NO_x per million Btu of heat input, respectively, and who chooses to comply by emission averaging.

7.00: Definitions

Add the following definition after the definition for AMBIENT AIR SPACE:

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

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 ~~requirement of 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 emissions unit that has a permit restriction prohibiting it from operating between May 1 and September 30 of each year and restricting potential emissions to less than 50 tons per year of NO_x from the emissions unit.

3. Any boiler having an energy input capacity of less than 20,000,000 Btu per hour provided that potential emissions from the emissions 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 ~~said~~such approval establishes BACT or LAER to be no less stringent than the RACT ~~applicable to the~~for a 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 ~~point~~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 calendar 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 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.

(b) Any person unable to comply with emission standards under 310 CMR 7.19(4)(~~b~~), (~~5~~), (7)(~~b~~), (8)(~~d~~) or (9) may submit an application under 310 CMR 7.19(3) for a source specific alternative RACT; ~~said~~Such application ~~to~~shall be submitted to the Department for approval no later than September 5, 2018~~by April 1, 1994 for 310 CMR 7.19(4), and by June 1, 1994 for 310 CMR 7.19(5), (7) or (8) and by May 1, 1999 for 310 CMR 7.19(9) for Department, and EPA approval. For any person subject to 310 CMR 7.08(2) and is required to submit an Emission Control Plan under 310 CMR 7.08(2), a separate Emission Control Plan to demonstrate compliance with 310 CMR 7.19(9) is not required. On and after May 31, 1995, 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. drylow-NO_x combustors;
7. ignition timing retard;
8. low emission combustion for reciprocating internal combustion engines;
- ~~8-9.~~ separate circuit after-cooling;
- ~~9-10.~~ fuel emulsification;
- ~~10-11.~~ fuel switching;

- ~~11.12.~~ selective noncatalytic reduction (SNCR);
- ~~12.13.~~ selective catalytic reduction (SCR);
- ~~13.14.~~ nonselective catalytic reduction (NSCR);
- ~~14.15.~~ [gas reburn; and](#)
- ~~15.16.~~ 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)*.

...

(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:

$$AS_{NO_x} = \frac{(HI_1) \times (ES_1) + (HI_2) \times (ES_2) \dots + (HI_N) \times (ES_N)}{HI_1 + HI_2 \dots + HI_N}$$

AS_{NO_x} is the annual standard for nitrogen oxides derived from all fuels fired during the baseyear.

HI_1 is the heat input for fuel 1 in Btu during the baseyear.

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 baseyear.

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 1 through September 30 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 baseyear. 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 NOx RACT emission standard to the lower of the actual emissions or the allowable NOx 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(2)(b), (4), (11) or (12) shall submit an emission control plan by April 1, 1994, any person subject to 310 CMR 7.19(5), (7) or (8) shall submit an ECP by June 1, 1994 for Department approval prior to implementation of RACT, and any person subject to 310 CMR 7.19(9) shall submit an Emission Control Plan by September 5, 2018May 1, 1999 for Department approval in accordance with 310 CMR 7.19(9)(b). Any person submitting an Emission Control Plan to satisfy 310 CMR 7.08(2) is not required to submit a separate Emission Control Plan to demonstrate compliance with 310 CMR 7.19.~~

~~3. Any person using ERCs in accordance with 310 CMR 7.19(2)(b)16. shall submit an Emission Control PlanAny person who has received a plan approval under 310 CMR 7.02(1) since January 1, 1990 is exempt from submitting an emission control plan, if that approval requires compliance with 310 CMR 7.19 for the entire facility. A plan application under 310 CMR 7.02(1) is not required in order to implement NOx RACT, except for boilers complying with the repowering provision under 310 CMR 7.19(4)(b).~~

~~Any person subject to 310 CMR 7.19 who is required to submit an emissions control plan by April 1, 1994 or June 1, 1994 as applicable pursuant to 310 CMR 7.19(2), who applies to the Department for restricted emission status (RES) pursuant to 310 CMR 7.02(9)(a)(4), is not required to submit an emission control plan until the Department has acted on the RES application, and has determined whether the facility is subject to 310 CMR 7.19.~~

~~(b) Notification.~~ Any person subject to 310 CMR 7.19(6) shall 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).

(eb) 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 O₂ 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), ~~(5)(d) or (7)(a)~~4.
 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;
 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.

~~(dc)~~ 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), 7.19(4)(~~bc~~) or 7.19(12), must meet the following requirements in addition to the requirements under 310 CMR 7.19(3)(~~eb~~). ~~For any person applying under 310 CMR 7.19(4)(b), these additional requirements are only for determining RACT for the period from May 31, 1995 until May 1, 1999. After April 30, 1999, 310 CMR 7.19(4)(b)3. will apply.~~

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)(~~cd~~)1., including technical and economic considerations.

~~(ed)~~ Approval of an Emission Control Plan. For persons applying under 310 CMR 7.19(2)(b) or (4)(~~bc~~) or 7.19(12) or 7.19(14), where the information submitted in the emission control plan is sufficient to support the emissions limits and the proposed schedule, the Department will publish a notice of public hearing in accordance with M.G.L. c. 30A. The Department shall allow for a 30 day public comment period following the published notice. After the public hearing and the close of the public comment period, the Department will issue a final approval or disapproval of the emission control

plan.

(~~fe~~) 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.

(~~gf~~) 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)(cb)~~ and 7.19(4)(~~de~~).

1. For dry bottom boilers burning coal:
 - a. for tangential fired boilers, 0.38 pounds per million Btu,
 - 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.
 - 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-ft³, 0.30 pounds per million Btu, and
 - b. for boilers with a heat release greater than 70,000 Btu/hour-ft³, 0.40.
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.

(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), 7.19(2)(b), and 7.19(2)(e).

1. For dry bottom boilers burning coal:
 - a. for tangential fired boilers, 0.12 pounds per million Btu,
 - 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;
 - 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-ft³, 0.15 pounds per million Btu, and
 - b. for boilers with a heat release greater than 70,000 Btu/hour-ft³, 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.
- ~~(b) Repowering. Any person subject to 310 CMR 7.19(4)(a), may choose to repower by December 31, 2003 and comply with 310 CMR 7.19(4)(b) rather than 310 CMR 7.19(4)(a). Such person shall enter into an enforceable agreement with the Department prior to June 1, 1994 agreeing to comply with the requirements of 310 CMR 7.19(4)(b).~~
- ~~1. A boiler to be repowered by December 31, 2003 shall not, after May 31, 1995 and before May 1, 1999, cause, suffer, allow or permit emissions from the facility in excess of an emission rate achievable through the implementation of RACT as required in an emission control plan approved under 310 CMR 7.19(3).~~
 - ~~2. The repowered boiler shall be approved under 310 CMR 7.02(1), 310 CMR 7.00: Appendix A or 40 CFR 52.21, unless specifically exempted by those regulations.~~
 - ~~3. The existing or repowered boiler shall not be operated after April 30, 1999 unless it complies with the most restrictive of the following NO_x emissions standards (this limit represents RACT):~~
 - ~~a. For dry bottom, tangential and face fired boilers burning solid fuel, 0.2 pounds per million Btu, based on a one hour average;~~
 - ~~b. For boilers burning oil or gas, 0.1 pounds per million Btu, based on a one hour average;~~
 - ~~c. The averaging time for determining compliance with 310 CMR 7.19(4)(b) shall be one hour. Except that, for boilers utilizing a CEMS that satisfies the requirements of 310 CMR 7.19(13)(b) to determine compliance, compliance shall be based on a calendar day average.~~
 - ~~d. A Best Available Control Technology determination made as part of an approval issued pursuant to 310 CMR 7.02(1) or 40 CFR 52.21 or Lowest Achievable Emission Rate determination made pursuant to 310 CMR 7.00: Appendix A, as applicable.~~
 - ~~e. An applicable New Source Performance Standards (40 CFR 60).~~

(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 can ~~not~~ 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. Notwithstanding 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.

(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), 7.19(2)(e) and 7.19(2)(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.

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 O₂ 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 O₂/CO curve (for gaseous fuels) or O₂/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:

<u>Fuel</u>	<u>Measurement</u>	<u>Value</u>
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.
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.

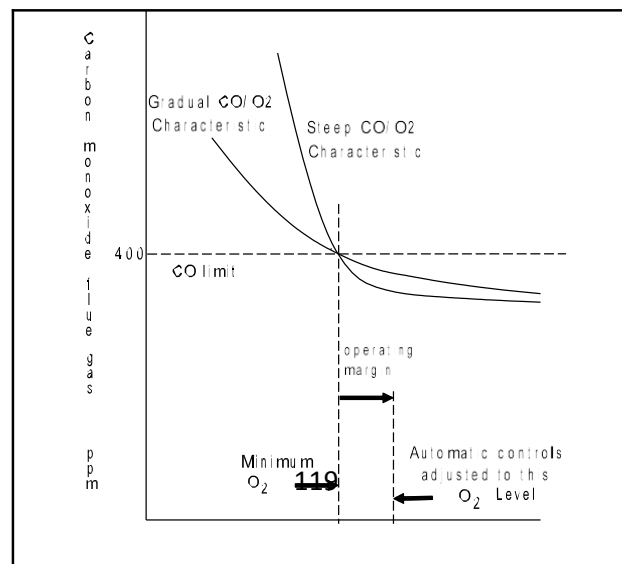
10. Verify that the new settings can accommodate the sudden changes that may occur in daily operation without adverse effects. Do this by increasing and decreasing load rapidly while observing the flame and stack. If any of the conditions in 310 CMR 7.19(6)(a)5. result, reset the combustion controls 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 JJJJJ [40 CFR 63.11223(b) and Table 2] or MACT Subpart DDDDD [40 CFR 63.7540(a)(10) and Table 3] method, may be used, substituted if it is approved, in writing, by the Department and EPA as equivalent.

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. O₂/CO (for gas) or O₂/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.



Flue gas oxygen content-%

Figure 310 CMR 7.19(6) - 1

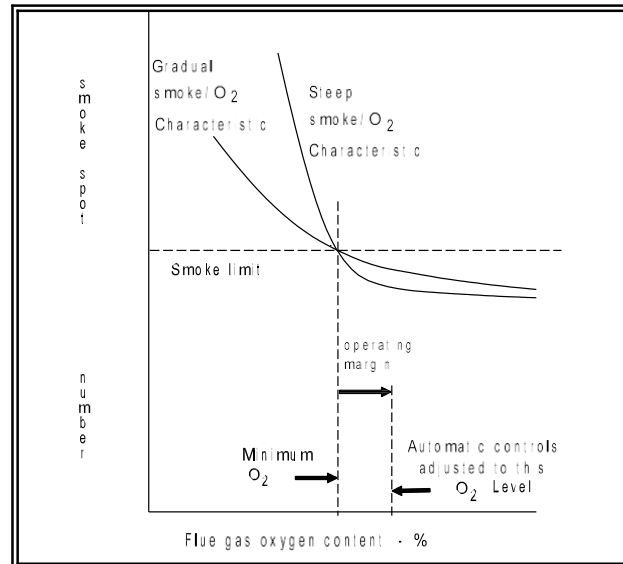


Figure 310 CMR 7.19(6) - 2

(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% O₂, when firing gas, and
 - b. 65 ppmvd NO_x, corrected to 15% O₂, when firing oil, and
 - c. 50 ppmvd CO, corrected to 15% O₂, 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% O₂, when firing gas, and
 - b. 100 ppmvd NO_x, corrected to 15% O₂, when firing oil, and
 - c. 100 ppmvd CO, corrected to 15% O₂, 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 310 CMR 7.19(7)(a)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% O₂, when firing gas, and
 - b. 42 ppmvd NO_x, corrected to 15% O₂, when firing oil, and
 - c. 50 ppmvd CO, corrected to 15% O₂, 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% O₂, when firing gas, and
 - b. 50 ppmvd NO_x, corrected to 15% O₂, when firing oil, and
 - c. 100 ppmvd CO, corrected to 15% O₂, 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.

(bc) 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).

(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), ~~or (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. ~~Emergency standby~~ An engines installed and operated in compliance with 310 CMR 7.02(8)(i), 310 CMR 7.03(10), or 310 CMR 7.26(42) is ~~are~~ exempted from the requirements of 310 CMR 7.19(8). provided:

- ~~1. the engine is not operated more than 300 hours per year, and~~
- ~~2. the engine is not operated as a load shaving unit, peaking power production unit, or standby engine in an energy assistance program.~~

(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 NOx 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.

~~(d)~~(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 NOx 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.

~~(e)~~(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).

...

(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). ~~If the provisions or requirements from 310 CMR 7.27(11) conflict with a provision of 310 CMR 7.19(13), the more stringent of the provisions will apply unless otherwise determined by the Department in the approved emission control plan.~~ 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). ~~Boilers that will be repowered pursuant to 310 CMR 7.19(4)(b) are not subject to the CEMS requirement until May 1, 1999 unless required as the result of the single source SIP revision approving RACT for the period from May 31, 1995 until May 1, 1999.~~
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). ~~Boilers that will be repowered pursuant to 310 CMR 7.19(4)(b) are not required to stack test until May 1, 1999.~~ 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.
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)(~~de~~).

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 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)(~~ed~~).

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).

(b) Continuous Emissions Monitoring Systems (CEMS). Any person required to monitor NO_x emissions (*i.e.*, through NO_x concentrations and the associated diluent concentrations) pursuant to 40 CFR 75, ~~310 CMR 7.27 or 310 CMR 7.28~~ 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. ~~The person subject to 40 CFR 75, 310 CMR 7.27, or 310 CMR 7.28 shall monitor for CO as specified in 310 CMR 7.19(13)(b)1. through (b)12. and use the data reduction procedures contained in either 40 CFR 75 or 310 CMR 7.19(13)(b)9.~~ Any person subject to 40 CFR 75 for NO_x 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 NO_x 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-~~310 CMR 7.27 or 310 CMR 7.28~~ 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)(f), 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 O₂ or CO₂ 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 4 operating hours, including startup and shutdown time). ~~calculate a calendar day average from a block hourly average for each hour the emissions unit is operating and a block hourly average from at least three data points, generated by a CEMS at 15 minute intervals over each one-hour period.~~

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).

~~10~~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 ~~90~~95% of the hours per quarter during which the emission unit is operating;

~~11~~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

~~12~~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. ~~The Department will be required to bring these PMS requirements into compliance with 40 CFR 64, Enhanced Monitoring Requirements, after EPA has finalized those rules.~~

(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 1 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;

In the event none of the above items have occurred such information shall be stated in the report;

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.

~~(4. Reserved)~~ 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 31), and may be included in the fourth quarter RACT quarterly report (due January 30) 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;
7. shall maintain copies of all fuel supplier certifications or fuel oil analyses on site for a period of five years;
8. shall maintain all records required by 310 CMR 7.19(13)(d) for a period of five years in a permanently bound log book or any other form acceptable to the Department including computer retained and generated data; and
9. shall submit compliance records within ten days of written request by the Department or EPA.

...

Text deleted is ~~struck out and bold~~. Text added is **underlined and bold**. Amendments associated with federal Emissions Guidelines are noted with “EG” below. Amendments associated with Reasonably Available Control Technology are noted with “RACT” below.

FINAL AMENDMENTS TO 310 CMR 7.08

Amend 310 CMR 7.08: U Incinerators (1) General.

[add (h) as follows]

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

* * *

Amend 310 CMR 7.08(2) Municipal Waste Combustors. (c) Definitions.

[revise as follows; EG]

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) ~~effective December 19, 1995 and~~ as **last** amended **May 10, 2006**~~October 24, 1997~~. 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) ~~December 19, 1995 and~~ as **last** amended **May 10, 2006**~~October 24, 1997~~.

* * *

Amend 310 CMR 7.08(2)(f) Applicable Requirements. 1. Operating Practices.

[revise b. as follows, incorporating text from federal regulations at 40 CFR 60.58b(m)(2)(i); EG]

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.

* * *

Amend 310 CMR 7.08(2)(f) Applicable Requirements. 2. Metals, Organics and Acid Gases.

[revise Table 1. as follows, deleting provisions that do not apply to Massachusetts MWCs]

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	4-hour
Mass Burn Refractory	100	4-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 4-hour block or 24-hr daily arithmetic averages.

[revise Table 2. as follows, incorporating text from federal regulations at 40 CFR 60.33b; *EG*]

TABLE 2. EMISSION LIMITS FOR MUNICIPAL WASTE COMBUSTOR UNITS

Emission Limits For Large MWC Units ^a	
Particulate Matter (PM)	27 25 mg/dscm
Opacity	10% (6-minute average)
<u>METALS</u>	
Cadmium (Cd)	0.040 0.035 mg/dscm
Lead (Pb)	0.440 0.400 mg/dscm
Mercury (Hg)	0.028 mg/dscm - average of compliance tests conducted in any rolling 12-month period
	<u>0.050 mg/dscm - average of test runs in any quarterly or 9-month compliance test</u>
<u>ACID GASES</u>	
Sulfur Dioxide (SO ₂)	29 ppmv or 75% reduction by weight or volume, whichever is less stringent. Compliance is based on a 24-hr geometric mean.
Hydrogen Chloride (HCl)	29 ppmv or 95% reduction by weight or volume, whichever is less stringent.
<u>ORGANICS: (Total Mass)</u>	
Dioxin/Furan with Electrostatic precipitator (ESP)	60 35 ng/dscm
Dioxin/Furan with Fabric Filter (FF)	30 ng/dscm

^a Corrected to 7% oxygen (dry basis).

* * *

Amend 310 CMR 7.08(2)(f) Applicable Requirements. 3. Nitrogen Oxides[revise Table 3. as follows; *RACT*]

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

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

^a Corrected to 7% oxygen, dry basis.^b Averaging times are 24-hr daily arithmetic averages.

* * *

Amend 310 CMR 7.08(2)(f) Applicable Requirements. 4. Nitrogen Oxides Emission Averaging Plan[amend as follows; *RACT*]

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	NOx Emission Limit (Parts per million by volume) ^a	Averaging Time ^b
Mass Burn Waterwall	185 150	24-hour
Refuse-Derived Fuel Stoker	230 146	24-hour

^a Corrected to 7% oxygen, dry basis.^b Averaging times are 24-hr 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.

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

$$\frac{h}{\sum_{i=1} (S_i)} \quad (1)$$

where:

No_{x24-hr} = 24-hr daily average nitrogen oxides emission concentration level for the emissions averaging plan (ppmv, corrected to 7% oxygen).

No_{xi} = 24-hr 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.

e. For each of the municipal waste combustor units included in an emissions averaging plan, the nitrogen oxides emissions shall be calculated on a daily average basis. The calculated average shall not exceed the maximum daily nitrogen oxides emission level achieved by that municipal waste combustor unit on any of the days during which the emissions averaging plan was achieved with all municipal waste combustor units online during the most recent calendar quarter. The requirements of this paragraph do not apply during the first quarter of operation, during the first year under an emissions averaging plan.

f. The average nitrogen oxides emissions (pounds per day) calculated according to 310 CMR 7.08(2)(f)4.g.iv. shall not exceed the average nitrogen oxides emissions (pounds per day) calculated according to 310 CMR 7.08(2)(f)4.g.

g. The average nitrogen oxides emissions shall be calculated for all days during which the emissions averaging plan was implemented and achieved and during which all municipal waste combustor units were online. The average nitrogen oxides emissions (pounds per day) shall be calculated on a calendar year basis according to 310 CMR 7.08(2)(f)4.g.i. through iii..

i. For each municipal waste combustor unit included in an emissions averaging plan, the daily amount of nitrogen oxides emitted (pounds per day) shall be calculated based on the hourly nitrogen oxides data required under 310 CMR 7.08(2)(f)4.g., on the flue gas flow rate determined using Table 19-1 of EPA Reference Method 19 in 40 CFR, Part 60, Appendix A or an alternative Department approved method, and on the hourly average steam or feedwater flow rate.

ii. The daily total nitrogen oxides emissions shall be calculated as the sum of the daily nitrogen oxides emissions from each municipal waste combustor unit calculated under 310 CMR 7.08(2)(f)4.g.i..

iii. The average nitrogen oxides emissions (pounds per day) on a calendar year basis shall be calculated as the sum of all

daily total nitrogen oxides emissions calculated under 310 CMR 7.08(2)(f)4.g.ii. divided by the number of calendar days for which a daily total was calculated.

iv. The average nitrogen oxides emissions shall be calculated for all days during which one or more of the municipal waste combustor units under the emissions averaging plan was offline. The average nitrogen oxides emissions (pounds per day) shall be calculated on a calendar year basis according to 310 CMR 7.08(2)(f)4.g.i. through iii..

* * *

Amend 310 CMR 7.08(2)(f) Applicable Requirements.

[add 5. as follows]

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)8., any person subject to 310 CMR 7.08(2) utilizing ammonia or urea for NOx 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 percent of the operating hours per calendar quarter and 95 percent of the operating hours per calendar year that the affected facility is combusting municipal solid waste.

65. 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)65. 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.

* * *

Amend 310 CMR 7.08(2)(f) Applicable Requirements. 7. Operator Training and Certification

[revise as follows, incorporating text from federal regulations at 40 CFR 60.54b(c)(2); EG]

76. 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.

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.

* * *

Amend 310 CMR 7.08(2)(f) Applicable Requirements. 7. Operator Training and Certification f. and 8. Materials Separation Plan.

f. shall be in compliance with all training and certification requirements specified in 310 CMR 7.08(2)(f)~~76~~. by six months after the date of start up or August 21, 1999 whichever is later.

87. 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)~~87~~.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.

* * *

Amend 310 CMR 7.08(2)(g) Compliance and Performance Testing.

[revise introductory paragraph as follows; *EG*]

(g) Compliance and Performance Testing. ~~Each~~**Any** person subject to 310 CMR 7.08(2) shall comply with the provisions of 40 CFR 60.58b, "Compliance and Performance Testing," ~~effective December 19, 1995 and as last amended October 24, 1997, and November 16, 2001~~**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., ~~4.~~ 5. and 6. The initial compliance test must be completed within 180 days after the final compliance date.

* * *

Amend 310 CMR 7.08(2)(g) Compliance and Performance Testing. 1. Dioxin/Furan.

[revise d. as follows; *EG*]

d. Municipal waste combustor units where carbon injection (or equivalent) is used to comply with the dioxin/furan emission limits specified in section 310 CMR 7.08(2)(f)2. or the dioxin/furan emission limit specified in 310 CMR 7.08(2)(g)1.b shall follow the procedures specified in 40 CFR 60.58b(m) ~~effective December 19, 1995 and as last amended October 25, 1997~~**May 10, 2006**, for measuring and calculating the eight-hour block average carbon (or equivalent) usage rate.

[add e. as follows, incorporating text from federal regulations at 40 CFR 60.58b(g)(10); *EG*]

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.

* * *

Amend 310 CMR 7.08(2)(g) Compliance and Performance Testing. 2. Mercury.

[revise 2. as follows, incorporating text from federal regulations at 40 CFR 60.58b(d)(4); *EG*]

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 0.0580 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 above. 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.

* * *

Amend 310 CMR 7.08(2)(g) Compliance and Performance Testing. 3. Optimization Testing.

[add d. as follows, incorporating text from federal regulations at 40 CFR 60.58b(d)(2)(xi); *EG*]

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.

* * *

Amend 310 CMR 7.08(2)(g) Compliance and Performance Testing. 4. Limited Waiver From Mercury Limit.

[delete in entirety; reserve]

4. [Reserved.] Limited Waiver From Mercury Limit.

a. After a municipal waste combustor plant has been retrofitted with air pollution controls to satisfy the requirements of 310 CMR 7.00 and if, upon the completion of the optimization test or prior to December 31, 2003 a municipal waste combustor unit(s) employing electrostatic precipitators as the primary particulate matter control device and/or unit(s) employing innovative technology with respect to air pollution control devices cannot achieve the mercury emission limits specified in 310 CMR 7.08(2)(f)2., the person subject to 310 CMR 7.08(2) may request a limited waiver from said emission limits.

b. The person shall submit with the request for the limited waiver information indicating detailed site specific technical reasons for the limited waiver, including but not limited to, optimization test results and the progress of the materials separation plan, as well as any additional information requested by the

Department as a result of its review of the request. In no circumstance will the Department grant a limited waiver if the mercury emission limit exceeds 0.065 mg/dsem @ 7% O₂. Upon review of the information submitted, the Department will approve or deny a limited waiver. A limited waiver will expire on December 31, 2003 unless an extension is requested and granted pursuant to 310 CMR 7.08(2)(g)4.e.

c. Approval of a limited waiver is considered a modification to the emission control plan and must comply with the requirements contained at 310 CMR 7.08(2)(j)7. prior to incorporation into the emission control plan.

d. If a limited waiver is approved, the person subject to 310 CMR 7.08(2) must comply with the following requirements during the term of the waiver:

i. A mercury emission limit of 0.065mg/dsem @7% O₂.

ii. A person subject to 310 CMR 7.08(2) must submit to the Department an evaluation of its material separation plan, identifying whether or not (1) existing activities have contributed to the accomplishment of the material separation plan's stated goals and/or diversion or reduction of mercury in the municipal solid waste prior to combustion; (2) existing activities have failed such stated goals and/or diversion or reduction of mercury (in such case, explaining why such activities failed); and (3) new activities may contribute to the accomplishment of the material separation plan's stated goals or diversion or reduction of mercury. If new activities are so identified, a material separation plan may be modified; and

iii. Perform and submit optimization testing annually until compliance with 310 CMR 7.08(2)(f)2. is achieved; and

iv. All unit(s) subject to 310 CMR 7.08(2) shall be in compliance with the mercury emission limit at 310 CMR 7.08(2)(f)2. on or before December 31, 2003.

e. Extension of the Mercury Waiver. A petition to the Department for the extension of a limited waiver beyond the December 31, 2003 deadline may be submitted by plants using electrostatic precipitators no later than August 1, 2003. The Department may grant a maximum two year extension. If such an extension is granted, the person subject to 310 CMR 7.08(2) shall comply with the following:

i. Continue to adhere to the provision at 310 CMR 7.08(2)(g)4.d.i. through iii.

ii. Submit a plan to achieve the 0.028 mg/dsem @ 7% O₂ emission limit by the end of the extended waiver period.

f. If a person subject to 310 CMR 7.08(2)(f)2. has submitted a request for a limited waiver, or an extension of the limited waiver from the mercury emission limit specified in 310 CMR 7.08(2)(f)2., which includes detailed site specific technical reasons for the limited waiver, compliance test results, if available, optimization test results, and the progress of the material separation plan, for a facility, but approval or denial of the request has not been issued, the facility shall not be deemed in noncompliance with the mercury emission limit specified in 310 CMR 7.08(2)(f)2. from the date the mercury emission limit was first exceeded until the final approval of the request by the Regional Director of the Department or until 180 days after the denial of such a request by the Regional Director. However, the facility must comply with the 0.065 mg/dsem mercury emission limit, all other applicable requirements of 310 CMR 7.08(2) and the facility's Emission Control Plan during the request process and the 180 days period after a denial of the request.

* * *

Amend 310 CMR 7.08(2)(g) Compliance and Performance Testing. 5. Continuous Emissions Monitoring Systems Data.

[delete a. as follows; *EG*]

a. ~~[Reserved.] Continuous Emissions Monitoring Systems (CEMS) which monitor nitrogen oxides, sulfur dioxide, and operating practices parameters (e.g., carbon monoxide, unit load and particulate matter control device inlet temperature) shall obtain at a minimum valid continuous emissions monitoring system data for 75% of the hours per day, 75% of the days per month, and 90% of the hours per quarter that the municipal waste combustor unit is combusting municipal solid waste.~~

* * *

Amend 310 CMR 7.08(2)(g) Compliance and Performance Testing.

[add 7., 8. and 9. as follows, incorporating text from federal regulations at 40 CFR 60.58b(c)(10), (d)(3) and (f)(8); *EG*]

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.

* * *

Amend 310 CMR 7.08(2)(h) Recordkeeping

[revise introductory paragraph as follows; *EG*]

(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 ~~of 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.

[revise 2. as follows; EG]

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) **effective December 19, 1995 and as last amended October 24, 1997May 10, 2006,** including the highest level measured.
- b. All one-hour average sulfur dioxide emission concentrations as specified under 40 CFR 60.58b(e) **effective December 19, 1995 and as last amended October 24, 1997May 10, 2006.**
- c. All one-hour average nitrogen oxides emission concentrations as specified under 40 CFR 60.58b(h) **effective December 19, 1995 and as last amended October 24, 1997May 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) **effective December 19, 1995 and as last amended October 24, 1997May 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) **effective December 19, 1995 and as last amended October 24, 1997May 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) **effective December 19, 1995 and as last amended October 24, 1997May 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) **effective December 19, 1995 and as last amended October 24, 1997May 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) **effective December 19, 1995 and as last amended October 24, 1997May 10, 2006,** including the highest level recorded.

[add 2.i., 2.j. and 2.k. as follows, incorporating text from federal regulations at 40 CFR 60.59b(d)(2)(i)(E), (ii)(E) and (ii)(F); EG]

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.

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.

[revise 3. as follows, incorporating text from federal regulations at 40 CFR 60.59b(d)(3); *EG*]

3. Identification of the calendar dates when any of the average emissions 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.

[revise 4. as follows; *EG*]

4. For municipal waste combustor unit(s) 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) ~~effective December 19, 1995 and~~ as **last** amended ~~October 24, 1997~~**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) ~~effective December 19, 1995 and~~ as **last** amended ~~October 24, 1997~~**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) ~~effective December 19, 1995 and~~ as **last** amended ~~October 24, 1997~~**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) ~~effective December 19, 1995 and~~ as **last** amended ~~October 24, 1997~~**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.**

[add 5.e. and 5.f. as follows, incorporating text from federal regulations at 40 CFR 60.59b(d)(6)(vi) and (vii); *EG*]

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.

[revise 6. as follows, incorporating text from federal regulations at 40 CFR 60.59b(d)(7); *EG*]

6. Identification of each occurrence that sulfur dioxide ~~emissions data~~, 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.

[revise 7. as follows, incorporating text from federal regulations at 40 CFR 60.59b(d)(10)(i)-(iii); *EG*]

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.**

[revise 11. as follows, incorporating text from federal regulations at 40 CFR 60.59b(d)(12)(iv); *EG*]

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.**

[add 11.a. and 11.b. as follows, incorporating text from federal regulations at 40 CFR 60.59b(d)(12)(iv)(A) and (B); *EG*]

a. If the certified chief facility operator and certified shift supervisor are off site for more than 12 hours, but for 2 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 2 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 of the written reports submitted every 4 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.

[revise 12. as follows]

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) ~~76~~.d. including the date of the initial review and subsequent annual reviews.

[revise 13.b. as follows; *EG*]

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) ~~effective December 19, 1995 and as last amended May 10, 2006~~ **October 24, 1997**, with reasons for such occurrences and a description of corrective actions taken.

* * *

Amend 310 CMR 7.08(2)(i) Reporting Requirements

[revise introductory paragraph as follows; *EG*]

(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,** of 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.

[amend 1. as follows; *EG*]

1. Annual Reporting Requirements^a - The information specified in 310 CMR 7.08(2)(i)1.a. through **gh**, shall be reported:

- a. 310 CMR 7.08(2)(h)2.a., e. through **hk**, for the highest emission levels recorded.
- c. 310 CMR 7.08(2)(h)5. - 6., **including 40 CFR 60.59b(g)(1)(iv) and (v), as last amended May 10, 2006.**

[add 1.h. as follows, incorporating text from federal regulations at 40 CFR 60.59b(g)(5); *EG*]

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

[amend 2.a. as follows; *EG*]

2. Semi-Annual Reporting Requirements^b - The information specified in a. through e. below shall be reported:

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

[add 3. as follows, incorporating text from federal regulations at 40 CFR 60.59b(m), (n)(12) and (o)(12); *EG*]

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.

* * *

Amend 310 CMR 7.08(2)(j) Emission Control Plan.

[amend 1. as follows; *EG*]

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** ~~90 days from August 21, 1998~~ on a form provided by the Department **to include new or amended applicable requirements in 310 CMR 7.08(2)(f).** All emission control plan applications are subject to the fee regulations and approval timelines contained in 310 CMR 4.00: **Timely Action Schedule and Fee Provisions.**

[amend 2. as follows]

2. Emission Control Plan Requirements. The requirements of the emission control plan are contained in the emission control plan 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.

[amend 6. as follows; *EG* and *RACT*]

6. Compliance Schedule. The emission control plan shall incorporate a compliance schedule that at a minimum contains the requirements in 310 CMR 7.08(2)(k)~~1~~.

* * *

Amend 310 CMR 7.08(2)(k) Schedule.

[amend as follows; *EG* and *RACT*]

(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 or cease operations by [one year from date of EPA approval of the state plan, or February 21, 2000, whichever is earlier], 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 NOx emission limit in 310 CMR 7.08(2)(f)3.: Table 3 in the deadline above, 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 NOx emission limit, not to exceed a 24-hr 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 NOx controls, where it may be applied, and its technological and economic feasibility.

a. low-NOx burners;

b. close coupled and separated overfire air;

c. flue gas recirculation;

d. steam/water injection;

e. dry low-NOx 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 NOx.

~~shall notify the Department in writing of reasons why the unit(s) cannot comply. Such notification shall include a compliance schedule for each activity described in 310 CMR 7.08(2)(k)1.a.i. through iii. The compliance schedule for each activity described in 310 CMR 7.08(2)(k)1.a.i. through iii. shall be incorporated into the emission control plan.~~

~~a. The ECP shall include the following dates:~~

~~i. Dates of all existing contract awards involving air pollution control systems or for process modifications, and dates for issuance of any additional orders for the purchase of air pollution control equipment. This date shall not exceed August 21, 1999.~~

~~ii. Date initiating on-site construction or installation of air pollution control equipment or process modification, as necessary. This date shall not be later than August 21, 2000.~~

~~iii. Date of the completion of on-site construction or installation of air pollution control equipment, or process modification will be achieved. This date shall be no later than November 19, 2000.~~

~~b. In no case shall compliance timelines be later than December 19, 2000.~~

~~2. If a municipal waste combustor unit(s) within a large municipal waste combustor plant is to permanently cease operations, it must do so by August 21, 1999. If permanent shutdown of operations is not possible within one year, then the person subject to 310 CMR 7.08(2) shall provide:~~

~~a. Justification to the Department six months prior to the compliance date why operation must extend beyond August 21, 199, and~~

~~b. The person subject to 310 CMR 7.08(2) shall enter into an Administrative Consent Order with the Department which contains enforceable milestones and commitments towards closure. In no case shall operations extend two years beyond August 21, 1998.~~

~~3. Large municipal waste combustor unit(s) which commenced construction, modification, or reconstruction after June 26, 1987 shall comply with the emission limits for mercury and dioxin/furan as contained in 40 CFR, Subpart Ca of Part 60 by one year following the approval by EPA of the state plan or one year following the promulgation of 40 CFR, Subpart FFF of Part 62, whichever is earlier.~~

FINAL AMENDMENTS TO 310 CMR 7.19

Amend 310 CMR 7.19: U Reasonably Available Control Technology (RACT) for Sources of Oxides of Nitrogen (NO_x)

Amend 310 CMR 7.19(1) Applicability.

[revise (c) as follows; *RACT*]

(c) The requirements of 310 CMR 7.19 do not apply to:

...

10. Any large municipal waste combustor unit subject to 310 CMR 7.08(2).

Amend 310 CMR 7.19(2) General Provisions.

[revise (b) as follows; *RACT*]

(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;

...

Any person approved under 310 CMR 7.19(2)(b) must comply with the requirements of 310 CMR 7.19(13), **except as specified in 310 CMR 7.19(9)(b).**

[amend 7.19(9) as follows; *RACT*]

(9) **Small Municipal Waste Combustor Units**.

(a) Applicability and NO_x RACT. ~~After May 31, 1995~~, 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 seven percent 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~~facility subject to 310 CMR 7.19(9) shall either comply with ~~any~~ **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 NOx 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 percent of the operating hours per calendar quarter and 95 percent of the operating hours per calendar year that the affected facility is combusting municipal solid waste.**

Attachment 2 Background Document on Proposed Amendments to 310 CMR 7.00 Air Pollution Control August 12, 2016



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

One Winter Street Boston, MA 02108 • 617-292-5500

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Governor

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Lieutenant Governor

Matthew A. Beaton
Secretary

Martin Suuberg
Commissioner

BACKGROUND DOCUMENT ON PROPOSED AMENDMENTS TO

310 CMR 7.00

Air Pollution Control

August 12, 2016

**REGULATORY AUTHORITY:
M.G.L. c. 111, §§142A – 142O
M.G.L. c. 21N**

This information is available in alternate format. Call the MassDEP Diversity Office at 617-556-1139. TTY# MassRelay Service 1-800-439-2370

MassDEP Website: www.mass.gov/dep

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Table of Contents

- A. Summary – page 1**
- B. Plan Approvals and Operating Permits – page 3**
- C. Source Registration – page 10**
- D. Engines and Turbines – page 12**
- E. Solvent Metal Degreasing – page 15**
- F. VOC RACT – page 17**
- G. NO_x RACT – page 29**
- H. NO_x Ozone Season Budget Program – page 36**
- I. Appeals – page 41**
- J. Source Reduction – page 47**
- K. Massachusetts Environmental Policy Act (MEPA) – page 47**
- L. Public Hearings and Comment – page 47**

A. SUMMARY

The Massachusetts Department of Environmental Protection (MassDEP) is proposing amendments to 310 CMR 7.00 *Air Pollution Control* in accordance with Governor Baker's Executive Order 562 and to meet federal Clean Air Act requirements. These amendments include the following:

Plan Approvals: Clarify Plan Approval applicability, exemptions and procedures, and increase public comment opportunities.

- Clarify that sources can keep records demonstrating that actual emissions are below 1 ton to qualify for the “de minimis” exemption.
- Establish Plan Approval applicability for greenhouse gases (GHGs) at equal to or greater than 100,000 tons carbon dioxide equivalent (CO₂e) for new facilities and 75,000 tons CO₂e for modifications at existing facilities.
- Remove the Electric Generating Unit mercury budget since it is no longer enforceable because the U.S. Environmental Protection Agency's (EPA) Clean Air Mercury Rule is no longer in effect.
- Require Plan Approvals for non-major modifications of existing Prevention of Significant Deterioration (PSD) permits.
- Delete an Operating Permit timeline provision that is unnecessary and has never been used.
- Clarify requirements where pollution prevention is used to limit volatile organic compound (VOC) emissions in lieu of a top-down Best Available Control Technology review.
- Establish 30-day public comment period for all Comprehensive Plan Approvals to meet EPA requirements for state minor New Source Review programs.
- Make other miscellaneous clarifications.

Operating Permits: Clarify insignificant activities and remove GHGs.

- Clarify that potential emissions from “insignificant activities” must be considered in major source applicability determinations.
- Remove lab hoods at commercial laboratories from the list of “insignificant activities.”
- Remove the Operating Permit GHG applicability threshold consistent with the U.S. Supreme Court's decision vacating EPA's GHG “Tailoring Rule.”

Source Registration: add small source exemption and adopt new EPA reporting requirement.

- Exempt small combustion sources from emissions reporting.
- Add new EPA reporting threshold for lead emissions.
- Make other miscellaneous clarifications.

Engines and Turbines: update and align engine and turbine requirements with federal requirements.

- Remove 300 hours operating restriction for emergency engines.
- Better align with federal requirements.
- Maintain consistency between recordkeeping and monitoring requirements in different regulatory sections.

- Provide clearer criteria for proper siting of emergency engines and stack heights.
- Clarify a permit pathway for non-certifiable engines.
- Clarify combined heat and power (CHP) engine and turbine alternative permitting pathways.
- Make other miscellaneous clarifications.

Solvent Metal Degreasing: exempt from some VOC cold cleaning degreaser requirements the cleaning of high precision components that must meet rigorous cleanliness standards.

VOC RACT: update Reasonably Available Control Technology (RACT) requirements for volatile organic compounds (VOCs) as required by EPA Control Technique Guidelines (CTGs). Includes RACT requirements (e.g., emissions limitations, work practice standards, recordkeeping) for the following CTGs:

- Flexible package printing materials
- Lithographic printing materials
- Letterpress printing materials
- Industrial cleaning solvents
- Flat wood paneling coatings
- Paper, film, and foil coatings
- Metal furniture coatings
- Large appliance coatings
- Miscellaneous metal products and plastic parts coatings
- Plastic parts coatings
- Fiberglass boat manufacturing materials

NO_x RACT: update RACT for sources of nitrogen oxides (NO_x) at major facilities in accordance with EPA requirements for the Ozone Transport Region. Includes RACT requirements (e.g., emissions limitations, monitoring, recordkeeping) for the following combustion categories:

- Large boilers
- Stationary combustion turbines
- Stationary reciprocating internal combustion engines

NO_x Ozone Season Budget Program: replace MassCAIR program with new ozone season NO_x budget program in accordance with EPA requirements to preserve ozone season NO_x emissions limitations.

- Exempt facilities whose permitted NO_x emissions limits already are below the allocation that the MassCAIR program had established.
- Maintain ozone season state-wide budget of 1,799 tons of NO_x for remaining facilities. In the event the state-wide budget is exceeded, require facilities that exceeded their emissions budgets to purchase CSAPR allowances to cover the excess emissions.

Air Appeals: establish timelines and procedures for requesting adjudicatory appeals of air decisions.

B. PLAN APPROVAL AND OPERATING PERMIT AMENDMENTS (310 CMR 7.00, 310 CMR 7.01, 310 CMR 7.02, 310 CMR 7.00: APPENDIX C)

1. Overview

MassDEP implements a pre-construction permitting program for new sources of air pollution and modifications of existing sources under its 310 CMR 7.02 Plan Approval regulations. MassDEP's regulations apply to larger (or "major") sources that trigger federal permits, and smaller "minor" sources that fall below federal major source permitting thresholds. MassDEP's regulations implement M.G.L. c. 111, §142A-O (referred to as Massachusetts Air Pollution Control Laws) and are designed to protect air quality, and also meet federal requirements under the federal Clean Air Act (CAA) and U.S. Environmental Protection Agency (EPA) regulations.

The CAA establishes three types of pre-construction New Source Review (NSR) permitting requirements:

1. Prevention of Significant Deterioration (PSD), which applies to new major sources, or major sources making major modifications, for emissions of air contaminants that meet the National Ambient Air Quality Standards (NAAQS) at the project location;
2. Nonattainment NSR (NNSR), which applies to new major sources, or major sources making major modifications, for emissions of air contaminants that do not meet one or more of the NAAQS at the project location, and for emissions of oxides of nitrogen (NO_x) and volatile organic compounds (VOC), which are ozone precursors, in the northeast states regardless of ozone attainment status; and
3. Minor NSR, which applies to sources that do not require PSD or nonattainment NSR permits, and is administered by states (or local air agencies or tribes) to prevent emissions from interfering with attainment or maintenance of NAAQS. States and local agencies may customize their minor NSR programs provided they meet federal criteria.

In Massachusetts, MassDEP administers PSD under EPA regulation 40 CFR Part 52 §52.21 through a delegation agreement between MassDEP and EPA.¹ MassDEP administers NNSR under its EPA-approved regulations at 310 CMR 7.00: Appendix A – Emission Offsets and Nonattainment Review. MassDEP administers minor NSR under its Plan Approval regulations, 310 CMR 7.02(4) Limited Plan Application (LPA) and 310 CMR 7.02(5) Comprehensive Plan Application, for sources with emissions below federal thresholds, as well as for PSD and NNSR projects. For air contaminants subject to NNSR, projects must implement Lowest Achievable Emissions Rate (LAER), which is the most stringent emissions limitation found in any state State Implementation Plan (SIP) or achieved in practice. For all other regulated air contaminants subject to PSD or Plan Approval, projects must implement Best Available Control Technology (BACT), which is an "emission limitation based on the maximum degree of reduction...on a case-by-case basis taking into account energy, environmental, and economic impacts and other costs..."² Under PSD review, case-by-case BACT analysis always is required. For some Plan

¹ EPA has delegated the authority to MassDEP to issue federal PSD permits on behalf of EPA through an April 2011 delegation agreement. These permits are required by the federal Clean Air Act, not by state statutes or regulations.

² EPA requires the application of LAER (for nonattainment permits) and BACT (for PSD permits).

Approval-only facility and equipment types, MassDEP has streamlined the BACT determination process through published guidance.

In addition to the preconstruction permitting procedures, MassDEP also issues Operating Permits under its EPA-approved Title V Operating Permit regulations (310 CMR 7.00: Appendix C) for certain high-emitting and categorically regulated sources. An Operating Permit is a compilation of all air emission standards and control requirements that apply to a facility. It does not impose any additional requirements to control or reduce emissions, but may impose more stringent compliance assurance terms than the original preconstruction permits or emissions standards.

Some of MassDEP's Plan Approval regulations were approved by EPA and included in the Massachusetts State Implementation Plan (SIP). MassDEP's Operating Permit and associated Fee regulations were approved by EPA under 40 CFR Part 70.

MassDEP's regulations contain several exemptions from Plan Approval, as well as alternatives such as "permit-by-rule" performance standards and "Environmental Results Program" performance standards with one-time or annual compliance certifications. "Permits by rule" under 310 CMR 7.03, Plan Approval Exemption: Construction Requirements are criteria allowing construction and operation of equipment in certain categories that might otherwise require Plan Approval (no actual permit is required). The Environmental Results Program (ERP) has consolidated air pollution, solid waste, hazardous waste and industrial wastewater regulatory requirements for designated industrial or commercial sectors (e.g., dry cleaners, printers, boilers and engines) into a streamlined regulation designed to enable small businesses to more easily understand and comply with MassDEP's regulations.

Based on an assessment of the Plan Approval and Operating Permit regulations, MassDEP's experience implementing the regulations, stakeholder feedback and comments, and some new federally mandated requirements, MassDEP is proposing a number of changes and clarifications designed to improve the regulations. Below is a description of the proposed amendments.

2. Description of Proposed Amendments

a) Definitions (310 CMR 7.00)

- Add new definitions of **Carbon Dioxide Equivalent** (CO₂e) and **Greenhouse Gases** (GHGs) related to Plan Approvals for GHG emissions; update **Criteria Pollutant** and **Particulate Matter** definitions; and add a definition of **Pollution Prevention** related to minimizing volatile organic compounds (VOC) emissions.
- Amend definition of **Potential Emissions** to clarify that a project (i.e., "construction, substantial reconstruction, or alteration") at a facility can qualify for the "De Minimis Increase in Emissions" exemption from Plan Approval in 310 CMR 7.02(2)(b)7. provided the owner/operator keeps records demonstrating that any actual air emissions increase was less than 1 ton per year. This proposed clarification reflects longstanding MassDEP practice that facility records that demonstrate that actual emissions from a project are below 1 ton per year are sufficient for this exemption.

- Amend the definition of **Volatile Organic Compounds (VOC)** and add/amend other definitions related to VOC controls (see Section F on VOC RACT).

b) Timing (310 CMR 7.01)

- Add a “computation of time” provision to provide consistency with other MassDEP regulations. The “computation of time” provision describes when actions taken by MassDEP (such as permitting and other actions) begin, taking into account non-business days (i.e., weekends and holidays).

c) Plan Approvals (310 CMR 7.02)

- Establish Plan Approval GHG applicability at equal to or greater than 100,000 tons CO₂e for a new facility and 75,000 tons CO₂e for a modification at a facility [310 CMR 7.02(1)(d)]. These are the same applicability levels in the Massachusetts Environmental Policy Act (MEPA) regulations [301 CMR 11.03(8)(a)] that trigger a mandatory Environmental Impact Review. Only high-emitting facilities (e.g., power plants) are likely to trigger these thresholds.
- Remove requirement in 310 CMR 7.02(2)(b)1. that a facility owner notify MassDEP if the owner voluntarily installs pollution control equipment that is not required by regulation. MassDEP believes this notification is unnecessary.
- Clarify in 310 CMR 7.02(2)(c) that projects, otherwise exempt from plan approval, that cause a facility to trigger the need for an Operating Permit, do require a plan approval.
- Add to 310 CMR 7.02(3)(h) a requirement for a public comment period for all Comprehensive Plan Approvals (CPAs). EPA regulations at 40 CFR 51.161 establish requirements to provide opportunity for public comment in EPA SIP-approved minor NSR permit programs. Currently, MassDEP only requires public comment on Plan Approvals for projects that trigger a Massachusetts Environmental Policy Act (MEPA) review threshold for air sources [see 310 CMR 7.02(3)(h)], which is a small subset of Plan Approvals. Therefore, MassDEP regulations are not in compliance with federal EPA regulatory requirements and must be changed. According to the Clean Air Act, all minor NSR permits must include opportunity for public comment; however, not all state permits must be included in the SIP-approved minor NSR program. States have the option to require minor NSR without public comment, provided these permits are not needed to attain or maintain NAAQS and the state does not submit this aspect of the program for such purpose.

To meet the EPA requirement for public comment on minor NSR permits, MassDEP proposes to establish a public comment period of 30 days for all CPAs, which are required for projects that include higher-emitting combustion sources or potential air contaminant emissions increases from non-fuel-combustion processes of 10 tons per year or more. MassDEP would not require public comment on LPAs. LPAs are required for projects that are lesser-emitting combustion sources and potential air contaminant emissions increases from non-combustion processes of one ton or more per year but less

than 10 tons per year. To the extent LPA projects are at small businesses, municipalities or other small organizations, the additional public comment procedures would be burdensome. It is not expected that public comment would result in any reductions in air pollutant emissions from such smaller sources.

- Delete 310 CMR 7.02(3)(o), which created an Electric Generating Unit (EGU) mercury budget for certain facilities. This section is no longer enforceable because EPA's Clean Air Mercury Rule is no longer in effect.

In 2005, EPA promulgated the Clean Air Mercury Rule (CAMR), which established an EGU mercury cap and trade program under Section 111 of the CAA. In 2007, MassDEP promulgated regulations to comply with CAMR that created a mercury emissions budget for four power plants (eight electric generating units or "EGUs"). However, in 2008, the District of Columbia Circuit Court of Appeals vacated the rule, and EPA later promulgated a rule (known as the Mercury and Air Toxics Standards (MATS)) that established mercury and other air toxics emissions limits under Section 112 of the CAA. Power plants in Massachusetts must comply with MATS (where applicable).

Since 310 CMR 7.02(3)(o) depends on and references the former CAMR rule, it is no longer enforceable or has any effect. Therefore MassDEP proposes to delete this section. (Note that the only facility remaining in Massachusetts to which this provision applies is Brayton Point, which is scheduled to close in 2017. The mercury emissions at this facility are well below the mercury cap in the regulation). Also delete 310 CMR 7.02(5)(a)12. and 13., which contain provisions related to the EGU mercury cap in 310 CMR 7.02(3)(o) proposed above for deletion.

- Change the Comprehensive Plan Approval (CPA) size threshold in 310 CMR 7.02(4)(a)2. and 7.02(5)(a)2. for a fossil fuel utilization facility with rated distillate oil combustion capacity from 30,000,000 British thermal units per hour (Btu/hr) to 40,000,000 Btu/hr. Facilities with capacity to combust 10,000,000 Btu/hr up to 40,000,000 Btu/hr would require a Limited Plan Approval (LPA), and facilities rated at greater than 40,000,000 Btu/hr would require a CPA. MassDEP believes 40,000,000 Btu/hr is a more appropriate threshold for distinguishing between an LPA (which requires less rigorous review) and a CPA; it also would match the 40,000,000 Btu/hr threshold for boilers, below which the boiler owner may be eligible for ERP and be exempt from even from LPA.
- Clarify in 310 CMR 7.02(4)(a)4. that LPA may be used for an otherwise-exempt project if the approval is necessary to create enforceable conditions for the purpose of allowing a facility to avoid applicability of the Operating Permit program (310 CMR 7.00: Appendix C).
- Add to 310 CMR 7.02(5)(a)9. a requirement that a minor modification to a PSD permit requires a Comprehensive Plan Approval. In accordance with the April 2011 PSD delegation agreement between EPA and MassDEP, MassDEP implements EPA's PSD regulations at 40 CFR Part 52 §52.21 and issues PSD permits for Massachusetts facilities. In 310 CMR 7.02(5)(a)7., MassDEP requires a Plan Approval for any construction,

substantial reconstruction, or alteration that would cause a facility to be subject to PSD, Nonattainment Review (310 CMR 7.00, Appendix A), or case-by-case Maximum Achievable Control Technology (MACT). Requiring a Plan Approval enables MassDEP to establish a timeline for review and collect a permit fee in accordance with MassDEP's timelines and fees regulation (310 CMR 4.00). Currently, 310 CMR 7.02(5)(a)9., requires a Plan Approval for a modification of a Nonattainment Review and case-by-case MACT, but not a PSD permit, which has caused confusion among permit applicants. MassDEP proposes to amend this regulation to require a Plan Approval for a modification of a PSD permit (that does not otherwise trigger PSD review) so that it is clear in the regulations that the timelines and fees in 310 CMR 4.00 apply to modifications of PSD permits.

- Delete in 310 CMR 7.02(5)d. a reference to an out-of-date 1982 PSD delegation agreement. There is no legal requirement to reference any PSD delegation agreement, and therefore MassDEP is not proposing to add any reference to the current PSD delegation agreement signed in April of 2011.
- Delete in 310 CMR 7.02(5)f. an Operating Permit timeline provision that is unnecessary and has never been used.
- Clarify in 310 CMR 7.02(8)(a)2. that where pollution prevention is used to limit VOC emissions in lieu of a top-down BACT analysis, a specific level of control based on implementing pollution prevention to the extent feasible must be proposed as part of the Plan Approval application.

d) 310 CMR 7.00: Appendix C

- Remove Operating Permit GHG applicability in 310 CMR 7.00: Appendix C(2)(a)1. Historically, MassDEP has not required Plan Approvals for GHG emissions. However, after EPA promulgated its GHG Tailoring Rule in 2010 that established GHG applicability thresholds for major sources, on August 16, 2013, MassDEP promulgated revisions to its Operating Permit regulations (310 CMR 7.00: Appendix C) that added the Tailoring Rule Operating Permit applicability threshold for GHG emissions. On June 23, 2014, the U.S. Supreme Court issued its decision in *Utility Air Regulatory Group v. EPA* (No. 12-1146) in which it held that EPA exceeded its statutory authority when it interpreted the Clean Air Act as requiring stationary sources to obtain PSD and Title V Operating Permits based solely on their potential GHG emissions, but upheld EPA's interpretation of the Act as providing EPA authority to require sources already subject to stationary source permitting requirements due to their emissions of conventional pollutants to install BACT for GHGs, if the source emits more than a *de minimis* amount of GHGs. Consistent with the Supreme Court's decision, the proposed amendments remove the GHG Tailoring Rule threshold from MassDEP's Operating Permit regulations. Note, however, that MassDEP proposes to add GHG applicability thresholds for Plan Approval in 310 CMR 7.02 (see above under *Plan Approvals*) and implements the GHG-related requirements of the PSD regulations.

- Clarify that potential emissions from “insignificant activities” must be considered in major source applicability determinations, and remove lab hoods at commercial laboratories from the list of “insignificant activities.” It always has been the case that facility owners must consider all emissions from their facility, including from insignificant sources, when determining whether the facility’s potential to emit meets or exceeds Operating Permit major source applicability levels, even though these activities would not in and of themselves be considered regulated emissions units in an Operating Permit. MassDEP proposes to make this more explicit in its Appendix C Operating Permit regulations to avoid confusion that may lead a source owner to disregard these emissions because they are from “insignificant activities.” In addition, based on recent experience, MassDEP believes that exhaust systems for laboratory hoods at commercial facilities that provide analytical services for third parties can be significant sources of hazardous air pollutants, and therefore should not be considered “insignificant activities.”

3. Economic Impacts

MassDEP does not anticipate significant economic impacts from the proposed amendments. In general, the proposed amendments make minor changes and clarifications to existing regulations and delete provisions that are no longer being implemented (e.g., power plant mercury budget, GHG applicability in the Operating Program). Where the proposed amendments add requirements, MassDEP also does not anticipate significant economic impacts. For example:

- The proposed amendments add Plan Approval applicability thresholds for GHGs; however, a project that triggers one of these thresholds already would trigger Plan Approval for other pollutants, and likely also PSD permitting, and MassDEP already includes GHG permit limits in such large projects. In addition, adding the GHG thresholds clarify that GHG emissions below the thresholds do not trigger Plan Approval, and therefore the amendments will benefit smaller sources since there otherwise is no exemption for GHG emissions. The lack of a GHG threshold has caused confusion and concern among smaller sources that MassDEP might require Plan Approval for small sources of GHG emissions.
- The proposed amendments add a 30-day public comment period for non-major Comprehensive Plan Approvals in order to meet EPA requirements for state minor New Source Review (NSR) permit programs. The mechanics of holding a comment period are not costly, but holding a comment period will add time to projects and may create additional work for applicants to respond to any comments received. However, the comment period benefits the public and can help inform the project, and is a federal requirement for state minor NSR programs.
- Removal of commercial laboratory hoods from the list of “insignificant activities” could require some laboratories to obtain a Plan Approval if a proposed project’s emissions exceed 1 ton per year (one of the Plan Approval thresholds). However, MassDEP believes that most commercial laboratories with project emissions above 1 ton per year have already obtained appropriate Plan Approvals, and those commercial laboratories with lower emissions likely can keep project emissions below 1 ton and will not require Plan Approval.

4. Impacts on Cities and Towns

Pursuant to Executive Order 145, state agencies must assess the fiscal impact of new regulations on the Commonwealth's municipalities. In general, the proposed amendments do not establish new requirements for municipalities. As noted under Economic Impacts, the proposed regulations require Plan Approvals for GHGs above specific thresholds. Some municipal facilities, such as power generating facilities, are permitted by MassDEP as PSD sources, and GHG emissions and major modifications at these facilities already require MassDEP review. The proposed amendments clarify and extend MassDEP review of major modifications at PSD sources, but do not impose additional specific control requirements on such sources. In addition, any costs associated with MassDEP review of municipally-owned facilities would not be subject to Proposition 2 ½ unless they were associated with a mandated municipal service. In general, large emissions sources are not necessary to deliver mandated municipal services. For example, operating a power plant is not a mandated municipal service.

5. Agricultural Impacts

Pursuant to M.G.L. C. 30A, §18, state agencies must evaluate the impact of proposed programs on agricultural resources within the Commonwealth. MassDEP believes that the proposed amendments will not have significant impacts to agriculture.

C. SOURCE REGISTRATION AMENDMENTS (310 CMR 7.12)

1. Overview

MassDEP's Source Registration regulations (310 CMR 7.12) require facilities that are of a certain type or that have air emissions above specific thresholds to report their emissions to MassDEP on an annual or triennial basis. Approximately 2,300 facilities currently file Source Registrations with MassDEP. MassDEP transmits emissions data to the EPA to be included in the National Emissions Inventory. MassDEP's Source Registration regulations are part of the Massachusetts State Implementation Plan (SIP) and are required by Section 182(a) of the federal Clean Air Act and 40 CFR 51 (Air Emissions Reporting Requirements), which requires states to obtain emissions statements from major air sources.

2. Description of Proposed Amendments

a) Exempt Small Combustion Facilities

Since 2005, MassDEP has exercised its enforcement discretion to defer reporting from approximately 500-600 small combustion sources that only burn natural gas or distillate oil since these sources have low emissions. MassDEP proposes to make this deferral permanent by raising the facility-wide heat input threshold from 10 million (MM) British Thermal Units (btu)/hour to 40 MMbtu/hour provided that no individual emissions unit is 10 MMbtu/hr or larger (these are the criteria used in the current policy). With this change, these facilities would no longer be required to pay annual compliance fees. MassDEP also proposes to make clear that facilities can qualify for this exemption even if they have non-combustion units, provided the non-combustion units are below Source Registration reporting thresholds. This clarification would reduce the number of small combustion facilities reporting to Source Registration by up to 100 additional facilities, for a total of approximately 600-700 exempted sources.

b) Lower Lead Threshold

In February 2015, EPA amended the its Air Emissions Reporting Requirements rule (40 CFR 51 Appendix A) and set a new federal reporting threshold for lead at 0.5 tons per year actual emissions. To comply with this federal requirement, MassDEP proposes to lower the reporting threshold for lead from 5 tons per year potential emissions to 0.5 tons per year actual emissions. MassDEP believes there are no facilities in Massachusetts that exceed this reporting threshold, and therefore no new facilities will begin reporting due to this proposed amendment.

c) Adjust Reporting Deadlines

MassDEP proposes to change the due date in the regulations for triennial Source Registration filers from April 15 to March 1 of each year. EPA recently changed the time allowed for states to submit emissions data to EPA from 18 months after the end of the calendar year to 12 months. Therefore, MassDEP needs to receive Source Registration data sooner to meet the new federal deadline. This change will affect approximately 500 triennial filers per year. There will be no change to the due dates for the filers with operating permits or the other

annual filers. In the past, MassDEP has used its discretion to set multiple due dates for filers starting with April 15 for filers with operating permits, May 15 for other annual filers, and June 1 and July 15 for triennial filers. The proposed amendments would require triennial reporting by March 1, keep the due date for Operating Permit facilities at April 15, and add May 15 to the regulations as the deadline for other annual filers.

d) Elimination of Unnecessary Regulations and Minor Clarifications

The proposed amendments also include a number of streamlining and minor clarifications including:

- Remove unnecessary reporting thresholds for non-combustion sources of oxides of sulfur and nitrogen dioxide because these pollutants are combustion related.
- Eliminate confusion by reporters by clarifying that: (1) Source Registration reports are for the previous calendar year; (2) Responsible Officials should sign the Source Registration report; and (3) reports should be filed electronically.
- Delete unneeded portions of 310 CMR 7.12(4), Verification and Availability of Information, which are redundant with public records law and not included in other MassDEP regulations. This change would not affect the fact that emissions data submitted through Source Registration are public information.

3. Economic Impacts

MassDEP does not anticipate significant economic impacts from the proposed amendments. In general, the proposed amendments make minor changes and clarifications to existing regulations. The proposed amendments exempt smaller combustion sources from reporting, which may have a positive economic effect.

4. Impacts on Cities and Towns

Pursuant to Executive Order 145, state agencies must assess the fiscal impact of new regulations on the Commonwealth's municipalities. Some municipal facilities already report air emissions to MassDEP under the Source Registration regulations, and the proposed amendments do not impose additional requirements for municipalities.

5. Agricultural Impacts

Pursuant to M.G.L. C. 30A, §18, state agencies must evaluate the impact of proposed programs on agricultural resources within the Commonwealth. MassDEP believes that the proposed amendments will not have significant impacts to agriculture.

D. ENGINES AND COMBUSTION TURBINES AMENDMENTS [310 CMR 7.02, 310 CMR 7.03(10), and 310 CMR 7.26(40)-(45)]

1. Overview

MassDEP regulates air pollutant emissions from stationary reciprocating internal combustion engines and combustion turbines that burn fuel to generate mechanical shaft power used for electric generators, natural gas pipeline compressors, pumps (e.g., drinking water, firefighting, sewage, floodwaters, mining, mineral and metal scrap processing, snowmaking), refrigeration, and other uses. MassDEP does not regulate non-stationary (i.e., mobile) engines and turbines, which are regulated by EPA.

Engines and turbines emit various air pollutants, such as nitrogen oxides (NO_x), carbon monoxide (CO), volatile organic compounds (VOC), toxics, particulate matter (PM), and carbon dioxide (CO₂). Over time there have been improvements in air pollution control technologies for engines and turbines, including cleaner fuel (e.g., ultra-low-sulfur diesel), lower-emitting designs, and add-on control devices, such as selective catalytic reduction (SCR) (which uses reagent injection and a catalyst), and non-reagent catalytic oxidation (CatOx). Many of these improvements also are in widespread use in mobile engines as mandated by federal emissions standards.

Prior to 2006, installation of a non-emergency engine or turbine required a permit from MassDEP. In March 2006, MassDEP promulgated 310 CMR 7.26(40)-(45) which established an engine and turbine Environmental Results Program (ERP). The ERP regulations allow a person to install an engine or turbine and then file a certification with MassDEP that the engine or turbine meets the regulation's emissions performance and operating requirements. If an engine or turbine cannot meet the ERP requirements, the owner or operator can apply for a Plan Approval from MassDEP. The following is a summary of options for engines and turbines:

- Installation and self-certification under ERP with standardized emissions performance, installation and operating requirements for:
 - Emergency engines and turbines under 310 CMR 7.26(42)
 - Engines with rated power output equal to or greater than 37 kilowatt (kW); and
 - Turbines with rated power output less than one megawatt (MW)
 - Non-emergency engines and turbines under 310 CMR 7.26(43)
 - Engines with rated power output equal to or greater than 50 kW and
 - Turbines with rated power output less than or equal to 10 MW
- Case-by-case Plan Approval of project-specific Best Available emissions Control Technology (BACT), installation and operating requirements for engines and turbines:
 - incapable of complying with or otherwise unsuited to the ERP procedure;
 - proposing to meet the non-emergency emissions standards of 310 CMR 7.26(43) through combined heat and power (CHP) credits derived under 310 CMR 7.26(45);
 - ineligible for ERP since the engine or turbine is part of a project that triggers Prevention of Significant Deterioration (PSD) review under 40 CFR Part 52

§52.21 or Emission Offsets and Nonattainment Review under 310 CMR 7.00
Appendix A

- Permit-by-rule provisions for certain engines installed prior to the ERP effective date;
- Emissions standards and operating provisions for grandfathered engines installed prior to the ERP effective date.

In addition to MassDEP regulations, EPA regulations impose emissions standards and operating requirements for owners and operators of existing engines under 40 CFR Part 63 Subpart ZZZZ, and manufacturers, owners and operators of new, modified or reconstructed engines under 40 CFR Part 60, Subparts IIII and JJJJ. EPA regulates existing turbines under 40 CFR Part 63 Subpart YYYY, and successive generations of new, modified and reconstructed turbines under 40 CFR Part 60 Subparts GG and KKKK.

2. Description of Proposed Amendments

a) Definitions and Plan Approval (310 CMR 7.00, 7.02, and 7.03)

- Remove the 300 operating hours per year limitation for emergency engines to align with EPA's regulations and address concerns that an emergency engine could exceed the 300 hours in an actual emergency (e.g., power outage caused by a Hurricane), and make associated changes and clarifications.
- Make clarifications to certain definitions and update references to current EPA engine standards.
- Clarify the option for the owner of an engine or turbine to seek a Plan Approval instead of meeting the ERP performance standards.
- Clarify that CHP projects may exceed ERP emission standards using credits that CHP projects may obtain under 310 CMR 7.26(45).

b) Engines and Turbines [310 CMR 7.26(40) - (45)]

- Remove the 300 operating hours per year limitation for emergency engines to align with EPA's regulations and address concerns that an emergency engine could exceed the 300 hours in an actual emergency (e.g., power outage caused by a Hurricane), and make associated changes and clarifications.
- Revise and simplify requirements for emergency engines and turbines to make the regulations easier to understand and to distinguish between requirements for emergency versus non-emergency engines and turbines, including CHP projects.
- Add and revise definitions to help make the regulations easier to understand, such as adding "Applicable Model Year" and "Model Year" to clarify the purchase and installation requirements for emergency engines, and removing "electrical" from the definition of "Rated Power Output" to clarify that the term refers to the engine rating and not an associated electric generator.

- Clarify that stack heights for all emergency engines equal to or greater than 300 kW must be 10 feet above the building or enclosure rooftop and non-emergency engines equal to or greater than 300 kW must now have exhaust stacks 10 feet above the roof or enclosure whichever is higher.
- Allow owners planning to install non-emergency engines to apply for a Plan Approval if they cannot meet the ERP engine requirements.
- Clarify that the deadline for filing a certification for a non-emergency engine is 30 days prior to commencement of operation and simplify recordkeeping requirements by removing hours and amount of fuel used.
- Remove reference to duct burners in the CHP regulations since they are a separate piece of equipment and not part of the engine or turbine.

3. Economic Impacts

MassDEP does not anticipate significant economic impacts because the proposed amendments provide additional flexibility to emergency generator operators while not changing any of the emissions requirements for either emergency or non-emergency engines or turbines.

4. Impacts on Cities and Towns

Pursuant to Executive Order 145, state agencies must assess the fiscal impact of new regulations on the Commonwealth's municipalities. The proposed amendments do not impose additional requirements on municipalities.

5. Agricultural Impacts

Pursuant to M.G.L. C. 30A, §18, state agencies must evaluate the impact of proposed programs on agricultural resources within the Commonwealth. MassDEP believes that the proposed amendments will not have significant impacts to agriculture.

E. SOLVENT METAL DEGREASING [310 CMR 7.18(8)]

1. Overview

MassDEP is proposing to amend its Solvent Metal Degreasing regulations [310 CMR 7.18(8)] to exempt cleaning of “high precision products” from certain volatile organic compound (VOC) vapor pressure and solvent spray requirements upon MassDEP and EPA approval.

MassDEP’s solvent metal degreasing regulations are required by the federal Clean Air Act and EPA regulations, which require Massachusetts to limit emissions of VOCs, which are precursors to the formation of ground-level ozone (or smog). Massachusetts is located within the Ozone Transport Region and is required to adopt VOC controls for which EPA has issued Control Technique Guidelines (CTGs), including solvent metal degreasing. MassDEP’s solvent metal degreasing regulations set specific operation and maintenance standards to reduce VOC emissions from solvent metal degreasing operations and are based on a CTG published by EPA for this sector. These degreasing operations include cold cleaning degreasing, vapor degreasing, and conveyORIZED degreasing.

Some Massachusetts manufacturers make products for industries that require the use of highly volatile solvents in order to minimize contamination left on the products. To meet customer product specifications, the solvents that must be used do not meet the current vapor pressure and spray requirements in 310 CMR 7.18(8). Therefore, MassDEP is proposing amendments to provide an exemption for the cleaning of “high precision products” based on similar exemptions several other New England States have adopted.

2. Description of Proposed Amendments

a) Definition of High Precision Products (310 CMR 7.00)

MassDEP proposes to add a definition of “high precision products” to 310 CMR 7.00 to identify the category of products that would be eligible for an exemption. High precision products would include those for use in extreme environments, those covered by rigorous military or commercial specifications, and those with quality standards that do not allow for excess contamination.

b) Vapor Pressure Exemption [310 CMR 7.18(a)1]

310 CMR 7.18(8)(a) currently requires a facility using a cold cleaning degreaser to use solvent with a vapor pressure less than or equal to 1.0 millimeter of mercury at 20°C, but provides an exemption from the vapor pressure requirement for several cold cleaning degreaser uses, such as special and extreme solvent metal cleaning and totally enclosed degreasers. MassDEP proposes to add an additional exemption for “high precision products” that would be available on a case-by-case basis upon MassDEP and EPA approval.

c) Degreasing Solvent Spray Pressure Exemption [310 CMR 7.18(8)(e)]

310 CMR 7.18(8)(e) currently requires solvent degreasers to be operated using

procedures to minimize evaporative emissions and spills, and requires use of a degreasing solvent spray that is a continuous fluid stream (not a fine, atomized or shower type spray) at a pressure that does not exceed 10 pounds per square inch as measured at the pump outlet and used within the confines of the degreaser. MassDEP proposes to include an exemption from this requirement for high precision products that would be available on a case-by-case basis upon MassDEP and EPA approval. A facility that receives an exemption would have to meet certain limitations on the amount of VOCs used, as well as recordkeeping and reporting requirements.

3. Economic Impacts

MassDEP does not anticipate significant economic impacts because the proposed amendments provide additional flexibility to Massachusetts manufacturers, and therefore may have a positive economic impact. Connecticut and Rhode Island have similar exemptions for high precision products, and one facility in Connecticut has been given an exemption.

4. Impacts on Cities and Towns

Pursuant to Executive Order 145, state agencies must assess the fiscal impact of new regulations on the Commonwealth's municipalities. The proposed amendments do not impose additional requirements on municipalities

5. Agricultural Impacts

Pursuant to M.G.L. C. 30A, §18, state agencies must evaluate the impact of proposed programs on agricultural resources within the Commonwealth. MassDEP believes that the proposed amendments will not have significant impacts to agriculture.

F. REASONABLY AVAILABLE CONTROL TECHNOLOGY FOR SOURCES OF VOLATILE ORGANIC COMPOUNDS [310 CMR 7.00, 310 CMR 7.03, 310 CMR 7.18, 310 CMR 7.26, 310 CMR 7.00: Appendix B]

1. Overview

MassDEP is proposing to amend 310 CMR 7.00 to update its Reasonably Available Control Technology (RACT) requirements for volatile organic compounds (VOCs) consistent with Control Techniques Guidelines (CTGs)³ issued by EPA. Once adopted, MassDEP will submit its RACT rules to EPA for approval as part of the Massachusetts State Implementation Plan (SIP).

The proposed regulations are part of MassDEP's ongoing efforts to protect public health by reducing ground-level ozone, and are needed to comply with the requirements of the Clean Air Act (CAA) that apply to states in the Ozone Transport Region (OTR), which includes Massachusetts. Section 184 of the CAA requires states in the OTR to implement RACT for sources of VOCs covered by an EPA CTG. EPA has promulgated national regulations for a number of VOC sources, and, therefore, a CTG does not exist for those categories.

EPA published new CTGs in 2006, 2007, and 2008 that MassDEP is required to address. The proposed amendments establish VOC limitations consistent with EPA's CTGs and include amendments to:

- 310 CMR 7.00 *Definitions*
- 310 CMR 7.03 *Plan Approval Exemption: Construction Requirements*
- 310 CMR 7.18 *Volatile and Halogenated Organic Compounds*
- 310 CMR 7.26 *Industry Performance Standards*
- 310 CMR 7.00: Appendix B: *Emissions Banking, Trading, and Averaging*

Ozone And Ozone Precursors

VOC emissions contribute to the formation of ground-level ozone, or smog, which adversely affects public health and damages forests and vegetation. Many VOCs are also toxic and, at sufficient concentrations and exposures, are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects. Ozone is formed when VOCs react with oxides of nitrogen (NO_x) in the presence of sunlight and heat. Unhealthy concentrations of ozone occur most frequently during hot summer months.

Ozone irritates the respiratory system and may cause coughing and shortness of breath. It can also exacerbate respiratory illness and reduce resistance to infection. Ozone is of particular concern for children, people with asthma and other chronic respiratory diseases, and people exercising and working outdoors for prolonged periods of time. Ozone also damages forests and other vegetation, agricultural crops, and natural and synthetic materials.

³ Control Techniques Guidelines can be found at <http://www3.epa.gov/ozonepollution/SIPToolkit/ctgs.html>

Reasonably Available Control Technology (RACT)

EPA defines RACT as “the lowest emission limitation that a particular source is capable of meeting with the application of control technology that is reasonably available considering technological and economic feasibility.” (44 FR 53761, September 17, 1979).

CAA §183(e) directs EPA to list and regulate those categories of products that account for at least 80 percent of the VOC emissions, on a reactivity-adjusted basis, from consumer and commercial products in areas that are in the OTR. EPA issued such a list on March 23, 1995, and has revised the list periodically. See 71 FR 28320 (May 16, 2006); 70 FR 69759 (Nov. 17, 2005); 64 FR 13422 (Mar. 18, 1999); 60 FR 15264 (March 23, 1995).

Table 1 shows the current §183(e) list, including the consumer and commercial product categories for which EPA has promulgated national regulations or determined that CTGs implemented by states will be substantially as effective as federal regulations in reducing VOC emissions in ozone nonattainment areas. EPA placed the categories in four groups as required by section 183(e)(3)(A) of the CAA, to address categories with the highest emissions first. The final column in Table 1 indicates the status of Massachusetts regulations for each of EPA’s CTG categories, and whether any actions are addressed in this proposal.

To assist states with implementing VOC RACT, EPA issued CTGs for various source categories of VOC emissions that provide recommendations for determining RACT for each category. In developing the CTGs, EPA evaluated the sources of VOC emissions from each category and the available control approaches for addressing these emissions, including the costs of such approaches.

Table 1 § 183(e) CTG List			
Category	EPA regulation	CTG	MassDEP addressing CTG in proposed regulations?
Group I:			
Consumer products	40 CFR Part 59 Subpart C		No; EPA promulgated national regulation
Shipbuilding and repair coatings		61 FR 44050 August 27, 1996	No; EPA approved negative declaration (no sources in MA) on 10/4/2002
Aerospace coatings		EPA-453/R-97-004 December 1997	No; EPA approved a combination of existing MassDEP federally-enforceable measures (310 CMR 7.18(11) and (8)) on 10/4/2002
Architectural coatings	40 CFR Part 59 Subpart D		No; EPA promulgated national regulation
Autobody refinishing coatings	40 CFR Part 59 Subpart B	EPA 453/R-94-031 April 1994	No; EPA approved 310 CMR 7.18(28) on 2/14/1996 as meeting 1994 CTG, and EPA subsequently promulgated national regulation
Wood furniture coatings		EPA-453/R-96-007 April 1996	No; EPA approved a combination of existing MassDEP federally-enforceable measures (310 CMR 7.18(23), (17) and BACT approvals) on 10/4/2002
Group II:			
Flexible package printing materials		EPA 453/R-06-003 September 2006	Yes
Lithographic printing materials		EPA-453/R-06-002 September 2006	
Letterpress printing materials		EPA 453/R-06-001 September 2006	
Industrial cleaning solvents		EPA 453/R-06-004 September 2006	
Flat wood paneling coatings			
Group III:			

Portable fuel containers	40 CFR Part 59 Subpart F		No; EPA promulgated national regulation
Aerosol spray paints	40 CFR Part 59 Subpart E		
Paper, film, and foil coatings		EPA 453/R-07-003 September 2007	Yes
Metal furniture coatings		EPA 453/R-07-005 September 2007	
Large appliance coatings		EPA 453/R-07-004 September 2007	
Group IV:			
Miscellaneous metal products coatings		EPA-453/R-08-003 September 2008	Yes
Plastic parts coatings			
Fiberglass boat manufacturing materials		EPA-453/R-08-004 September 2008	
Miscellaneous industrial adhesives		EPA-453/R-08-005 September 2008	Yes; EPA approved 310 CMR 7.18(30) on 10/9/2015; a minor technical amendment is included in this proposal
Auto and light-duty truck assembly coatings		EPA-453/R-08-006 September 2008	Yes; MassDEP is deleting 310 CMR 7.18(7) and submitting a negative declaration since there are no existing facilities in MA

MassDEP considered EPA's CTGs in developing the proposed regulations. MassDEP also considered CTG regulations now in effect in New Hampshire, Connecticut, Indiana, Ohio, the South Coast Air Quality Management District (SCAQMD) and the Bay Area Air Quality Management District (BAAQMD) of California. EPA approved or has proposed approval of these state or local air pollution control authorities' and states' regulations into their SIPs.

Once adopted, MassDEP must submit its RACT rules to EPA for approval as part of the Massachusetts SIP. EPA will evaluate the rules, publish the rules in the Federal Register for public comment, and determine whether the regulations meet the RACT requirements of the CAA and EPA's regulations. Some of the proposed amendments are not necessary to meet RACT requirements, and, therefore, MassDEP will not submit them to EPA for approval (e.g., the portions of 310 CMR 7.26 affecting small and very small printers, which are not subject to RACT because such facilities are below the RACT size threshold.⁴

2. Description of Proposed Amendments

MassDEP is proposing to amend the requirements for existing RACT categories affected by the Group II-IV CTGs and adopt new RACT regulations where a Group II-IV CTG category is not already addressed in Massachusetts' regulations. The proposed amendments adopt the CTG RACT VOC coating emission limits and work practices. In addition, MassDEP is proposing to better organize the RACT regulations as shown in Table 2; amend the definition of Volatile Organic Compound (VOC) to exclude substances EPA has exempted; and clarify and update cross-references to other sections of the regulations.

⁴ Other provisions of 310 CMR 7.26 that will not be submitted to EPA as part of the Massachusetts SIP because they are not necessary to demonstrate compliance with EPA's CTGs are 310 CMR 7.26(22) "Midsize Printer" definition provisions (a) and (b), (26)(a) and (b)2. and (27)(a), (b) and (d).

Table 2 310 CMR 7.18 organization																	
	Current subsections																Proposed subsections
	(3)	(5)	(11)	(12)	(14)	(21)	(24)	(25)	(3)	(5)	(11)	(12)	(14)	(21)	(24)	(25)	(31) (32)
Topic	Current divisions								Revised divisions								New divisions
Applicability	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Definition																	(b)
Reserved/deleted																(b)	
Exemption			(a)			(c)	(c)	(c)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(c)	(b) (c)
Extension			(a)		(a)	(b) & (d)	(b) & (d)	(b) & (d)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(d)	(c) (d)
RACT limits	(a)	(a)	(b)	(a)	(a)	(b) & (e)	(b) & (e)	(b) & (e)-(l)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(e)-(l)	(d) (e)
Application method									(e)	(e)	(e)			(e)			(f)
Cleaning material & RACT work practices								(k) & (l)	(f)	(f)	(f)	(e)	(e)	(f)	(e)	(m)	(e) (g)
Plan & extension submittal						(f)	(f)	(m)	(g)	(g)	(g)	(f)	(f)	(g)	(f)	(n)	(f) (h)
Continuous compliance requirement	(b)	(b)	(c)	(b)	(b)	(g)	(g)	(n)									
Recordkeeping	(c)	(c)	(d)	(c)	(c)	(h)	(h)	(o)	(h)	(h)	(h)	(g)	(g)	(h)	(g)	(o)	(g) (i)
Testing	(d)	(d)	(e)	(d)	(d)	(i)	(i)	(p)	(i)	(i)	(i)	(h)	(h)	(i)	(h)	(p)	(h) (j)

Revised and New 310 CMR 7.18 subsections:

- (3) Metal Furniture Surface Coating
- (5) Large Appliance Surface Coating
- (11) Surface Coating of Miscellaneous Metal Parts and Products
- (12) Packaging Rotogravure and Packaging Flexographic Printing
- (14) Paper, Film and Foil Surface Coating
- (21) Surface Coating of Plastic Parts
- (24) Flat Wood Paneling Surface Coating
- (25) Offset Lithographic Printing and Letterpress Printing
- (31) Industrial Cleaning Solvents
- (32) Fiberglass Boat Manufacturing

MassDEP is proposing to delete 310 CMR 7.18(7): *Automobile Surface Coating*, since there are no longer any facilities in Massachusetts in the affected source category, as determined by MassDEP's review of its air emissions source database for North American Industry Classification System (NAICS) codes 336111, 336112 and 336120. To meet its CTG obligation, MassDEP is proposing a "negative declaration" for this category for EPA approval as part of the Massachusetts SIP. If in the future a new facility is proposed in Massachusetts, it would be subject to Best Available Control Technology (BACT) and would not be subject to RACT; therefore, this RACT regulation is no longer needed.

On August 30, 2013, MassDEP adopted a new Adhesives rule at 310 CMR 7.18(30) that contains emission limits applicable to adhesive use not otherwise covered by a regulation. Since 310 CMR 7.03, 7.18(12) and (25) and 7.26(20) through (29) (ERP) contain emission limits for adhesives used in the printing industry, MassDEP is proposing an amendment clarifying that the Adhesives rule (310 CMR 7.18(30)) does not apply to adhesives used by the printing industry, consistent with EPA's Adhesives CTG recommendation.

a) General Amendments to 310 CMR 7.18

The proposed amendments include provisions that are generally applicable to many or all of the CTG categories, which are described below and follow the order in Table 2 above.

Applicability

The proposed amendments follow EPA's CTGs in specifying applicability based on the sum of emissions from process operations and cleaning operations. The quantity of emissions that triggers applicability is the greater of 15 pounds of VOC per day or 3 tons per rolling 12 month period, before application of control equipment, unless otherwise noted for a particular category. The proposed amendments specify that the revised RACT limits take effect two years after the date of final promulgation of these amendments, while compliance with the coating and cleaning work practices is required from the date of promulgation since they are consistent with current practice.

Definitions

The proposed amendments make several revisions to definitions in 310 CMR 7.00 related to 310 CMR 7.18 based on EPA's CTGs, and also update the definition of VOC to exclude eight substances EPA has excluded in the federal definition of VOC⁵ and to make a typographical correction.

Exemptions

The proposed amendments specify exemptions for each subsection, consistent with EPA's CTGs.

Extensions

The proposed amendments allow an extension of the compliance date (except for the coating and cleaning work practices) when an owner is researching new compliance or waste prevention options as a means to comply, and proposes to achieve additional reductions. The extension is for one year (i.e., three years after the date of final promulgation). Providing a one year extension continues a long-standing Massachusetts practice of allowing flexibility in meeting VOC RACT standards.

RACT limits

The proposed amendments incorporate VOC limits from EPA's CTGs that apply to more explicitly divided categories of coatings and operations than are found in MassDEP's current regulations. The proposed amendments clarify that when RACT requirements become more stringent, operations that complied with superseded less stringent requirements under 310 CMR 7.03 or 7.26 must comply with the newly adopted more stringent RACT requirements, as of the dates indicated in the 'Applicability' and 'Extensions' discussions above.

Note that the proposed amendments retain existing 310 CMR 7.18(2)(f), which exempts up to 55 gallons of coating at a facility per rolling 12 month period from the emissions limitations of each 310 CMR 7.18 subsection, consistent with EPA's CTGs in recognition that some specialized operations require small quantities of non-compliant raw materials.

⁵ See June 22, 2012, (77 FR 37610); February 12, 2013 (78 FR 9823); August 28, 2013 (78 FR 53029); October 22, 2013 (78 FR 62451); March 27, 2014 (79 FR 17037); and February 25, 2016 (81 FR 9339).

This will allow flexibility for smaller businesses in the implementation of the VOC RACT requirements.

Application Methods and Work Practices for coating, printing and cleaning operations

The proposed amendments specify allowable application methods and required work practices for each subsection, consistent with EPA's CTGs. The amendments allow use of a coating application method capable of achieving a transfer efficiency equivalent to or greater than that achieved by high volume low pressure (HVLP) spray guns, with prior approval from EPA. EPA determines HVLP-equivalence. MassDEP will work closely with EPA and spray gun manufacturers to ensure that spray gun models with a demonstrated transfer efficiency equivalent to HVLP spray guns are approved by EPA.

Emission control plan requirement when installing control equipment or exploring pollution prevention option

In order to allow for flexibility in implementing these VOC RACT requirements, the regulations allow facilities to choose to install control equipment, after receiving approval of an emission control plan application submitted pursuant to 310 CMR 7.18(20). This provides an alternative pathway for owners to achieve compliance. Similarly, facilities seeking to exercise the extension option discussed above also follow the emission control plan application provisions in 310 CMR 7.18(20).

Recordkeeping

The proposed amendments specify that records sufficient to demonstrate compliance shall be kept for five years, consistent with EPA's recent practice which has superseded older requirements that required that only three years of records be kept.

Testing

The proposed amendments specify allowable test methods for demonstrating compliance. In addition, and consistent with EPA's CTGs, the proposed amendments in subsections (11), (21) and (32) allow manufacturer formulation data to be used to demonstrate compliance with VOC content limits as an alternative to using EPA Test Methods, subject to approval by MassDEP and EPA. The proposed amendments also clarify that when test data and formulation data conflict, the EPA Test Method takes precedence unless the manufacturer demonstrates to MassDEP's and EPA's satisfaction that the manufacturer formulation data are correct.

Continuous Compliance

The amendments propose to delete existing "Continuous Compliance" regulatory divisions as duplicative excerpts of language in 310 CMR 7.18(2). Proposed amendments to 310 CMR 7.18(2) update the list of allowable test methods, and address references to 310 CMR 7.18 subsections that have been added and deleted over time.

b) CTG Category-Specific Amendments

Where the proposed amendments include provisions that are not generally applicable to many or all of the CTG categories, they are described below.

Stringency of CTGs as compared to existing 310 CMR 7.18(3), (5), (11) and (21)

The proposed amendments to 310 CMR 7.18(3), (5), (11) and (21) are generally consistent with EPA's CTGs. However, certain EPA CTG limits for specialty coatings are less stringent than MassDEP's current, SIP-approved regulations. Section 110(l) of the CAA only allows revisions to SIP requirements if such revisions do not interfere with attaining air quality standards (known as the "anti-backsliding" provision). Because the amendments also include emission limits for some large use categories (i.e., one component and multi-component general use coatings) that are more stringent than MassDEP's current regulations, MassDEP believes (based on EPA guidance) that these more stringent limits on higher use coatings offset the less stringent specialty coating limits; therefore, the regulations as a whole avoid backsliding.

In addition, similar to 310 CMR 7.18(7): *Automobile Surface Coating*, the proposed amendments delete the provisions in 310 CMR 7.18(21) for plastic parts coating operations with the potential to emit 50 tons per year of VOC, since there are no longer any such facilities in Massachusetts, based on the following:

- No plastic parts coating facilities operate under 310 CMR 7.00: Appendix C: Operating Permit and Compliance Program;
- No plastic parts coating facilities have applied for a restriction on their VOC emissions potential to emit to avoid 310 CMR 7.00: Appendix C; and
- No plastic parts coating facilities have submitted an Emission Control Plan (ECP) pursuant to 310 CMR 7.18(21) to install pollution controls.

If in the future a facility is proposed in Massachusetts, it would be subject to Best Available Control Technology (BACT) instead of RACT; therefore, the 310 CMR 7.18(21) provisions for operations with the potential to emit 50 tons per year or greater are no longer needed. Existing facilities that become subject to the proposed amendments at the new applicability threshold (the greater of 15 pounds of VOC per day or 3 tons per rolling 12 month period) are not subject to the current regulation, and therefore adopting the new less stringent plastic parts coating VOC limits in the CTG will not result in backsliding.

The proposed Tables 310 CMR 7.18(11)(d)2.c. and (21)(d)1.d. (both entitled *RACT Emission Limitations for Pleasure Craft Surface Coatings*) include VOC limits for two coating categories that are less stringent than suggested in the CTG and for a third coating category added by MassDEP, Antifouling Sealer/Tie Coat, not included in the CTG. The reasons for differing from the CTG VOC limits are as follows:

- After EPA published the *Miscellaneous Metal and Plastic Parts Coatings* CTG, the American Coatings Association (ACA), representing the pleasure craft industry, commented that the suggested VOC limits for several coating categories were too stringent to be considered RACT. The comments submitted to EPA also were submitted to a number of states that were revising their RACT regulations, including New Hampshire. New Hampshire determined that the following changes requested by ACA reflect RACT:
 - *Extreme High Gloss Topcoat*: suggested change from 420 g/l to 600 g/l is needed to meet appearance and functionality requirements.
 - *Other Substrate Antifouling Coating*: suggested change from 330 g/l to 400 g/l is needed to meet performance requirements.

- *Antifouling Sealer/Tie coating*: a new category that is needed to comply with the International Maritime Organization (IMO) *International Convention on the Control of Harmful Anti-Fouling Systems on Ships* (which regulates biocide antifouling coatings). The antifouling sealer must be able to penetrate and seal the old biocide-antifouling coat, and promote adhesion of a biocide-free anti-stick top coat.

310 CMR 7.18(11) Surface Coating of Miscellaneous Metal Parts and Products and (21) Surface Coating of Plastic Parts

While EPA's CTG for *Miscellaneous Metal and Plastic Parts Coatings* combines miscellaneous metal and plastic parts coatings operations, the proposed amendments maintain the current structure of two separate regulatory subsections, but include new cross references to one another.

Where a facility has metal and plastic parts coating operations, the sum of the associated process and cleaning emissions would be used to determine applicability, but the metal coating operations would be subject to the emission limits established at 310 CMR 7.18(11) and the plastic parts coating operation would be subject to the requirements of 310 CMR 7.18(21).

310 CMR 7.18(14) Paper, Film, and Foil Surface Coating

The proposed amendments clarify that the regulations apply to paper, film, and foil coating operations, which should help eliminate confusion with the RACT printing requirements discussed further below (particularly through amendments to the definitions of *Paper, Film and Foil Surface Coating* and *Specialty Printing* and the clarification that coating performed on or in-line with any offset lithographic, screen, letterpress, flexographic, rotogravure, or digital printing press is part of a printing process and is not part of the paper, film, and foil coating category).

The current emission limit applicability threshold of 15 pounds of VOC per day per coating line before application of control equipment would remain in effect, and the proposed amendments would add:

1. the CTG work practices applicability threshold of the greater of 15 pounds of VOC per day or 3 tons per rolling 12 month period before application of control equipment; and
2. the CTG emission limit applicability threshold of 25 tons of VOC per rolling 12 month period per coating line before application of control equipment (with the option to obtain an enforceable limit to restrict the potential emissions of a coating line to below 25 tons per year to be exempted from these emission limits).

310 CMR 7.18(31) Industrial Cleaning Solvents

The proposed amendments create a new RACT regulation, 310 CMR 7.18(31) *Industrial Cleaning Solvents*, which would apply to any facility with emissions from industrial cleaning solvents greater than 15 pounds of VOC per day or 3 tons per rolling 12 month period, before application of control equipment.

The proposed amendments include work practices and three options for compliance with the VOC content of the industrial cleaning solvent:

1. use materials which meet the specific VOC content limitations in Table 310 CMR 7.18(31)(d)1.; or

2. use industrial cleaning solvents that have a VOC composite partial pressure equal to or less than eight mm Hg at 20°C (68°F); or
3. achieve an overall VOC control efficiency of at least 85 percent by weight using add-on air pollution capture and control equipment.

These three requirements do not apply to industrial cleaning solvent usage otherwise subject to an emission limitation in 310 CMR 7.03, 7.18, 7.25 or 7.26, because in such cases EPA has determined that there is a more appropriate sector-specific requirement.

310 CMR 7.18(32) Fiberglass Boat Manufacturing

The proposed amendments create a new RACT regulation, 310 CMR 7.18(32) *Fiberglass Boat Manufacturing*, which would apply to any fiberglass boat manufacturing facility with emissions from manufacturing and cleaning operations greater than 15 pounds of VOC per day or 3 tons per rolling 12 month period, before application of control equipment.

The proposed amendments include work practices and four options for compliance with the monomer (the basic building block of fiberglass resins) VOC content limitations for open molding resins and gel coats:

1. use materials which meet the specific VOC content limitations in Table 310 CMR 7.18(32)(e)1.;
2. emit no more than a calculated weighted-average monomer VOC content for a specific category and application method;
3. emit no more than a calculated facility-wide emissions average VOC emissions cap, or
4. 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.

Printing industry related amendments 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(24)-(29) ERP: Lithographic, Gravure, Letterpress, Flexographic, and Screen Printing***

MassDEP currently regulates VOC emissions from the printing industry under four separate but overlapping regulations: 310 CMR 7.02, 7.03, 7.18 and 7.26. The proposed amendments would delete obsolete provisions from 310 CMR 7.03(15) and make other minor edits to align 310 CMR 7.03, 7.18 and 7.26. This streamlining and reorganization of the regulations will make the requirements for the printing industry easier to understand and comply with.

The CTGs (and MassDEP's 310 CMR 7.18 RACT regulations implementing them) are designed to address a 'type' of printing operation, whereas MassDEP's 310 CMR 7.26 Environmental Results Program (ERP) applies to facilities that conduct printing as their primary activity on an 'industry sector basis' as determined by the 2012 North American Industry Classification System (NAICS) codes associated with the printing industry. As a result, a non-ERP facility (i.e., NAICS code not listed in ERP) that conducts printing as an ancillary activity (i.e., on the product it manufactures) is covered by the appropriate section of 310 CMR 7.18 but not ERP.

In all cases, the 310 CMR 7.18 RACT requirements cover all large facilities that conduct printing as either their primary or ancillary operation as well as all large heat-set operations. In addition, an ERP printer that has actual VOC emissions that equal or exceed 10 tons per year is required to obtain a preconstruction plan approval under 310 CMR 7.02 or comply with 310 CMR 7.03 prior to installation or modification of a printing line at their facility.

After these regulations are finalized, MassDEP will update its ERP printer outreach materials to assist facilities in complying with any new provisions.

310 CMR 7.18(12) Packaging Rotogravure and Packaging Flexographic Printing

The proposed amendments implement EPA's *Flexible package printing materials* CTG and would:

1. add the CTG work practices applicability threshold of the greater of 15 pounds of VOC per day or 3 tons per rolling 12 month period before application of control equipment (from combined printing and cleaning operations); and
2. supersede (two years after promulgation) the current emission limit applicability threshold of 50 tons per year of potential VOC before application of control equipment with the CTG emission limit applicability threshold of 25 tons of VOC per rolling 12 month period per printing line before application of control equipment (with the option to obtain an enforceable limit to restrict the potential emissions of a printing line to below 25 tons per year to be exempted from these emission limits).

The proposed amendments also remove the imprecise, undefined term "graphic arts" from 310 CMR 7.18(12) and ERP, replacing it with appropriate, defined terms ("Packaging Rotogravure and Packaging Flexographic Printing" in 7.18(12) and "Gravure, Letterpress, and Flexographic" in ERP).

Based on MassDEP's search of its air emissions source database for the NAICS commercial printing code 32111 and the associated facility and emission unit descriptions, and inquiry of trade groups, there are no longer any publication rotogravure printing operations with the potential to emit 50 tons per year or more of VOC in Massachusetts (indeed, there are no such facilities of any size in Massachusetts). Therefore, MassDEP is proposing to delete the 310 CMR 7.18(12) provisions for such facilities that originated in EPA's 1978 CTG *Control of Volatile Organic Emissions from Existing Stationary Sources - Volume VIII: Graphic Arts - Rotogravure and Flexography*. To meet its CTG obligation, MassDEP is proposing a "negative declaration" for this category for EPA approval as part of the Massachusetts SIP.

310 CMR 7.18(25) Offset Lithographic Printing and Letterpress Printing

The proposed amendments would:

1. add the CTG work practices applicability threshold of the greater of 15 pounds of VOC per day or 3 tons per rolling 12 month period before application of control equipment; and
2. supersede (two years after promulgation) the current offset lithographic printing press emission limit applicability threshold of 50 tons per year of potential VOC before application of control equipment with the CTG emission limit applicability thresholds of:
 - a. 15 pounds of VOC per day or 3 tons per rolling 12 month period before application of control equipment; and

- b. 25 tons of VOC per rolling 12 month period per heatset web offset lithographic or heatset web letterpress printing press line before application of control equipment (with the option to obtain an enforceable limit to restrict the potential emissions of a printing line to below 25 tons per year to be exempted from these emission limits).

310 CMR 7.26(20) - (29): Environmental Results Program: Lithographic, Gravure, Letterpress, Flexographic, and Screen Printing

The proposed amendments update obsolete Standard Industrial Classification (SIC) and NAICS codes. The proposed amendments to the ERP definition of “Midsize Printer” incorporate the CTG threshold of the greater of 15 pounds of VOC per day or 3 tons per rolling 12 month period, before application of control equipment. The proposed amendments include new “Very Small Printer” and updated “Large Printer” definitions.

MassDEP will not submit the portions of 310 CMR 7.26 solely affecting small and very small printers to EPA for approval as part of the Massachusetts SIP because such printers are not subject to RACT since they are below the RACT size threshold. The portions of 310 CMR 7.26 affecting midsize and large printers will be submitted to EPA for approval as part of the Massachusetts SIP.

3. Economic Impacts

The proposed amendments will have modest economic impacts on some businesses that are subject to the regulations. However, similar emissions standards are required in eleven other northeastern states and the District of Columbia (to the extent that the affected industries are present in each jurisdiction) and therefore compliant coatings, industrial cleaning solvents, adhesives, and fountain solutions are widely available. In addition, the proposed amendments provide flexibility in compliance dates to entities that wish to seek innovative compliance approaches that could be less expensive and would result in additional emissions reductions but would require more time to implement. There are also numerous provisions in the proposed regulation for smaller businesses to seek additional time or alternative approval pathways to achieve compliance.

4. Impacts on Cities and Towns

Pursuant to Executive Order 145, state agencies must assess the fiscal impact of new regulations on the Commonwealth’s municipalities. In general, the proposed amendments do not establish new requirements for municipalities. However, some municipalities operate EGUs, boilers, or engines that the regulation applies to, and as noted under Economic Impacts, the owners of such units may incur costs in complying with the proposed amendments. However, these costs would not be subject to Proposition 2 ½ unless they were associated with a mandated municipal service. In general, large emissions sources are not necessary to deliver mandated municipal services. For example, operating a power plant is not a mandated municipal service.

5. Agricultural Impacts

Pursuant to M.G.L. C. 30A, §18, state agencies must evaluate the impact of proposed programs on agricultural resources within the Commonwealth. The proposed amendments could have positive impacts on agricultural production in Massachusetts. VOCs are precursors to ground-

level ozone, which adversely affects vegetation and some crops. Therefore, a reduction in VOC emissions could have a positive impact on agriculture by resulting in less ozone formation.

G. REASONABLY AVAILABLE CONTROL TECHNOLOGY FOR SOURCES OF NITROGEN OXIDES

1. Summary

The Massachusetts Department of Environmental Protection (MassDEP) is proposing to amend 310 CMR 7.19: *Reasonably Available Control Technology (RACT) for Sources of Nitrogen Oxides (NO_x)* to lower emission limits for large boilers, stationary combustion turbines, and stationary reciprocating internal combustion engines at major source facilities (i.e., those with potential facility-wide NO_x emissions of 50 tons per year or more).

Massachusetts is located within the Ozone Transport Region (OTR)⁶. Pursuant to the Clean Air Act (CAA),⁷ states in the OTR are required to adopt RACT⁸ for major sources of NO_x irrespective of their ozone attainment status. NO_x contributes to ozone formation. Ozone irritates the respiratory system and may cause coughing and shortness of breath. It also can exacerbate respiratory illness and reduce resistance to infection. Ozone is of particular concern for children, people with asthma and other chronic respiratory diseases, and people exercising and working outdoors for prolonged periods of time. Ozone also damages forests and other vegetation, agricultural crops, and natural and synthetic materials.

Federal regulations promulgated under the CAA require states in the OTR to review, amend as necessary, and certify to the U.S. Environmental Protection Agency (EPA) through a RACT State Implementation Plan (SIP) that their regulations meet RACT within two years of EPA issuing designations for a revised ozone National Ambient Air Quality Standard (NAAQS) (40 CFR §51.1116).

EPA promulgated revised ozone NAAQS in 2008 and issued designations on July 20, 2012; RACT SIPs were due on July 20, 2014. Many states, including Massachusetts, did not submit RACT SIPs by this date. Furthermore, EPA promulgated revised ozone NAAQS on October 1, 2015 and expects to issue designations by October 1, 2017, which likely would make RACT SIPs for the 2015 ozone standard due by October 1, 2019. As recommended by EPA, and to efficiently use its resources, MassDEP is proposing that these proposed amendments fulfill Massachusetts' NO_x RACT obligations for the 2008 and the 2015 ozone NAAQS.

MassDEP compared its existing NO_x RACT emissions standards with those in other OTC states (see Appendix A) and found that more stringent standards have been adopted or proposed (specifically in New York and Connecticut) for large boilers, stationary combustion turbines, and stationary reciprocating internal combustion engines. MassDEP considers these levels to represent RACT.

⁶ Section 184(a) of the CAA established the Northeast Ozone Transport Region (OTR) and the Ozone Transport Commission (OTC). The OTR is comprised of the District of Columbia, a portion of Northern Virginia, and the states of Maine, Vermont, New Hampshire, Massachusetts, Connecticut, Rhode Island, New York, Pennsylvania, New Jersey, Delaware, and Maryland.

⁷ CAA Sections 184(b)(2) and 182(f).

⁸ RACT is defined as "the lowest emission limitation that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility." (44 FR 53762, September 17, 1979).

For large boilers, the proposed amendments would adopt the emission limits in New York's regulation for large boilers. For stationary reciprocating internal combustion engines, the proposed amendments would adopt the emissions limits in New York's and Connecticut's regulations (both have the same limits). For stationary combustion turbines, the proposed amendments would adopt the emissions limits Connecticut is in the process of proposing to meet its RACT obligations.

Altogether, MassDEP's proposed amendments would potentially affect 17 facilities with large boilers, 21 facilities with combustion turbines, and 15 facilities with engines (see Appendix B for a list of these facilities). While MassDEP is proposing lower NO_x RACT emission limits, there are several provisions that provide flexibility to affected facilities, including:

- The new emission limits would not apply to:
 - large boilers and combustion turbines that operate with a capacity factor of less than ten percent averaged over the most recent three years.
 - engines that operate less than 1,000 hours per year.
- A facility can obtain a permit restriction limiting potential NO_x emissions below 50 tons so that RACT would no longer apply.
- If a facility believes that it is not reasonable to meet the new RACT limits, the facility can apply for an alternative RACT limit.
- Compliance is required two years after the date of promulgation to give time for facilities to obtain a restriction, apply for an alternative RACT limit, or plan for pollution controls.

2. Description of Proposed Amendments

a) Large Boilers

The proposed large boiler emission standards would apply to Electric Generating Units (EGUs), district heating facilities, and industrial/commercial/institutional (ICI) boilers with a rated heat input of 100 million British thermal units per hour (MMBtu/hr) or greater. MassDEP is proposing to adopt NO_x RACT emission limits equal to those adopted by the New York Department of Environmental Conservation (NYSDEC) in 2010 for large boilers under 6 NYCRR Part 227, Subpart 227-2. Table 1 below compares MassDEP's current and proposed emission limits in 310 CMR 7.19(4) for large boilers with NYSDEC's limits. MassDEP believes that the limits in place in New York are appropriate as RACT in Massachusetts because the limits are technically and economically feasible for large boilers, and because Massachusetts has large boilers that are similar in size, fuel used, and combustion configuration as those in New York.

MassDEP believes that boilers with a low level of operation may not be able to cost effectively meet more stringent emission levels and is proposing to exempt units that operate with an average capacity factor of less than ten percent (10%) averaged over the most recent three years of operation. This approach is similar to the EPA's Boiler Maximum Achievable Control Technology (MACT) regulation where a boiler operating below a 10% capacity factor is considered "limited use" and is not required to meet the MACT emission limits.

Table 1- Large Boilers NO_x Emission Limits

Large Boilers (100 MMBtu/hr or greater) Type and Size	MassDEP NO _x RACT-310 CMR 7.19(4) lb/MMBtu			NYSDEC NO _x RACT- Subpart 227-2 lb/MMBtu		
	Coal	Oil	Gas	Coal	Oil	Gas
Large Coal fired Boilers equal to or greater than 100 MMBtu/hr, and Oil/Gas fired Boilers ≥ 250 MMBtu/hr Tangential fired	0.38 Current	0.25 Current	0.20 Current	0.12	0.15	0.08
	(0.12)	(0.15)	(0.08)			
	Proposed	Proposed	Proposed			
Large Coal fired Boilers equal to or greater than 100 MMBtu/hr, and Oil/Gas fired Boilers ≥ 250 MMBtu/hr Face Fired	0.45 Current	0.28 Current	0.28 Current	0.12	0.15	0.08
	(0.12)	(0.15)	(0.15)			
	Proposed	Proposed	Proposed			
100 ≤ X < 250 MMBtu/hr Heat release >70,000 Btu/hour-ft ³	n/a	0.40 Current	0.20 Current	n/a	0.15	0.06
		(0.15) Proposed	(0.06) Proposed			
100 ≤ X < 250 MMBtu/hr Heat Release less than or equal to 70,000 Btu/hour-ft ³	n/a	0.30 Current	0.20 Current	n/a	0.15	0.06
		(0.15) Proposed	(0.06) Proposed			

The EGUs that would be affected by the proposed amendments also are subject to 310 CMR 7.29 (Emissions Standards for Power Plants), which imposes a facility-wide NO_x emission limit of 0.15 lb/MMBtu per consecutive 12 month period. EPA does not allow an averaging period greater than one month for compliance with RACT emissions limitations; therefore, MassDEP is proposing a unit-specific RACT emission standard of 0.15 lb/MMBtu for oil-fired boilers per calendar month. NO_x emissions from all affected large oil-fired EGU boilers are reported to EPA's Clean Air Market Database (CAMD). Based on MassDEP review of this data, these units already demonstrate the capability of complying with the emissions standard on a calendar quarter basis, and MassDEP believes that complying with the proposed emissions standard on a monthly basis is achievable.

Three coal-fired EGUs would be subject to the proposed emission standard. Two of these units are equipped with selective catalytic reduction (SCR) for NO_x control and must meet a NO_x emissions limit of 0.08 lb/MMBtu on a rolling 30-day average basis in accordance with an EPA consent agreement. These two units are capable of complying with the proposed NO_x emission standard of 0.12 lb/MMBtu. The third coal-fired EGU is equipped with

selective non-catalytic reduction (SNCR) and also may be capable of complying with the proposed RACT with no additional capital costs.

The owners of several large ICI and district heating boilers may need to install NO_x control equipment, such as overfire air, flue gas recirculation, SNCR, or SCR in order to meet the proposed emission standards, or they may qualify for the proposed exemption from the emission standards if the boiler's annual capacity factor is less than 10% over a three year period. The affected facilities are noted in Appendix B.

b) Combustion Turbines

The combustion turbines that would be affected by the proposed amendments are used primarily for merchant and municipal electric power generation; institutional, commercial, industrial and residential combined heat and power; and natural gas transmission line compressor stations. MassDEP is proposing to adopt NO_x RACT standards equivalent to those proposed by the Connecticut Department of Energy and Environmental Protection (CT DEEP), as shown in Table 2. MassDEP believes that turbines with a low level of operation may not be able to cost effectively meet more stringent emission levels and is proposing to exempt units that operate with an average capacity factor of less than ten percent (10%) averaged over the most recent three years of operation.

CT DEEP is proposing two phases of emission limits where the more stringent standards become effective on June 1, 2022. MassDEP believes CT DEEP's proposed phase 2 RACT limits are appropriate as RACT in Massachusetts because the limits are technically and economically feasible, and because Massachusetts has aeroderivative combustion turbines and combined cycle turbine models that are similar to those in Connecticut. Since MassDEP is establishing RACT to fulfill its RACT obligations for the 2008 and 2015 ozone NAAQS, MassDEP is proposing limits equal to CT DEEP's phase 2 limits.

Table 2 – Combustion Turbines NO_x Emission Limitations

<u>Type of turbine</u>	MassDEP (current) ppm @ 15% O ₂	MassDEP (proposed) ppm@15% O ₂	CT DEEP (proposed Phase 2 effective June 1, 2022) ppm@15% O ₂
Simple cycle gas	65	40	40
Simple cycle oil	100	50	50
Combined cycle gas	42	25	25
Combined cycle oil	65	42	42

c) Reciprocating Internal Combustion Engines (RICE)

Similar to combustion turbines, the reciprocating internal combustion engines (RICE) that would be affected by the proposed amendments are used primarily for merchant and municipal electric power generation; institutional, commercial, industrial and residential combined heat and power; and natural gas transmission line compressor stations. MassDEP is proposing emission standards for lean-burn natural gas-fired, and all oil-fired RICE that are equal to those adopted by NYSDEC and proposed by CT DEEP, as shown in Table 3.

MassDEP believes these limits are technically and economically feasible. If an engine does not operate equal to or greater than 1,000 hours during any consecutive 12 month period, the engine operator has the option of tuning up the engine to minimize emissions without complying with the numerical emissions standard. However, if operation of such an engine equals or exceeds 1,000 hours of operation during any subsequent consecutive 12 month period, the owner must comply with the applicable emission standard no later than two years from the end of the consecutive 12 month period that exceeded 1,000 hours.

Table 3 - RICE NO_x Emission Limits

Fuel type	MassDEP (current) Grams per brake horsepower-hour (g/bhp-hr)	MassDEP (proposed) g/bhp-hr	NYSDEC Subpart 227-2.4 (current) g/bhp-hr	CT DEEP Section 22a-174-22e(d)6 (proposed phase 2) g/bhp-hr
Gas fired (rich burn)	1.5	1.5	1.5	1.5
Gas fired (lean burn)	3.0	1.5	1.5	1.5
Oil fired (lean burn)	9.0	2.3	2.3	2.3
Dual fired (lean burn)	9.0	2.3	2.3	2.3

d) Alternative RACT

If an owner of a RACT-affected emissions unit cannot comply with applicable RACT emissions standards due to technological and/or economic feasibility, the owner may apply to MassDEP for a source-specific RACT determination. The application must demonstrate that compliance with the applicable regulation is not technically or economically feasible, or that only partial compliance is feasible, and must include a list of all possible control technologies and strategies. MassDEP would evaluate the application and would issue a source-specific RACT determination where a satisfactory alternative RACT demonstration is made.

Source-specific RACT determinations, including emissions limits and monitoring provisions, would be added to the facility's Emission Control Plan. Once the permit is issued, MassDEP would submit the source-specific RACT determination to EPA for approval as a single source State Implementation Plan (SIP) revision, which is a requirement to make it federally enforceable. EPA would hold a public comment period on the single-source SIP as part of its approval process.

e) Compliance date

MassDEP is proposing a compliance date for meeting the proposed RACT emission standards of two years after the date of promulgation of the proposed amendments. This would give time to owners of affected facilities to obtain a permit restriction, apply for

alternative RACT, or plan for pollution controls or fine tuning of combustion units to meet the applicable emission standards. An owner of a large boiler or combustion turbine emission unit that meets the low capacity factor exemption, which subsequently exceeds the 10% annual capacity factor would have two years from the end of the calendar year in which the capacity factor was exceeded to comply with the emissions limits. An owner of an engine that operates less than 1,000 hours, which subsequently operates 1,000 or more hours in a consecutive 12-month period would have two years from the end of that 12 month period to comply with the applicable emission limits.

f) Emission Control Plan

If an owner must install or retrofit air pollution controls to comply with the new emission standards, the owner would submit an Emission Control Plan to MassDEP for approval in accordance with 310 CMR 7.19(3)(a),(b), and (c) within 180 days of the date of promulgation of the proposed amendments, or within 180 days of becoming subject to an emission standard by exceeding the 10% annual capacity factor (for large boilers and turbines) or the 1,000 operating hours for RICE.

g) Monitoring Provisions

The proposed amendments update the monitoring provisions at 310 CMR 7.19(13) to reflect amendments to 40 CFR Part 75, monitoring requirements for NO_x and CO compliance, and streamline the quality assurance specifications for CO consistent with 40 CFR Part 60.

3. Economic Impacts

The proposed amendments will have an economic impact on owners of affected facilities that must add or upgrade pollution control equipment. The overall impact should not be significant since many of the facilities already have controls in place that will meet the proposed standards, and the proposed amendments provide exemptions for low capacity units. In addition, facilities that do not qualify as low capacity and do not meet the proposed standards can propose a facility-specific alternative RACT standard if the proposed standards are not feasible, which will further moderate potential costs. In addition, the provisions in these regulations are required by the federal Clean Air Act.

4. Impacts on Cities and Towns

Pursuant to Executive Order 145, state agencies must assess the fiscal impact of new regulations on the Commonwealth's municipalities. The Executive Order was issued in response to Proposition 2 1/2, M.G.L. c. 29 s. 27C(a) which requires the state to reimburse municipalities for costs incurred as a consequence of new state laws and regulations. In general, the proposed amendments do not establish new requirements for municipalities. However, some municipalities operate EGUs, boilers, or engines that the regulation applies to, and as noted under Economic Impacts, the owners of such units may incur costs in complying with the proposed amendments. However, these costs would not be subject to Proposition 2 1/2 unless they were associated with a mandated municipal service. In general, large emissions sources are not necessary to deliver mandated municipal services. For example, operating a power plant is not a mandated municipal service.

5. Agricultural Impacts

Pursuant to M.G.L. C. 30A, §18, state agencies must evaluate the impact of proposed programs on agricultural resources within the Commonwealth. The proposed amendments will not have significant impacts on agriculture.

H. NO_x Ozone Season Budget Program

1. Overview

The Massachusetts Department of Environmental Protection (MassDEP) is proposing to replace 310 CMR 7.32: *Massachusetts Clean Air Interstate Rule* (MassCAIR) with a new 310 CMR 7.34: *Ozone Season Nitrogen Oxides Control* (MassNO_x) to meet a 2017 and beyond budget for emissions of oxides of nitrogen (NO_x) from large fossil-fuel-fired electric power and steam-generating units during the ozone season (May 1st through September 30th). NO_x is an ozone precursor and the proposed amendments are part of MassDEP's strategy to maintain attainment with the ozone National Ambient Air Quality Standards (NAAQS).

MassDEP adopted the existing MassCAIR regulation in 2007 to meet U.S. Environmental Protection Agency (EPA) requirements to reduce ozone season NO_x emissions that contributed to ozone affecting other states. MassCAIR required affected facilities to participate in EPA's multi-state Clean Air Interstate Rule (CAIR) cap-and-trade program, which ended in 2015. EPA approved the MassCAIR regulations as part of the Massachusetts State Implementation Plan (SIP) in 2007 and MassDEP took credit for NO_x reductions resulting from MassCAIR.

Under MassCAIR, each facility was given a NO_x budget. If the budget was exceeded the facility had to purchase NO_x allowances from other facilities equal to the excess emissions. The Massachusetts annual budget was 7,914 tons (2009 -2014) and 6,656 ton (2015 and beyond). An important concept in MassCAIR was that cleaner, more efficient facilities were given more NO_x allowances than they needed (i.e., more than their permitted NO_x emissions) and could sell them to less efficient facilities that were given fewer than they needed. Under MassCAIR, MassDEP recalculated each facility's NO_x budget annually based on emissions and net electrical and/or steam output.

In 2011, EPA replaced CAIR with a completely different regulation, the Cross State Air Pollution Rule (CSAPR). However, Massachusetts was not included in CSAPR because EPA's technical analysis showed sources in Massachusetts did not significantly contribute ozone to other states. While Massachusetts is not subject CSAPR, MassDEP is legally required to maintain the NO_x budget established under MassCAIR since MassCAIR is part of the Massachusetts State Implementation Plan (SIP). This is to avoid what is referred to as "backsliding" under section 193 of the federal Clean Air Act. If MassDEP did not replace the MassCAIR regulation with an equivalent regulation (MassNO_x) to maintain the emissions budget from that regulation, then Massachusetts could become subject to EPA sanctions or other legal action under the federal Clean Air Act since it would no longer be meeting its SIP obligations.

MassDEP developed the proposed MassNO_x program in consultation with EPA. The program would give each facility the same NO_x budget it received in the last year (2015) of the MassCAIR program as its MassNO_x emissions budget. Under this approach, cleaner, more efficient units are given more NO_x tons to emit than the unit's allowable permitted emissions (as provided in the facility's operating permit), but the facility cannot sell the excess tons since Massachusetts is not in EPA's regional CSAPR trading program. Therefore, MassDEP is proposing to exclude these units from MassNO_x because they could never emit above the budget they were given. This reduces the total number of facilities subject to MassNO_x from 32 to 24 facilities and also reduces the state-wide NO_x emissions budget from 6,656 tons to 1,799 tons.

Over the past five years the total ozone season NO_x mass emissions from all facilities (including those that would be excluded under MassNO_x) have ranged from 975 to 1,620 tons, which is below the proposed budget of 1,799 tons. However, in the event that the state-wide emissions budget is exceeded, any facility that has exceeded its individual emissions budget would be required to purchase CSAPR allowances to cover the excess emissions.

MassDEP will submit the final regulations to EPA to be included in the Massachusetts SIP. The proposed amendments do not require additional emissions reductions beyond those achieved under the MassCAIR program, and therefore facilities will not need to install new emissions control equipment to comply and can continue to operate existing equipment.

2. Description of Proposed Amendments

a) Regulated Units [310 CMR 7.34(1)(b)]

The proposed amendments would apply to units that were subject to the requirements of MassCAIR, that are still commercially operating as of the date of promulgation, and where the owner or operator received a 2015 CAIR NO_x Ozone Season Allocation from MassDEP that was less than the unit's annually permitted NO_x emissions (calculations of permitted emissions are shown in Appendix C). See 310 CMR 7.34(7): Table A for a list of applicable units.

b) Averaging Emissions [310 CMR 7.34(1)(d)]

The proposed amendments allow averaging of emissions between MassNO_x Units within the same MassNO_x Facility but do not allow averaging with another facility.

c) State-Wide Emissions Budget [310 CMR 7.34(7)]

The proposed amendments establish a state-wide emissions budget of 1,799 tons of NO_x per ozone season which was the 2015 MassCAIR budget for the facilities that would be subject to the proposed amendments. Over the past five years, the ozone season total NO_x mass emissions from these facilities have ranged from 698 to 1,305 tons. This time period has included a wide variability in factors that can influence emissions, such as economic activity, fuel prices, and weather. Therefore, MassDEP believes that the 1,799 ton mass emissions budget will not be burdensome for facilities.

d) Facility Emissions Budgets

The proposed amendments establish an ozone season NO_x emission budget for each MassNO_x Facility that would remain the same each year into the future. Each facility's emissions budget is the same as the allocation it received for the 2015 ozone season under MassCAIR, 310 CMR 7.32. The facility emissions budget is the sum of the individual unit budgets at each facility. Appendix A shows the calculations used to identify which units that were previously in the MassCAIR program would be in the MassNO_x program. The sum of all of the facility emissions budgets is 1,799 tons mass emissions, which is the state-wide emissions budget proposed for this regulation.

e) State-Wide Emissions Budget Exceedance and Required Actions [310 CMR 7.34(8)]

In the event the state-wide emissions budget of 1,799 tons of NO_x mass emissions per ozone season is exceeded, the proposed amendments require MassDEP to notify the owner or operator of each MassNO_x Facility whose NO_x emissions exceeded the facility's emissions budget. Within 60 days of the notification, the owner or operator would have to purchase and transfer CSAPR NO_x Ozone Season Allowances to MassDEP at a rate of one 2017 vintage or later CSAPR NO_x Ozone Season allowance for every one ton of excess emissions above the facility's emissions budget. Allowing the use of CSAPR allowances provides flexibility to facilities to emit above their budgets if needed.

f) Monitoring Requirements [310 CMR 7.34(3)]

As was required in the MassCAIR program and by federal regulations, the proposed amendments require the owner or operator of a MassNO_x unit to comply with the emissions monitoring requirements of 40 CFR Part 75 for operation, maintenance, mass emissions determinations, and out of control periods.

g) Reporting Requirements [310 CMR 7.34(4)]

As was required in the MassCAIR program and by federal regulations, the proposed amendments require the owner or operator of a MassNO_x Unit to comply with the reporting requirements of 40 CFR Part 75 to submit reports for NO_x mass emissions data and heat input data on a quarterly basis or for the control period to EPA. The owner or operator of a MassNO_x Unit would be required to submit a compliance certificate to EPA in support of each quarterly report and the facility designated representative would certify regarding the data submitted.

Unlike the MassCAIR program, the proposed amendments do not require reporting of electrical and steam output since each facility's budget will not change (under MassCAIR output reporting was used to annually recalculate each facilities NO_x allocation). Moreover, most units have separate requirements to report annual output under MassDEP's greenhouse gas reporting program (310 CMR 7.70), and to report output data to the U.S. Department of Energy.

h) Permits

Unlike the MassCAIR program, the proposed amendments do not require facilities to obtain a permit, thereby lessening the regulatory requirements on facilities. However, facilities will have to incorporate the new requirements into Operating Permits in accordance with 310 CMR 7.00: Appendix C.

i) Role of EPA

Even though the MassNO_x program will not be part of a regional trading program operated by EPA, the proposed amendments retain references to the EPA Administrator because EPA will administer the allowance tracking and emissions monitoring, reporting, and recordkeeping systems and processes for the program.

j) Updating Citations

Citations to prior ozone season NO_x regulations that have previously been proposed for deletion have been updated to 310 CMR 7.34, where appropriate, throughout 310 CMR 7.00.

3. Economic Impacts

The proposed amendments are not expected to increase compliance costs for facilities compared to the previous MassCAIR program, which required facilities to obtain allowances at significant monetary cost. Compliance with MassNO_x is not expected to be costly for facilities going forward because reductions from recent emissions levels are not required. In the event that the state-wide budget is exceeded, facilities would be required to purchase 2017 vintage or later CSAPR NO_x Ozone Season Allowances at a cost that will be made under a future market-based determination (the prior MassCAIR regulation also required facilities to obtain allowances). Therefore, there should be no change in the economic impact from current regulations, or there might be a reduced economic impact because several procedures and submittals have been removed as requirements.

In addition, there are several provisions that make MassNO_x less burdensome than the previous MassCAIR program:

- Eight facilities are no longer subject to the program;
- Some emission units at the remaining 24 facilities are no longer subject to the program;
- A facility that exceeds its NO_x emissions budget would be required to purchase CSAPR allowances only if the overall state-wide NO_x emissions budget is exceeded, which is unlikely (under MassCAIR such a facility would have had to purchase allowances if their budget was exceeded even if the state-wide budget was not exceeded);
- Facilities would no longer be required to report ozone season electrical and steam output (however facilities subject to the Regional Greenhouse Gas Initiative will continue to report annual output under that program);
- There is less administrative burden for facilities and MassDEP because each facility's NO_x emissions budget is set in the regulation and does not need annual recalculation by MassDEP and verification by facilities, and there is less reporting required by facilities;
- Permits are not required for MassNO_x (whereas MassCAIR required a permit);
- MassNO_x would not apply to new facilities (whereas MassCAIR applied to new facilities that met the MassCAIR applicability criteria), since new facility NO_x emission limits are set very low and would not contribute significantly to ozone in other states.

4. Impacts on Cities and Towns

The proposed amendments will not negatively affect cities or towns. While the communities that own electric power plants would be subject to the regulation, significant compliance costs are not anticipated because the program does not require facilities to reduce mass emissions from recent levels, and the proposed regulation removes some previously required procedures and submittals. Furthermore, MassDEP notes that ownership and operation of a power plant, which municipalities may voluntarily undertake, is not a mandated municipal service. Therefore, costs

associated with operation of a power plant are not mandated costs subject to the restrictions of Proposition 2 ½ (Town of Norfolk v. Department of Environmental Quality Engineering, 407 Mass 233 (1990)).

5. Agricultural Impacts

Pursuant to M.G.L. C. 30A, §18, state agencies must evaluate the impact of proposed programs on agricultural resources within the Commonwealth. The proposed amendments are not expected to have any negative impacts on agricultural production in Massachusetts. By maintaining emissions levels, positive impacts may result from reduced acid rain and ozone levels, both of which can impact agricultural productivity.

I. Appeals

1. Overview

MassDEP is proposing to amend its regulations for Hearings Relative to Orders and Approvals (310 CMR 7.51) to:

- (1) Clarify which persons have a right to request an adjudicatory hearing on MassDEP's approvals or disapproval of an air permit and the timelines and procedures for making such a request;
- (2) Reference the Adjudicatory Proceeding regulations at 310 CMR 1.01 that provide additional procedures relative to adjudicatory hearing procedures; and
- (3) Codify procedures for issuance and requesting review of MassDEP administrative orders.

MassDEP is retaining the current regulatory language that provides a right to request an adjudicatory hearing on a MassDEP administrative order within 10 days from the date of issuance and the public hearing provisions of 310 CMR 7.51(2) regarding facilities regulated by the Department of Public Utilities.

MassDEP's air pollution control regulations at 310 CMR 7.00 (the "Air Regulations") do not currently define the procedures for requesting adjudicatory hearings on permit decisions, and they have very limited appeal procedures for administrative orders. This has caused confusion, and parties have had to spend time litigating over which deadlines and procedures apply. By adding clear timelines and procedures for parties to request adjudicatory hearings on permit decisions and administrative orders, MassDEP believes the proposed regulations will reduce unnecessary litigation and the attendant delays in finalizing air permits and implementing administrative orders. These proposed regulations, along with past and ongoing efforts by MassDEP to streamline adjudicatory hearing procedures, should alleviate delay in the resolution of issues raised by parties with respect to air permit decisions, while also ensuring that these issues are properly heard and considered at an adjudicatory hearing. Please note that the proposed regulations are not federally required and are not part of the Massachusetts State Implementation Plan under the Clean Air Act.

The proposed regulations are not intended to replace MassDEP's adjudicatory hearing regulations at 310 CMR 1.01 (the "adjudicatory hearing"). The two sets of regulations are intended to work together.

The Air Regulations at 310 CMR 7.00 are silent on whether people have the right to request an adjudicatory hearing on MassDEP's approvals or disapprovals of an air permit application. Historically, MassDEP has provided the right to request an adjudicatory hearing by attaching to the permit decision a notice stating that a person aggrieved by the decision has the right to request an adjudicatory hearing within 21 days from the date MassDEP issues the decision, and that the request for an adjudicatory hearing must be filed in accordance with the adjudicatory hearing rules at 310 CMR 1.01.

The historical practice of attaching a notice to the permit decision has caused some confusion as to what it means to be aggrieved by the decision, which parties have standing to request an

adjudicatory hearing, the date the appeal period starts, and the deadline for filing a request for an adjudicatory hearing. In addition, the lack of detailed appeal procedures in the regulations for administrative orders has also resulted in confusion by parties seeking to appeal such orders. Therefore, MassDEP is proposing regulations to clarify timelines and procedures for requesting adjudicatory hearings to review permit decisions and administrative orders issued pursuant to the Air Regulations at 310 CMR 7.00.

The proposed amendments establish timelines and procedures for making a request for an adjudicatory hearing for specified persons with respect to MassDEP's decisions to approve or disapprove an air permit application submitted pursuant to the Air Regulations. Including these timelines and procedures in the Air Regulations provides notice as to who can file a request for an adjudicatory hearing, when they must file the request for an adjudicatory hearing, and what they must include in a request for an adjudicatory hearing.

The proposed regulations also make clear that the timelines and procedures apply to all permit decisions by MassDEP, except as set forth in an express exemption section. The proposed regulations exempt certain types of decisions issued, actions taken by the Department or submittals made pursuant to the Air Regulations from the right to request an adjudicatory hearing for various reasons.

Clarification of exempt decisions or actions will avoid unnecessary litigation, and the exempt decisions and actions include:

1. Administrative orders issued by the Department for violations of any provision of 310 CMR 7.00. Such requests are subject to the rules for adjudicatory hearing pursuant to 310 CMR 7.51(3);
2. Tunnel Ventilation Certifications issued by the Department pursuant to 310 CMR 7.38;
3. The federally required portions of the approvals or disapprovals, issued by the Department pursuant to federal law that require the appeal of the federally required portion to be filed with a federal administrative agency or in federal court.
4. Notifications, certifications and other submittals to the Department on which the Department does not issue decisions, including, but not limited to, the certification required pursuant to 310 CMR 7.02(7)(c), the consolidation of applicable requirements into a single plan pursuant to 310 CMR 7.02(12), notifications regarding demolition/renovation operations pursuant to 310 CMR 7.09, notifications regarding asbestos abatement activities pursuant to 310 CMR 7.15, notifications and certifications pursuant to 310 CMR 7.24(6), and/or certifications pursuant to 310 CMR 7.26.
5. Department requests for monitoring or compliance actions pursuant to 310 CMR 7.00, including but not limited to, Department requests to perform stack testing or protocols approved by the Department pursuant to 310 CMR 7.13, and/or Department requests to comply with emissions monitoring device requirements pursuant to 310 CMR 7.14.
6. Department approvals or denials of waivers or variances under 310 CMR 7.00, including but not limited to, notification waivers or non-traditional work practice approvals issued pursuant to 310 CMR 7.15.
7. Minor administrative amendments to plan approvals approved by the Department pursuant to 310 CMR 7.02(13) and minor modifications to Operating Permits approved by the Department pursuant to 310 CMR 7.00: Appendix C(8).

None of the exempt actions or decisions require appeal procedures under 310 CMR 7.51(1).

Administrative order procedures are set forth in 310 CMR 7.51(3) rather than in 310 CMR 7.51(1). Federal permit decisions and Tunnel Vent Certifications have alternative appeal procedures that are established in law or regulations. Notifications, certifications and other submittals to the Department are not “decisions” as defined in 310 CMR 7.51(1). An adjudicatory hearing review is not warranted for Department requests for compliance, Department asbestos timeline and other waiver approvals, minor administrative amendments to air plan approvals and minor permit modifications to Operating Permits.

2. Description of the Proposed Amendments

a) Summary of the Proposed Regulations to Request an Air Adjudicatory Hearing

i. Purpose

The proposed amendments establish timelines and procedures for making a request for an adjudicatory hearing for specified persons with respect to MassDEP’s decisions to approve or disapprove an air permit application submitted pursuant to the Air Regulations. Including these timelines and procedures in the Air Regulations provides notice as to who can file a request for an adjudicatory hearing, when they must file the request for an adjudicatory hearing, and what they must include in a request for an adjudicatory hearing.

The proposed regulations also make clear that the timelines and procedures apply to all permit decisions by MassDEP, except as set forth in an express exemption section. The proposed regulations exempt certain types of decisions issued, actions taken by the Department or submittals made pursuant to the Air Regulations from the right to request an adjudicatory hearing for various reasons.

Clarification of exempt decisions or actions will avoid unnecessary litigation, and the exempt decisions and actions include:

1. Administrative orders issued by the Department for violations of any provision of 310 CMR 7.00. Such requests are subject to the rules for adjudicatory hearing pursuant to 310 CMR 7.51(3);
2. Tunnel Ventilation Certifications issued by the Department pursuant to 310 CMR 7.38;
3. The federally required portions of the approvals or disapprovals, issued by the Department pursuant to federal law that require the appeal of the federally required portion to be filed with a federal administrative agency or in federal court.
4. Notifications, certifications and other submittals to the Department on which the Department does not issue decisions, including, but not limited to, the certification required pursuant to 310 CMR 7.02(7)(c), the consolidation of applicable requirements into a single plan pursuant to 310 CMR 7.02(12), notifications regarding demolition/renovation operations pursuant to 310 CMR 7.09, notifications regarding asbestos abatement activities pursuant to 310 CMR 7.15, notifications and certifications pursuant to 310 CMR 7.24(6), and/or certifications pursuant to 310 CMR 7.26.
5. Department requests for monitoring or compliance actions pursuant to 310 CMR 7.00, including but not limited to, Department requests to perform stack testing or protocols approved by the Department pursuant to 310 CMR 7.13, and/or Department

- requests to comply with emissions monitoring device requirements pursuant to 310 CMR 7.14.
6. Department approvals or denials of waivers or variances under 310 CMR 7.00, including but not limited to, notification waivers or non-traditional work practice approvals issued pursuant to 310 CMR 7.15.
 7. Minor administrative amendments to plan approvals approved by the Department pursuant to 310 CMR 7.02(13) and minor modifications to Operating Permits approved by the Department pursuant to 310 CMR 7.00: Appendix C(8).

None of the exempt actions or decisions require appeal procedures under 310 CMR 7.51(1). Administrative order procedures are set forth in 310 CMR 7.51(3) rather than in 310 CMR 7.51(1). Federal permit decisions and Tunnel Vent Certifications have alternative appeal procedures that are established in law or regulations. Notifications, certifications and other submittals to the Department are not “decisions” as defined in 310 CMR 7.51(1). An adjudicatory hearing review is not warranted for Department requests for compliance, Department asbestos timeline and other waiver approvals, minor administrative amendments to air plan approvals and minor permit modifications to Operating Permits.

ii. Definitions

The proposed air adjudicatory hearing regulations incorporate definitions from M.G.L. c. 30A, the Massachusetts Administrative Procedure Act, definitions from MassDEP’s adjudicatory hearing regulations at 310 CMR 1.01, and definitions from the Air Regulations at 310 CMR 7.00.

Some of the new definitions included in the air adjudicatory hearing regulations are consistent with long-standing adjudicatory hearing practices and decisions. For example, the proposed regulations define “aggrieved person” as any person who, because of an act or failure to act by MassDEP, may suffer an injury in fact which is different either in kind or magnitude from that suffered by the general public and which is within the scope of the interests protected by 310 CMR 7.00. This definition is consistent with long-standing judicial precedent and with use of the term in other MassDEP regulations.⁹

The proposed air adjudicatory hearing regulations also define “Issuance” as “the date on which MassDEP sends the approval or disapproval to the applicant.” Defining issuance will clarify that the 21 day appeal period begins on the date MassDEP issues the decision to the applicant and not the date MassDEP sends the decision to any other person requesting a copy of the decision. MassDEP often sends a copy of the decision to interested parties and any other person who has requested a copy of the decision but not necessarily on the date MassDEP sends the decision to the applicant. The proposed air adjudicatory hearing regulations clarify that if a person wants a copy of the decision on the same date that MassDEP issues the decision to the applicant, the person must make a request to MassDEP before it issues the decision. MassDEP will also post a copy of the decision on MassDEP’s

⁹ See *Standerwick v. Zoning Board of Appeals of North Andover*, 447 Mass. 20 (2006); *Marshallian v. Zoning Board of Appeals of Newburyport*, 421 Mass. 719, 660 N.E.2d 369 (1966); see also, *Sheehan v. Zoning Bd. of Appeals*, 65 Mass. App. Ct. 52, 54 (2005) citing *Marshallian* and *Denneny v. Zoning Bd of Appeals of Seekonk*, 59 Mass App. Ct. 208, 211 (2003).

website, along with the date MassDEP issued the decision to the applicant. This will help notify people when the appeal period begins.

The proposed air adjudicatory hearing regulations also define “approval,” “disapproval” and “decisions” since these are new terms in the proposed air adjudicatory hearing regulations.

iii. Standing to Request an Adjudicatory Hearing

The proposed air adjudicatory hearing regulations clarify that only (1) the applicant, (2) an aggrieved person and (3) a ten (10) persons group that has submitted comments during the permit application’s public comment period have standing to request an adjudicatory hearing. This will clarify that ten persons groups have a right to request an adjudicatory hearing, provided that they have submitted comments during the public comment period on a pending permit application. Pursuant to other regulatory amendments proposed at the same time as these proposed regulations, most air permit applications for air emissions sources that emit ten (10) tons or greater of regulated pollutants will have required public comment periods, which will allow ten persons groups to obtain standing to request an adjudicatory hearing on air permit decisions for all major sources of proposed air pollutant emissions. This approach is consistent with MassDEP’s Adjudicatory Proceeding Regulations at 310 CMR 1.01 and other MassDEP regulations (e.g., the Waterway regulations at 310 CMR 9.13) and judicial precedent that require a ten persons group to submit comments during the public comment in order to have standing to request an adjudicatory hearing. MassDEP hopes that by clarifying who has standing it will avoid future litigation.

iv. Process for Requesting an Adjudicatory Hearing and Timely Filing of Request for Adjudicatory Hearing

The proposed air adjudicatory hearing regulations clarify that all persons must file a request for an adjudicatory hearing within 21 days from the date MassDEP issues a decision to the applicant. Including these requirements in the regulations is intended to avoid future confusion on the deadline to file a request for adjudicatory hearing.

The proposed air adjudicatory hearing regulations incorporate by reference all other procedural requirements included in MassDEP’s Adjudicatory Proceeding Rules, 310 CMR 1.01, so that all parties are held to the same standard required for requesting an adjudicatory hearing.

Several sections of the proposed air adjudicatory hearing regulations clarify certain procedural requirements resulting from adjudicatory decisions. For example, the regulations define when MassDEP’s decision is considered final and clarify that a ten persons group submitting comments during a public comment period has the right to request an adjudicatory hearing, but only on issues relating to damage to the environment. This limitation is also consistent with MassDEP’s Adjudicatory Proceeding regulations at 310 CMR 1.01.

The proposed air adjudicatory hearing regulations explicitly limit the issues that may be raised in an adjudicatory hearing to only those matters that were addressed in MassDEP’s decision and not matters outside the scope of the decision. The purpose of adding this section

is to avoid having irrelevant issues raised during the appeal.

b) Existing Requirement for Public Comment Period Required for Facilities Regulated by Department of Public Utilities

MassDEP is retaining existing language in 310 CMR 7.51(2) that requires MassDEP to hold a public hearing prior to considering approval or disapproval of any proposal for the construction, substantial reconstruction or alteration and subsequent operation of a facility regulated by the Department of Public Utilities, insofar as the facility may have an impact on air quality. MassDEP is not proposing to change this existing requirement.

c) Administrative Enforcement Under Air Regulations

MassDEP is amending the existing language previously included in 310 CMR 7.51(2) that provides people with 10 days, and not 21 days, to request an administrative hearing of administrative orders as provided for under M.G.L. c. 111, § 142B, and is adding language to clarify procedures for issuance of and requests for adjudicatory hearings regarding enforcement orders.

3. Economic Impacts

The proposed amendments incorporate existing requirements for requesting an adjudicatory hearing that are currently provided in a notice attached to all permit decisions and enforcement orders. MassDEP believes the potential costs of complying with the proposed amendments should be negligible since they clarify the process for regulated parties to request an adjudicatory hearing. In fact, clarification of the adjudicatory hearing process for air decisions could reduce costs and may help eliminate unnecessary litigation.

4. Impacts on Cities and Towns

Pursuant to Executive Order 145, state agencies must assess the fiscal impact of new regulations on the Commonwealth's municipalities. The proposed amendments do not impose additional requirements on municipalities

5. Agricultural Impacts

Pursuant to M.G.L. C. 30A, §18, state agencies must evaluate the impact of proposed programs on agricultural resources within the Commonwealth. MassDEP believes that the proposed amendments will not have significant impacts to agriculture.

J. SOURCE REDUCTION

The implementation of source reduction is a MassDEP priority, and is defined as in-plant practices that reduce or eliminate the total mass of contaminants discharged into the environment. The proposed amendments support source reduction by promoting the use of cleaner fuels and low VOC content coatings and solvents.

K. MASSACHUSETTS ENVIRONMENTAL POLICY ACT (MEPA)

The proposed amendments are exempt from the “Regulations Governing the Preparation of Environmental Impact Reports,” 301 CMR 11.00, in that no MEPA review threshold set forth in 301 CMR 11.03 is met or exceeded. In addition, these proposed amendments do not reduce standards for environmental protection, nor do they reduce opportunities for public participation in review processes or public access to information generated or provided in accordance with the regulations. [See MEPA review threshold pertaining to promulgation of regulations at 301 CMR 11.03(12)].

L. PUBLIC HEARINGS AND COMMENT

M.G.L. Chapter 30A requires MassDEP to give notice and provide the opportunity to review the proposed amendments and background and technical information. Since many of the final amendments will be submitted to EPA for approval and incorporation into the Massachusetts SIP, formal notice will be issued 30 days before the public hearing pursuant to federal notice requirements in CAA 42 U.S.C. § 7410(a) and 40 CFR §51.102(d). The hearing will be held in accordance with the procedures of M.G.L. Chapter 30A. The hearing notice and proposed amendments are available on MassDEP’s website at:

www.mass.gov/eea/agencies/massdep/news/comment/. For further information, please contact Marc Wolman at 617-292-5515 or marc.wolman@state.ma.us.

Attachment 3 Response to Comments on Proposed Amendments to: 310 CMR 7.00 Air Pollution Control, March 9, 2018



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

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Matthew A. Beaton
Secretary

Martin Suuberg
Commissioner

Response to Comments on Proposed Amendments to:

310 CMR 7.00

Air Pollution Control

REGULATORY AUTHORITY:
M.G.L. c. 111, §§142A – 142O
M.G.L. c. 21N

March 9, 2018

In accordance with MassDEP's Workplan for implementing Governor Baker's Executive Order No. 562, and to meet federal Clean Air Act requirements, on August 12, 2016, MassDEP proposed amendments to 310 CMR 7.00 *Air Pollution Control*, including:

- 310 CMR 7.00 to add and amend definitions;
- 310 CMR 7.01 to add a computation of time provision;
- 310 CMR 7.02 to clarify Plan Approval applicability, exemptions and procedures; increase public comment opportunities; and establish criteria for greenhouse gases;
- 310 CMR 7.12 to add a small source exemption from emissions reporting and revise the lead reporting threshold;
- 310 CMR 7.18 to update Reasonably Available Control Technology (RACT) for volatile organic compounds used in certain coating, printing, and cleaning operations; and to create flexibility for solvent cleaning of certain high precision components;
- 310 CMR 7.19 to update RACT for oxides of nitrogen for certain boilers, turbines, and engines at major sources;
- 310 CMR 7.26 to update stationary engine and combustion turbine requirements;
- 310 CMR 7.32 (rescind) and 310 CMR 7.34 (new section) to replace the current summertime ozone season nitrogen oxide regional trading program with a state-only nitrogen oxide budget program;
- 310 CMR 7.51 to establish timelines and procedures for requesting adjudicatory appeals of air decisions; and
- 310 CMR 7.00: Appendix C to remove greenhouse gas applicability and clarify "insignificant activities."

MassDEP held public hearings and solicited oral and written testimony on the proposed amendments in accordance with Massachusetts General Law Chapter 30A. On August 12, 2016, MassDEP published a notice in the Boston Globe and Worcester Telegram and Gazette announcing the schedule of public hearings and public comment period on the proposed amendments. Public hearings were held on September 13, 2016 in Boston, September 14, 2016 in Boston, and September 15, 2016 in Worcester. The comment period closed on September 26, 2016.

This document summarizes and responds to comments that were received during the public comment period. Those who provided comments are listed below:

1. David Darling, American Coatings Association (ACA)
2. Robert A. Rio, Associated Industries of Massachusetts (AIM)
3. Jeffrey Richards, Alnylam Pharmaceuticals (Alnylam)
4. Lynn Sheridan, Capaccio Environmental Engineering (Capaccio)
5. DSG Solutions (DSG)
6. Margo Rice Jay, Environmental Health & Engineering (EHE)
7. Jeffry F. Ludwig, Environmental Health & Engineering (EHE)
8. David B. Conroy, U.S. Environmental Protection Agency, Region I (EPA)
9. Dale T. Raczynski, Epsilon Associates (Epsilon)

10. Daniel Fefer, Epsilon Associates with co-signors: (Epsilon)
 - Paul DeViller, Lahey Medical Center Peabody
 - Paul Cantrell, Lahey Health
 - Edward Pitts, Tufts Medical Center
 - Edward M. Browne, Cambridge Health Alliance
 - Stephen Chiavelli, Massachusetts Eye & Ear
 - George Player, Brigham and Women's Hospital
 - Robby Robertson, Lahey Health
 - Dan McGrath, Shire
 - Nicholas T. DiIeso, Mount Auburn Hospital
 - Kevin J. Keating, Shriners Hospitals for Children - Boston
 - Bruce McCoy, Hallmark Health System
 - Edmund Lydon, Beverly Hospital, The American Society for Healthcare Engineering of the American Hospital Association and New England Healthcare Engineers' Society
11. Eric A. Pearson, ESS Group (ESS)
12. Ruthanne F Calabrese, Eversource Energy (Eversource)
13. Graphic Arts Coalition: Tad Parker, Printing Industries of New England; Doreen Monteleone, Flexographic Technical Association; Marcia Y. Kinter, Specialty Graphic Imaging Association; Gary A Jones, Printing Industries of America (GAC)
14. Tad Parker, Printing Industries of New England (PINE)
15. J. Andrew Irwin, Irwin Engineers (Irwin)
16. Thomas A. Mackie, Mackie Shea O'Brien (Mackie)
17. Tamara C. Small, NAIOP Massachusetts (NAIOP)
18. Shawn Konary, NRG Canal and NRG Energy (NRG)
19. Alan Kao, Ramboll Environ (Ramboll)
20. T. Bradley Duffin, Raytheon (Raytheon)
21. Joshua Berman, Sierra Club (SC)
22. Kenneth Goulart, Taunton Municipal Lighting Plant (TMLP)

PLAN APPROVALS – 310 CMR 7.02

1. Comment: (EPA) MassDEP has proposed revisions to 310 CMR 7.02 "Plan Approval and Emission Limitations." Some of the text MassDEP is proposing to change has never been approved into the SIP. Other regulatory text covers similar sections or definitions that have been approved into the SIP but the SIP approved language is different from the text that is currently adopted by the Commonwealth. MassDEP should submit the regulations in their entirety, and not just the revisions, for EPA approval into the SIP. In doing so, please include the required information for a SIP revision as specified in 40 CFR 51, subpart F from any earlier adoption or other revisions made to the subsection(s) of 310 CMR 7.02 for which the MassDEP seeks approval into the SIP.

Response: MassDEP agrees and plans to submit the entire regulatory text of 310 CMR 7.02 and the required information for a SIP revision to EPA for approval into the Massachusetts SIP.

2. Comment: (EPA) MassDEP is proposing to update section 310 CMR 7.02(2)(b)32 to reference the newly proposed 310 CMR 7.34. The title of this provision should also be revised to reference MassNOx instead of MassCAIR as currently stated.

Response: MassDEP agrees and has changed the reference to the NOx Ozone Season Program in the final regulations.

GHGs

3. Comment: (EPA) Section 310 CMR 7.02(1)(d)l: Last month, the EPA Administrator signed a proposed amendment to EPA's prevention of significant deterioration (PSD) permit regulations that will require states to adopt a significant emission rate (SER) for greenhouse gases of 75,000 tons per year (tpy) measured on a carbon dioxide equivalent basis (CO₂e). The SER applies to any new or modified source that is required to obtain a PSD permit. Section 310 CMR 7.02(1)(d)l. sets the GHG threshold for a new source at 100,000 tpy CO₂e which is inconsistent with EPA's proposed rule revisions.

Response: MassDEP agrees and has included a single 75,000 tpy GHG threshold for plan approval in the final regulations to maintain consistency with the proposed federal PSD permitting requirements. While the Massachusetts Environmental Policy Act (MEPA) regulations use GHG thresholds of 75,000 tpy for modifications at existing facilities and 100,000 tpy for new facilities, MEPA review serves a different purpose than MassDEP permitting, and facilities triggering MEPA review at the higher threshold will still require a plan approval from MassDEP due to the single 75,000 tpy GHG plan approval threshold in the final regulations.

4. Comment: (Epsilon) 7.02(1)(d) Please clarify which level of Plan Approval is required in the appropriate sections for LPA, NMCPA, etc. for the proposed levels of GHG of 100,000 tpy and 75,000 tpy. Please resist any comments that suggest lowering these thresholds as this is already potentially adding a redundant review of the efficiency of a project that will be reviewed

under the GHG policy of MEPA, which DEP already comments on through the MEPA review process

Response: MassDEP agrees and has clarified that if a plan approval is required due to potential GHG emissions, a CPA is required. As noted in the Response to Comment 3, MassDEP has eliminated the 100,000 tpy threshold to be consistent with proposed federal PSD requirements for GHGs.

5. Comment: (Capaccio) In 310 CMR 7.02(1)(d) Determining Plan Approval Applicability, thresholds were added for the air contaminant greenhouse gases (GHGs), but it does not state which type of air plan approval would be required; limited plan or non-major comprehensive plan. Since the proposed changes to 310 CMR 7.02(1)(d) refer facilities to thresholds in 310 CMR 7.02(4) and 310 CMR 7.02(5), it would be beneficial to have the GHG thresholds listed in the corresponding areas (i.e., 310 CMR 7.02(4) or (5))

Response: MassDEP agrees and has clarified that where a plan approval is required due to potential GHG emissions, a comprehensive plan approval is required. MassDEP has added a cross-reference in 7.02(5) to the GHG threshold in 7.02(1)(d)1.

6. Comment: (Capaccio) Will the GWP be updated each year (as available) to recalculate CO₂e?

Response: The definition of Carbon Dioxide Equivalent in the final regulations reference the global warming potential (GWP) set forth in 40 CFR part 98 subpart A Table A-1 – Global Warming Potentials as in effect on January 1, 2015. MassDEP will periodically update the regulation as EPA updates 40 CFR part 98 subpart A Table A-1.

7. Comment: (Eversource) MassDEP is proposing to establish Plan Approval applicability for facilities that emit greenhouse gases (GHGs) at or greater than 100,000 tons carbon dioxide equivalent (CO₂e) for new facilities and 75,000 tons CO₂e for modifications at existing facilities. Local Gas Distribution Companies ("LDCs") are required to report Greenhouse emissions from their distribution systems. They conduct thousands of construction activities annually, that may change the LDCs potential to emit. The language as proposed may result in an LDC being required to submit a 7.02 application for every maintenance activity. Eversource suggests that LDCs be exempted from this requirement for maintenance activities, main extensions, gas service installations and other system improvements.

Response: MassDEP does not consider a natural gas distribution system to be a facility subject to permitting under 310 CMR 7.02. Under 310 CMR 7.00, MassDEP defines a "facility" as "any installation or establishment and associated equipment, located on the same, adjacent or contiguous property, capable of emissions;" and for the purpose of 310 CMR 7.15, it means "any dumping ground, or any installation, structure, building establishment or ship, and associated equipment." By contrast, under 310 CMR 7.71, *Reporting of Greenhouse Gas Emissions*, MassDEP defines "facility" as "a building, structure or installation located on contiguous or adjacent properties of an entity, *or a natural gas facility.*" (italics added) MassDEP's GHG reporting program serves a different purpose than MassDEP's permitting program, and therefore

the reporting regulations (i.e., 310 CMR 7.71) define a facility in a way that is more inclusive of large GHG emitters, including LDCs. However, MassDEP does not consider a distribution system operated by a LDC to be a facility for 310 CMR 7.02 permit purposes, and construction/repair/maintenance of the distribution system would not trigger 7.02 permitting.

Public Comment

8. Comment: (EPA) EPA appreciates MassDEP adding public participation to the CPA process in 7.02. Public process is a key element in meeting EPA's requirements for a minor NSR program contained at 40 CFR 51.160-164. However, since EPA last revised section 310 CMR 7.02 in the SIP in 1989, the Commonwealth has made significant changes to this section of its regulations, including the entire subsection (310 CMR 7.02(5)) for CPAs. As discussed above, MassDEP should submit the regulation in its entirety, and not just the revisions, for EPA approval into the SIP. Please include the required information for a SIP revision as specified in 40 CFR 51, subpart F from any earlier adoption or other revisions made to section 310 CMR 7.02(5).

Response: MassDEP agrees and plans to submit the entire regulatory text of 310 CMR 7.02 to EPA for approval into the Massachusetts SIP, along with the required supporting documentation as to legal authority and administrative process for all adoptions and revisions associated with the proposed content.

9. Comment: (NAIOP) Proposed 310 CMR 7.02(3)(h) would require that the Department provide an opportunity for public comment on all comprehensive plan applications (CPAs) and a subset of limited plan applications (LPAs) "in accordance with the requirements in 40 CFR Part 51.161." The proposal is intended in part to assure that the Department's air permitting procedures satisfy certain EPA requirements. NAIOP is not opposed to adding public notice requirements for CPAs and that subset of LPAs, and the notice requirements in the federal regulation are suitable and sufficient. It would be preferable, however, to spell out the public notice requirements directly in 310 CMR 7.00 rather than including them just by reference to an EPA regulation. Comparable public notice provisions for other MassDEP permits are contained within MassDEP's own regulations, which is where the regulated community expects to find them.

Response: MassDEP agrees and has added specific requirements for public comment opportunities consistent with 40 CFR Part 51.161 found in a new section 310 CMR 7.02(3)(i) in the final regulations.

10. Comment: (ESS) We do not believe that the proposed 30 day comment period for all Comprehensive Plan Approvals will reduce unnecessary regulatory burden upon businesses as stated in executive order number 562, issued by Charlie Baker, which prompted the Amendments to 310 CMR 7.00. This proposed amendment will extend the review period of Comprehensive Plan Approvals by potentially 60 days due to the 30 day appeal period and may result in multiple months' worth of lost revenue opportunities, due to project delays for many companies. Timeliness of regulatory reviews is critical to business expansion and growth initiatives. These growth initiatives could favorably provide employment opportunities and the

proposed amendment would be detrimental to overall business climate within the State of Massachusetts and is contrary to the objective of EO 562.

Response: The Clean Air Act requires states to provide a 30-day comment period for minor new source review permits, and therefore MassDEP has kept the 30-day public comment period for CPAs. MassDEP believes the CPA is the right permit level for defining its minor NSR program. Major CPAs already require a public comment period, so the result of the final regulations is to add non-major CPAs to the category of permits that require public comment.

Permitting Exemptions / Certifications

11. Comment: (EPA) MassDEP should limit the exemptions for plan approvals to only changes that will not be subject to new source review, including the Commonwealth's SIP approved minor new source review program. As currently proposed, this section allows a source to be exempted from obtaining a Comprehensive Plan Approval (CPA) if it is making one of the listed changes at its facility. If MassDEP intends to submit its CPA regulations as its minor new source review (NSR) program, the Commonwealth should remove the exemption to section 310 CMR 7.02(5) in section 310 CMR 7.02(2)(b).

Response: MassDEP has removed reference to the 7.02(5) CPA provisions in the final regulations, thereby limiting the exemptions in 7.02(2)(b) to only projects that would otherwise trigger an LPA. Most of the activities listed in 7.02(2)(b) would be exempt from plan approval due to being processes with less than one ton per year potential to emit, and the specific exemptions were added to the regulations to help facilities more easily identify exempt activities and not have to prepare potential to emit calculations. Therefore, MassDEP believes limiting the exemptions to only activities that might otherwise require an LPA is consistent with the original intent of the exemptions, which was to exempt small projects but not to exempt projects that would otherwise require a CPA.

12. Comment: (EPA) Under section 310 CMR 7.03(1), a source subject to a CPA could comply with the provisions of 310 CMR 7.03 in lieu of obtaining a CPA. Section 310 CMR 7.03 is not practicably enforceable as currently promulgated and cannot be used as part of the Commonwealth's minor NSR program. To address this, MassDEP should exclude any source subject to a CPA from using 310 CMR 7.03.

Also, EPA understands that a source needing a CPA could, as an alternative, certify compliance with 310 CMR 7.26 in lieu of obtaining a source specific permit. MassDEP would either have to revise 310 CMR 7.26 as necessary to meet the requirements for a general minor NSR permit rule or exempt sources subject to a CPA from certifying they will comply with 310 CMR 7.26 instead of obtaining a CPA.

Response: MassDEP has not changed the scope of 310 CMR 7.03 or 7.26 to address EPA's comment since the draft regulations did not contemplate such changes. However, MassDEP will work with EPA on developing further regulation amendments as appropriate to address EPA's comments.

13. Comment: (EPA) MassDEP should require all emission increases over the CPA applicability thresholds to obtain a CPA by exempting such emission increases from 310 CMR 7.03 and 7.26. Otherwise, the Commonwealth will need to address the emission increases allowed by 310 CMR 7.03 and 7.26 in the required CAA sections 110(l) and 110(a)(2)(C) demonstrations for supporting that the CPA program is sufficient in meeting MassDEP's minor NSR obligations.

Response: See Response to Comment 12. In addition to any further regulation amendments that may be needed, MassDEP will work with EPA to develop the appropriate demonstration regarding its minor NSR obligations.

PSD

14. Comment: (EPA) Section 310 CMR 7.02(5)(a)(9): Please note in addition to requiring a CPA, a facility making a change that would violate a condition of a PSD permit, a nonattainment NSR permit, or a case-by-case most achievable control technology decision under 40 CFR part 63, may require revisions to the existing permits, regardless as to whether the Commonwealth issues a CPA for that change.

Response: MassDEP agrees and has noted in the final regulations that a revision to the existing permit may be required regardless of whether a CPA is required.

OPERATING PERMITS – 310 CMR 7.00 Appendix C

15. Comment: (Capaccio) Does the 100 tons per year of any other regulated air pollutant in 310 CMR 7.00 Appendix C(1)(a) include GHGs?

Response: The 100 tons per year applicability in 310 CMR 7.00 Appendix C(1)(a) does not include GHGs; MassDEP has clarified that GHGs are not included in the 100 tons in the final regulations.

16. Comment: (DSG) Within the proposed updates, Page 20 shows the proposed modifications to Appendix C of 310 CMR 7.00. The second paragraph is labeled 310 CMR 7.00 Appendix C(5)(i), however, it appears the proposed update should have been labeled 310 CMR 7.00 Appendix C(5)(a). In addition, the third paragraph is labeled 310 CMR 7.00(C)(5)(j), but appears it should have been labeled 310 CMR 7.00(C)(5)(i). Please confirm this is an accurate understanding and that no new paragraphs have been added to Appendix C.

Response: MassDEP agrees and confirms that the revisions are to 310 CMR 7.00 Appendix C(5)(a) and C(5)(i).

17. Comment: (DSG) Please confirm that emissions from sources on the list of insignificant activities do not need to be considered for any other regulatory provision other than Appendix C(2). Specifically, please confirm that the sources will continue to be exempt from the requirements of Appendix C(5), as stated in Appendix(c)(5)(3).

Response: MassDEP agrees and confirms that, according to Appendix C(2), emissions from insignificant sources are exempt from the requirements of other provisions of Appendix C, including Appendix C(5).

18. Comment: (DSG) While the existing language in 310 CMR 7.00 Appendix C(5)(i) specifies that emissions from sources on the list of [insignificant] activities are exempt from the requirements of Appendix C, facilities may have interpreted the language to mean there was no requirement to quantify emissions from these sources and may have therefore excluded such emissions from all recordkeeping requirements. For this reason we are seeking clarification on whether emissions from sources on the insignificant activities list should be included within other recordkeeping requirements, for example, New Source Review analysis conducted in accordance with 310 CMR 7.00 Appendix A assuming such emission are below thresholds required to obtain a Plan Approval. For example, it does not appear to be the intent of Appendix A that facilities include a value for the increase in net emissions associated with the installation of a HVAC system or the purchase of an additional mobile vehicle when determining contemporaneous net emission increases associated with the installation of a combustion unit. Please also confirm that emissions from exempt activities, as described in 310 CMR 7.00 Appendix C(5)(h), should be included in such analyses, considering such emissions are expected to be quantified for other regulatory purposes (e.g. Source Registration reporting).

Response: The Appendix C regulations do not explicitly require that a facility keep records of emissions from insignificant activities (i.e., failure to keep such records is not a violation of the

regulations). However, a facility is responsible for accounting for emissions from insignificant activities when determining Appendix C applicability. It is up to each facility to determine how it should account for and track emissions from insignificant activities. Emissions from insignificant activities must be taken into account in Appendix A review where applicable. For example, emissions from a HVAC system should be taken into account, whereas emissions from the purchase of an additional mobile vehicle would not be taken into account because a vehicle does not fall within the definition of a “facility.” Emissions from exempt activities, as described in 310 CMR 7.00 Appendix C(5)(h), should be included in Appendix A analyses and are subject to Source Registration reporting.

19. Comment: (DSG) We would propose that MassDEP add clarifying language to the regulations regarding how a facility should proceed if a new exempt activity (or insignificant activity if MassDEP does not agree with our understanding in item 5 above) triggers the New Source Review threshold due to contemporaneous emission increases. For example, a facility may install a new emission source permitted according to 310 CMR 7.02 that alone does not increase the facility’s net emissions above the NSR thresholds. However, within the next 5 years, the facility may install several small water heaters that are exempt from obtaining a plan approval according to 310 CMR 7.02(2)(b) or emergency generators installed in accordance with 310 CMR 7.26(42), together the net contemporaneous emissions are above the NSR thresholds. If the installation of an emergency generator triggers the NSR thresholds, is a facility expected to obtain a NSR permit for that generator?

Response: The circumstances described apply at a facility that is classified as an existing major stationary source pursuant to 310 CMR 7.00 Appendix A, “Emission Offsets and Nonattainment Review.” The terminology “exempt” and “insignificant” and associated concepts are not used in 310 CMR 7.00 Appendix A. The owner or operator of a major stationary source must determine the net emissions increase associated with any increase in actual emissions from a particular physical change or change in method of operation at the facility, regardless of exemptions from other regulatory requirements. In particular, a change at a major stationary source that meets an exemption criterion under 310 CMR 7.02(2)(b) is nonetheless subject to net emissions increase determination pursuant to the exclusions from exemptions under 310 CMR 7.02(2)(c)1. and 2. Furthermore, the installation of an engine or turbine that would cause a significant net emissions increase is not eligible for certification under 310 CMR 7.26, pursuant to 310 CMR 7.26(40)(a). If the installation of an emergency generator would trigger the NSR thresholds, the owner or operator of the facility should apply for a NSR permit or may investigate options for reducing the magnitude of the net emissions increase.

SOURCE REGISTRATION – 310 CMR 7.12

20. Comment: (EPA) Massachusetts should consider revising the content of its source registration such that process-level emissions data for Hazardous Air Pollutants (HAPs) is required. Massachusetts currently only collects HAP data at the facility level. Although reporting HAP emissions data is not required by EPA's air emissions reporting rule requirements found within 40 CFR part 51, Subpart A, adding this level of detail would enable Massachusetts to submit the HAP data it does collect to EPA's National Emissions Inventory (NEI) database. This data would then be readily available for use in national analyses such as periodic national air toxic assessments.

Response: MassDEP currently collects HAP data at the facility level. MassDEP is considering collecting additional HAP data, including at the process level, which would not require a regulation change.

21. Comment: (Capaccio) In 310 CMR 7.12(2) the submittal deadline for three year filers has changed, but does not state when it will come into effect.

Response: The new deadlines for Source Registration will take effect on the date the regulations are promulgated, which means that the new deadlines will apply to the 2018 reporting cycle (i.e., April 1, 2018 for triennial filers; May 1st and June 1st for annual filers).

22. Comment: (Epsilon) For 7.12 Source Registration, we suggest that DEP clarify potential emissions estimates by adding under (3) Source Registration Contents (a)(2) Detailed emission estimates... "Any limitations on hours of operation applicable to a source either by Approval condition or regulation may be used to calculate potential emissions, and in the case of emergency generators without limiting conditions, a default value of 500 hours per year may be used consistent with EPA guidance."

Response: MassDEP does not believe the regulations need to be amended to address this issue. MassDEP instead will update the Source Registration forms and instructions to allow a facility with enforceable emissions, usage, or operating restrictions to report its maximum allowed emissions as its potential emissions on the Source Registration form. The instructions also would allow the use of a default value of 500 hours per year for an emergency engine.

23. Comment: (EH&E) While we understand the need to compress the timeline in order for MassDEP to meet EPA reporting deadlines based on this data, moving triennial Source Registration filing to March 1 poses a particular challenge to consulting companies such as ours who manage a number of compliance deadlines for a large number of clients, or to facilities who do their own filings with limited compliance resources. As there are already annual EPA deadlines for Tier 2 filing under the Emergency Preparedness and Community Right to Know Act (EPCRA) on that same day which apply to a large number of facilities, as well as biennial reporting for hazardous waste on alternate years, compliance personnel are already very busy in January and February. Imposing yet another March 1 deadline would make it administratively difficult to complete all these reports accurately and on time, especially as much of the data (such as natural gas usage) may not be available for the end of the year until well into February.

The winter and spring are very busy for our compliance staff. We have regular compliance deadlines through the winter and spring months, but in recent years, these deadlines have been staggered in such a way that we have been able to handle many of them sequentially. Our preference would be to keep the reporting schedule as it stands. If that is not possible, we would propose moving all the triennial filers to June 1. Our next proposal would be to move the triennial filers to May 1, or to move the GHG reporting deadline to May 1 and the triennial filers to April 1.

Moving the triennial filing up any further would still put a big strain on our resources. It has been our experience that triennial filings can take more time than the annual filings because there are more likely to have been changes since it has been three years since the last filing, and some of these have not happened all that recently so the details can take some time to track down. Compressing the reporting timeline could reduce time available to ensure quality, and increase pressure for facilities to gather and/or process year-end data on a very limited timeframe, potentially increasing both internal and external costs.

Response: MassDEP has moved the deadline for triennial filers to April 1 (instead of March 1 as originally proposed), moved the operating permit facility filing deadline to May 1, and the remainder of the annual filers to June 1 in the final regulations. This provides the ability for both filers and MassDEP to spread the workload over a wider timeframe. The deadline for GHG reporting is not contained in the Source Registration regulations and remains April 15.

VOC RACT – 310 CMR 7.18

24. Comment: (EPA) The new VOC RACT (Volatile Organic Compound Reasonably Available Control Technology) requirements being proposed in 310 CMR 7.18 require facilities to comply with the emission limits by “2 years after the promulgation date.” The proposed rule also allows facilities to apply for an extension “until no later than 3 years after the promulgation date,” if the facility's emission control plan meets certain Toxics Use Reduction Plan criteria. Massachusetts should consider accelerating the compliance date by requiring compliance be achieved within 1 year, unless the source requests, and is granted, additional time to meet the requisite emission limit.

Response: MassDEP believes a 2 year period prior to compliance is warranted due to the many sources (small and large) covered by these CTGs. This period will allow adequate time for MassDEP to conduct outreach to these sources and time for the sources to plan for compliance.

25. Comment: (EPA) As noted in the Background Document, MassDEP is proposing to amend 310 CMR 7.00 to update its RACT requirements for VOCs consistent with EPA's Control Techniques Guidelines (CTGs). EPA notes, however, that in its RACT certification, MassDEP will also need to address all major non-CTG sources, and other VOC sources for which MassDEP previously submitted single source VOC RACT SIP revisions, to ensure that they are still sufficient for meeting RACT. In particular, any sources for which it was previously determined that no feasible emission reductions existed, and therefore RACT involved no emission controls or no reformulation, should be reviewed to determine whether that conclusion is still valid.

Response: MassDEP acknowledges EPA's comment and has reviewed major non-CTG sources and other sources with VOC RACT SIPs and will include documentation of this review in the RACT certification MassDEP will submit to EPA.

26. Comment: (PINE/SGIA) Overall, PINE and SGIA support the proposed changes to the RACT rules as several of them clarify applicability which provides for more regulatory certainty, especially the paper film foil surface coating, adhesives, and industrial solvent cleaning rules. Historically, there has been a lot of confusion regarding the applicability of these rules to printing operations and these proposed revisions will clarify this confusion. One change to the industrial solvent cleaning rule that is being requested would be to exempt digital printing devices from the requirements. The emissions from cleaning from these devices are minimal and the cleaning materials are not able to meet the limits in the rule. In addition, this rule was never intended to cover these devices.

Response: MassDEP appreciates the comments supporting the amendments. Regarding digital printing, page 4 of the Industrial Cleaning Solvent CTG states that “this CTG is intended to cover all industrial cleaning operations,” which would include digital printers. Thus, MassDEP's final regulation includes Work Practices for Cleaning Operations for digital printers. However, MassDEP agrees that digital printing cleaning activities should not be subject to the numerical standards in the regulations. MassDEP has amended the final regulation, at 310 CMR 7.18(31)(b)1.c.v., so that it exempts digital printing cleaning activities from numeric emissions

limits (i.e., for VOC Content Limitation, Vapor Pressure Limitation and add-on Air Pollution Capture and Control Equipment efficiency), since EPA has approved this approach in other states. A definition of Digital Printing has therefore been added to the final regulation.

27. Comment: (PINE/SGIA) As we had indicated in our statement and comments on the proposed changes to add the Very Small Printer Category to the Environmental Results Program or ERP, we would respectfully request that the DEP undertake a rulemaking to include printing operations that have incorporated digital printing devices or those operations that are exclusively using digital printing devices. We understand that the scope of this rulemaking is limited to changing major source RACT requirements and that a separate rulemaking is required to incorporate digital printing equipment into ERP.

Over the past several months, we have been working with MassDEP regarding approaches that can be used to extend the ERP program to digital printing operations. The request that we are making is in line with those ongoing discussions.

PINE and SGIA have long supported the development and implementation of the ERP program for printing operations. It provides a cost effective solution to environmental compliance and most importantly, environmental protection. Considering the current set of requirements under ERP and the demographics of the printing industry, incorporating digital operations into ERP will allow for additional regulatory streamlining.

We do, however, make the following recommendation. In the definition section, it is our recommendation that a definition for digital printing be added. Specifically, the following language should be added:

Digital Printing: A print-on-demand method of printing in which an electronic output device transfers variable data, in the form of an image, from a computer to a variety of substrates. Digital printing methods include, but are not limited to, inkjet printing, electrophotographic printing, dye sublimation printing, thermal wax printing and solid ink printing.

Including this definition into this rulemaking ensures that the future designations for the “Very Small Printer” category applies to digital operations and that once performance standards are formally established, it will be clear that digital printing operations are included in ERP. We look forward to continuing our work with the Department on the development of specific performance standards for digital devices, which is the fastest growing print technology.

Response: MassDEP will evaluate whether digital printing operations should be added to the ERP printing regulations and will consider future regulation amendments if warranted. MassDEP has added a definition of “Digital Printing” similar to the suggested definition. See Response to Comment 26.

28. Comment: (Capaccio) In 310 CMR 7.18 the recordkeeping timeframe is being increased from 3 to 5 years. Does this mean current applicable facilities need to have five years of records when the rules are promulgated?

Response: As of the effective date of the regulation, any new records and any existing records that an applicable facility still has must be kept for 5 years from the date the records were generated. Records that were kept under the previous regulations that were older than 3 years and were disposed of prior to the effective date of the new regulations would not be subject to the 5 years recordkeeping requirement.

29. Comment: (ACA) VOC Definition – ACA supports the proposed amendments to the VOLATILE ORGANIC COMPOUND definitions, specifically the added exempt compounds.

Response: MassDEP appreciates this comment.

30. Comment: (ACA) Surface Coating CTG Comments – Powder Coatings – ACA requests that MA exempt powder coatings from the metal parts/plastic parts VOC limits as other States have done and as described in the EPA CTG on page 30: “Consistent with the State rules which are the basis for the recommended VOC limits, we are recommending that the recommended VOC limits and application methods not apply to certain types of coatings and coating operations. For all coating operations, we are recommending that the recommended VOC limits and application methods not apply to aerosol coating products or powder coatings.”

Response: MassDEP agrees and has exempted powder coatings and hand-held aerosol cans from the miscellaneous metal parts and products and the plastic parts VOC limits and application methods (see 310 CMR 7.18(11)(b)2.g. and (21)(b)5.).

31. Comment: (ACA) Use of Formulation Data – ACA requests that MA change the rule language from “If acceptable to the Department and EPA, manufacturer’s formulation data may be used to demonstrate compliance” to “manufacturer’s formulation data may be used to demonstrate compliance” since this is consistent with the language on page 30 of the CTG: “...In addition, we recommend that manufacturer’s formulation data be accepted as an alternative to EPA Method 24.”

Response: MassDEP notes that the next sentence in the CTG after the one quoted states “[i]f there is a disagreement between manufacturer’s formulation data and the results of a subsequent test, we recommend that States use the test method results unless the facility can make a demonstration to the States’ satisfaction that the manufacturer’s formulation data are correct.” Furthermore, EPA has indicated to MassDEP that when formulation and test data conflict, the EPA test method results prevail unless a legitimate technical justification exists for using formulation data. Deleting “If acceptable to the Department and EPA” would imply that no testing is ever required, and is not appropriate. On the other hand, in instances where EPA and MassDEP agree that the manufacturer’s formulation data is acceptable, no test would be required. As such, MassDEP does not believe that this change is warranted and has not made the change.

32. Comment: (ACA) Industrial Cleaning Solvent CTG – Applicability Threshold – Massachusetts has included both a 15 lb/day and 3 ton per year threshold for the CTG amendments. Given that the 15 lb/day can impact manufacturing operations - ACA suggests

deleting the 15 lb/day threshold and just including the 3 tons per year threshold, which is consistent with other State adoptions (which have been EPA SIP approved).

Response: Deleting the 15 lb/day applicability threshold would result in a less flexible applicability threshold, as it would eliminate the option to base applicability on either 15 pounds of VOC emissions per day or 3 tons of VOC emissions per rolling 12 month period. Also, deleting the 15 pounds per day option would be inconvenient for those facilities that have long used that threshold to track whether they are subject to existing regulations that use 15 pounds per day as the applicability threshold. However, to clarify the provision, MassDEP has made the following changes in 21 places in the final regulations: "...equal to or greater than ~~the greater of~~ 15 pounds of VOC per day or, in the alternative, equal to or greater than 3 tons of VOC per rolling 12 month period..." This change makes it clear that to avoid applicability a facility can either stay under 15 pounds of VOC emissions per day or stay under 3 tons per rolling 12 month period (even if more than 15 pounds of VOC is emitted on some days).

33. Comment: (ACA) ACA is very concerned about the proposed VOC limit of 1.68 lb/gal (202 g/l) for manufacture of inks, coatings, or resins since this this will not allow effective cleaning at coatings, inks, adhesives and resin manufacturing operations. We appreciate that MA included the 1.68 lb/gal limit (as opposed to 50 g/l), however this limit is only one of the four ACA options that we recommended in the past. While some facilities might be able to use solvent that meets the 1.68 lb/gal limit, others will likely utilize the work practice options in our recommended language (see below) since solvents that meet the 1.68 lb/gal limit are less effective, more expensive, more evaporative, and more flammable than current solvents used today. As a result, there will likely be an increase in VOC emissions if the 202 g/l limit were adopted for these operations (since more solvents will need to be used). ACA recommends MA specifically exempt coatings, ink, adhesives and resin manufacturing operations from the proposed regulations (as Texas has done). Alternatively, ACA suggests adopting the language Wisconsin, Illinois, Ohio, Indiana, North Carolina, Missouri, Virginia have adopted. Note EPA has approved these other states' regulations.

Response: MassDEP agrees and has exempted coatings, inks, adhesives and resin manufacturing from the numeric limits (at 310 CMR 7.18(31)(b)1.k.) as other states have done with EPA approval (i.e., for VOC Content Limitation, Vapor Pressure Limitation and add-on Air Pollution Capture and Control Equipment efficiency). However, MassDEP believes it is appropriate that all facilities comply with work practices such as covering containers containing solvent and, therefore, these common-sense provisions do apply to these types of operations in the final regulations.

34. Comment: (Eversource) MassDEP's proposed VOC RACT amendments include certain definitions, specifically, "Extreme Performance Coating" for "Miscellaneous Metal Parts." The current definition includes "... coatings designed for harsh or extreme environmental conditions, including but not limited to constant weather exposure"

Eversource Gas Serves approximately 250,000 customers in the Commonwealth, each with a gas meter located outdoors and replaced every seven years. Continuous uninterrupted operation of these meters is critical to safe efficient delivery of natural gas to our customers. Coatings used on

these meters currently qualify as an extreme performance coating application. The proposed new definition no longer includes constant weather exposure. Eversource requests the proposed definition of “Extreme Performance Coating” be amended to include “constant weather exposure.”

Response: “Extreme performance coatings” refers to coatings that are exposed to extreme environmental conditions, such as temperatures in excess of 250°F or corrosive, caustic or acidic agents. Mere exposure to weather does not constitute extreme conditions. Therefore, MassDEP did not add the suggested language to the definition.

35. Comment: (Alnylam) The proposed VOC RACT rule for industrial cleaning solvents (310 CMR 7.18(31)) poses significant challenges for Pharmaceutical manufacturing/preparation facilities. The proposed rule has an exemption for “medical device and pharmaceutical manufacturing operations using up to 1.5 gallons per day of solvents.” However, this amount of cleaning solvent is not sufficient for a large pharmaceutical manufacturing facility and the proposed requirements of the industrial cleaning RACT cannot be applied to pharmaceutical operations (such as reduced VOC-content of cleaning solution, low vapor pressure cleaning solution or add-on controls).

For example, 70% isopropyl alcohol (IPA) is commonly used for disinfection in the pharmaceutical (and biotechnology) industry but does not meet the proposed RACT requirements. It would be economically infeasible to control these intermittent and difficult-to-capture emissions with add-on controls as required by 7.18(31)(d)3. Therefore, we ask that the 1.5 gallons per day of solvent be stricken from the exemption, such that the exemption reads as follows:

g. medical device and pharmaceutical manufacturing operations ~~using up to 1.5 gallons per day of solvents.~~

This exemption would then be consistent with New Hampshire and Connecticut regulations, neither of which have a limitation on the amount of solvent used in the exemption.

Response: MassDEP agrees that, given the medical device and pharmaceutical manufacturing industries’ extensive use of IPA to meet their cleanliness needs, it is not reasonable to require these industries to meet the proposed VOC RACT limit, and has included an exemption for these industries in the final regulations, similar to what other New England states have done (see 310 CMR 7.18(31)(b)1.g.).

36. Comment: (GAC) Overall, the GAC supports the proposed changes to the RACT rules as several of them clarify applicability which provides for more regulatory certainty, especially the paper film foil surface coating, adhesives, and industrial solvent cleaning rules. Historically, there has been confusion regarding the applicability of these rules to printing operations and these proposed revisions will clarify this confusion.

Response: MassDEP appreciates this comment.

310 CMR 7.00 Definitions

37. Comment: (GAC) The GAC concurs with and supports the proposed changes to the definition of Paper, Foil, and Film Surface Coating as contained in 310 CMR 7.00.

Response: MassDEP appreciates this comment.

38. Comment: (GAC) Letterpress Printing – Please delete the word “paper” and replace it with “substrate” as letterpress printing operations can be used to print on a variety of substrates that include, paper, corrugated, etc.

Response: MassDEP agrees and has changed “paper” to “substrate” in the definition of Letterpress Printing in 310 CMR 7.00 and 7.26(22) of the final regulations.

39. Comment: (GAC) Non-Heatset Offset Lithographic Printing - Please revise the definition by adding the sentence “For the purposes of this section, UV-cured and electron beam-cured inks are considered non-heatset.”

Response: MassDEP agrees that UV-cured and electron beam-cured inks should be addressed and therefore made the following changes:

1. MassDEP changed 310 CMR 7.00 “Non-Heatset Offset Lithographic Printing” to read “NON-HEATSET OFFSET LITHOGRAPHIC PRINTING means an offset lithographic process that does not require heat to set or dry the ink. UV-cured and electron beam-cured inks are considered non-heatset.”
2. MassDEP changed 310 CMR 7.00 “Petroleum Heatset Ink” to read “PETROLEUM HEATSET INK means an ink that is not a water-based, UV-cured, or electron beam-cured ink” so that these inks are excluded from the provisions of the new 310 CMR 7.18(25)(a)2.
3. MassDEP notes that UV-cured inks are already addressed in the ERP printing regulations at 310 CMR 7.26(20)-(29), but electron beam-cured inks are not; thus, MassDEP added a definition of electron beam ink and added 13 other occurrences of the term *electron beam* to the ERP regulation, paralleling the existing use of the term *ultraviolet*.

40. Comment: (GAC) Printing Press – Please revise the definition by adding the phrase “including any associated coating, spray powder application, heatset web dryer, ultraviolet or electron beam curing units, or infrared heating units” at the end of it so that it reads:

Printing Press means a printing production assembly, with the ability to print one or multiple colors, designed to produce a printed product *including any associated coating, spray powder application, heatset web dryer, ultraviolet or electron beam curing units, or infrared heating units*.

Response: MassDEP believes the existing phrase “printing production assembly” encompasses the added examples, and did not add the suggested language to the definition.

41. Comment: (GAC) Please add a definition for batch.

Batch - A supply of fountain solution that is prepared and used without alteration until completely used or removed from the printing process. For the purposes of this rule, this term may apply to solutions prepared in either discrete batches or solutions that are continuously blended with automatic mixing units.

Response: The term “batch” is commonly understood and a definition of “batch” is not needed. In addition, MassDEP does not believe “solutions that are continuously blended with automatic mixing units” would be considered “batch.”

42. Comment: (GAC) Please add a definition for VOC Composite Vapor Pressure.

VOC Composite Partial Vapor Pressure - The sum of the partial pressure of the compounds defined as VOCs. VOC composite partial vapor pressure is calculated as follows:

$$PP_c \sum_{i=1}^n [[(W_i)(VP_i) / MW_i] / [W_w/MW_w + W_c/MW_c + \sum_{i=1}^n W_i/MW_i]]$$

Where:

W_i = Weight of the “i”th VOC compound, in grams

W_w = Weight of water, in grams

W_c = Weight of exempt compound, in grams

MW_i = Molecular weight of the “i”th VOC compound, in g/g-mole

MW_w = Molecular weight of water, in g/g-mole

MW_c = Molecular weight of exempt compound, in g/g-mole

PP_c = VOC composite partial vapor pressure at 20°C (68°F), in mm Hg

VP_i = Vapor pressure of the “i”th VOC compound at 20°C (68°F), in mm Hg

n = the number of VOC compounds

Response: 310 CMR 7.00 already has a definition of VOC Composite Partial Pressure and applies this calculation at standard temperature (i.e., 20°C), as specified in regulations that use this definition.

310 CMR 7.03(15) (b) Non-heatset Offset Lithographic Printing

43. Comment: (GAC) Please revise the limit in 310 CMR 7.03(15)(b)(2) for web presses by adding the phrase “*and no more than 5% by weight VOC content*” so that it is consistent with the requirements in the CTG for Offset Lithographic Printing and Letterpress Printing.

Response: Existing 310 CMR 7.03(15)(b)8. already contains a fountain solution limit of 2.5% by volume, which industry has been complying with for decades. It would be backsliding to replace it with a higher limit; therefore, MassDEP did not revise the limit. However, MassDEP replaced “by volume” with “by weight” in the final regulation (see Response to Comment 44).

44. Comment: (GAC) Please revise the VOC content limits for fountain solution in 310 CMR 7.03(15) (b)(4) by deleting the words “by volume” replacing them with “by weight.” This change

would place the limits on a consistent basis with the CTG for Offset Lithographic Printing and Letterpress Printing and the recordkeeping requirements in 310 CMR 7.03(15)(d)(1). The revision also makes compliance demonstration much easier as VOC emissions are determined on a weight basis. This change would not represent a backsliding situation as the limits are virtually equivalent and compliance determination is much easier if the limits are on a by weight basis.

Response: MassDEP agrees and replaced “% by volume” with “% by weight” throughout the final 310 CMR 7.03(15) regulations. MassDEP agrees that this change does not represent backsliding, as indicated in the August 12, 2016 Technical Support Document, which stated, “Section 110(l) of the CAA only allows revisions to SIP requirements if such revisions do not interfere with attaining air quality standards (known as the “anti-backsliding” provision). Because the amendments also include emission limits for some large use categories (i.e., one component and multicomponent general use coatings) that are more stringent than MassDEP’s current regulations, MassDEP believes (based on EPA guidance) that these more stringent limits on higher use coatings offset the less stringent specialty coating limits; therefore, the regulations as a whole avoid backsliding.”

45. Comment: (GAC) Please delete “fountain additives” in 310 CMR 7.03(15)(d)(1) and replace it with “fountain solution concentrate” and “fountain solution alcohol substitute” so that it is clear that both materials need to be included in the records.

Response: MassDEP agrees that the additional text adds clarity, and added it in the final regulation at 310 CMR 7.03(15)(e)1. Also, MassDEP notes that the definition of “propanol substitute” in 310 CMR 7.00 was inadvertently not updated to “alcohol substitute” to parallel the proposed regulations’ replacement of “propanol” with “alcohol.” For consistency, MassDEP replaced the 310 CMR 7.00 definition of “propanol substitute” with the definition of “alcohol substitute” used in the Environmental Results Program, 310 CMR 7.26(20) through (29).

46. Comment: (GAC) Please add a provision to 310 CMR 7.03(15)(d)(1) that allows for an alternate approach for having to keep records on each and every ink, coating, and other input materials. In lieu of tracking each material, the covered facility should be allowed to group materials into a single class of similar materials and use the highest VOC content for that class of materials as a means to reduce the overall recordkeeping. The provision would read:

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

...

When determining the VOC content or other property for each material in a class of similar compounds use the specifications for the material which has the highest VOC content in that class.

Response: MassDEP did not make the suggested change. In order for MassDEP inspectors to verify compliance during an inspection, records of the quantity used and VOC content of each individual material are necessary. If VOC content records of only the highest VOC content materials for each class of compounds were retained, inspectors would have no way to confirm that the retained records represent the highest VOC content material. Also, using the highest

VOC content could lead to an inappropriate conclusion that a facility has higher emissions than it in fact does, subjecting it to requirements for facilities with higher emissions. Therefore, MassDEP did not revise the provision as suggested.

310 CMR 7.18(2)(a) Compliance With Emission Limitations

47. Comment: (GAC) Please add a footnote to the table indicating that Method 24A is to only be used for publication rotogravure inks and related coatings.

Response: The appropriate test method to use would be determined by MassDEP and a facility at the time of a test; therefore, MassDEP did not add the suggested footnote.

48. Comment: (GAC) It is not clear what the definition of “related materials” in the entry that states Coatings, Inks and Related Materials Formulation. This term needs to be moved in the statement so that it appears before “Coatings” so that it is consistent with the manner in which both Method 24 and 24A use the term to describe coatings. For example Method 24A’s title states “Method 24A - Determination of Volatile Matter Content and Density of Publication Rotogravure Inks and Related Publication Rotogravure Coatings.”

Response: The table gives some examples (coatings and inks) of materials that might be tested with Test Method 24 or 24A. Other related material examples are paint, varnish and lacquer. MassDEP believes the text does not need to list additional materials and finalized the table as proposed.

310 CMR 7.18(12) Packaging Rotogravure and Packaging Flexographic Printing

49. Comment: (GAC) Please modify 310 CMR 7.18(12)(d)(2)(b) by modifying the requirement from in line averaging by also allowing cross line averaging by adding the phrase “*or all presses in the facility.*” This approach allows for maximum flexibility for facilities that are subject to the requirements and is acceptable to EPA as described in their guidance *Improving Air Quality with Economic Incentive Programs*. U.S. Environmental Protection Agency. Research Triangle Park, NC. EPA-452/R-01-001. January 2001.

Response: The September 2006 Flexible Package Printing CTG on page 14 indicates, “The use of averaging to meet the VOC content limits is not recommended for cross-line, i.e., across multiple lines.” Therefore, MassDEP did not add the suggested text.

50. Comment: (GAC) Please add a provision to 310 CMR 7.18(12)(g) that allows for an alternate approach for having to keep records on each and every ink, coating, and other input materials. In lieu of tracking each material, the covered facility should be allowed to group materials into a single class of similar materials and use the highest VOC content for that class of materials as a means to reduce the overall recordkeeping.

Please delete the requirement to record the amount of product produced as there is no regulatory requirement that would make this record necessary. The provision would read (all changes in bold):

(g) Recordkeeping Requirements Any person.....

Such records shall include, but are not limited to:

1. identity, quantity, formulation and density of ink(s), coating(s) and adhesive(s) **or class** used;
2. identity, quantity, formulation and density of any diluent(s) and clean-up solvent(s) **or class** used;
3. solids content of any ink(s), coating(s) and adhesive(s) **or class** used;
4. actual operational and emissions characteristics of the printing line and any appurtenant emissions capture and control equipment;
- ~~5. quantity of product processed; and~~
- ~~65.~~ any other requirements specified by the Department in any approval(s) or order(s) issued to the person.

When determining the VOC content or other property for each material in a class of similar compounds use the specifications for the material which has the highest VOC content in that class.

Response: MassDEP did not make the suggested change. In order for MassDEP inspectors to verify compliance during an inspection, records of the quantity used and VOC content of each individual material are necessary. If VOC content records of only the highest VOC content materials for each class of compounds were retained, inspectors would have no way to confirm that the retained records represent the highest VOC content material. Also, using the highest VOC content could lead to an inappropriate conclusion that a facility has higher emissions than it in fact does, subjecting it to requirements for facilities with higher emissions. The quantity of product processed is required if needed to determine emissions. Therefore, MassDEP revised eight occurrences of this provision throughout the 310 CMR 7.18 sections opened for public comment, as follows: “quantity of product processed, if necessary to determine emissions; and.”

310 CMR 7.18(25) Offset Lithographic Printing and Letterpress Printing

51. Comment: (GAC) Please revise the requirement in 310 CMR 7.18(25)(c)(b)(2)(a) that requires a facility to obtain a federally enforceable permit to restrict the potential emissions of a heatset web offset press to less than 25 tons per year. In some instances, this may be the only option for a printing operation where they would have a large multi-color press, but that is not always accurate. In some instances, the presses potential emissions do not exceed 25 tons per year so requiring the facility to obtain a federally enforceable limit would impose significant administrative and economic burdens that are not necessary. Therefore, the condition should be revised to state that the federally enforceable permit should be obtained only when the potential emissions exceed 25 tons of VOC emissions and one is not required if the potential emissions do not exceed 25 tons of VOC emissions.

Response: MassDEP believes the suggested revision is unnecessary. 310 CMR 7.18(25)(a)2. applies only to a heatset web printing press that has potential VOC emissions greater than 25 tons per year, with the option under 310 CMR 7.18(25)(c)2.a. to obtain a federally enforceable emission limitation below 25 tons per year in order to not be subject to 310 CMR 7.18(25)(a)2. If

the potential emissions of the press do not exceed 25 tons per year, then the press would not be subject to 310 CMR 7.18(25)(a)2. and the owner would have no need to choose to obtain a federally enforceable emission limitation.

52. Comment: (GAC) Please revise the VOC content limits for fountain solution in 310 CMR 7.18(25)(g) and (h) by deleting the words “by volume” replacing them with “by weight.” This change would place the limits on a consistent basis with the CTG for Offset Lithographic Printing and Letterpress Printing and it makes compliance demonstration much easier as VOC emissions are determined on a weight basis. This change would not represent a backsliding situation as the limits are virtually equivalent and compliance determination is much easier if the limits are on a by weight basis.

Response: MassDEP agrees and replaced “% by volume” with “% by weight” throughout the final 310 CMR 7.18(25) regulations. MassDEP agrees that this change does not represent backsliding, as indicated in the August 12, 2016 Technical Support Document, which stated, “Section 110(l) of the CAA only allows revisions to SIP requirements if such revisions do not interfere with attaining air quality standards (known as the “anti-backsliding” provision). Because the amendments also include emission limits for some large use categories (i.e., one component and multicomponent general use coatings) that are more stringent than MassDEP’s current regulations, MassDEP believes (based on EPA guidance) that these more stringent limits on higher use coatings offset the less stringent specialty coating limits; therefore, the regulations as a whole avoid backsliding.”

53. Comment: (GAC) Please revise the limit in 310 CMR 7.18(25)(i) by deleting 2.5% and replace it with 5% so that it is consistent with the CTG for Offset Lithographic Printing and Letterpress Printing.

Response: Existing 310 CMR 7.18(25)(i) already contains a fountain solution limit of 2.5%, which industry has been complying with for decades. It would be backsliding to replace it with a higher limit; therefore, MassDEP did not revise the limit.

54. Comment: (GAC) Please revise the limit in 310 CMR 7.18(25)(j) by deleting 3.0% and replace it with 5% so that it is consistent with the CTG for Offset Lithographic Printing and Letterpress Printing.

Response: Existing 310 CMR 7.18(25)(j) already contains a fountain solution limit of 3.0%, which industry has been complying with for decades. It would be backsliding to replace it with a higher limit; therefore, MassDEP did not revise the limit.

55. Comment: (GAC) Please revise the cleaning solvent limit in 310 CMR 7.18(25)(m)(2)(a) by deleting “30%” and replacing it with “70%” per the CTG for Offset Lithographic Printing and Letterpress Printing requirements for cleaning solutions. Although this limit was originally included in the 1993 draft CTG for Offset Lithography, it was subsequently superseded by the 70% by weight limit with the issuance of the 2006 CTG for Offset Lithographic Printing and Letterpress Printing, when the printing industry demonstrated to EPA that the 30% by weight

VOC content limit in the 1993 CTG for Offset Lithographic Printing did not constitute an achievable technology and therefore EPA revised the limit to 70% by weight.

Response: MassDEP agrees and replaced “30%” with “70%” in three places in the final regulations, consistent with the 2006 Offset Lithographic Printing and Letterpress Printing CTG (see 310 CMR 7.03(15)(c)1.a., 7.18(25)(m)2.a. and 7.26(24)(c)2.a.). Facilities have historically complied with the cleaning solutions provision by following the VOC composite partial pressure standard, and not the 30% VOC content standard; therefore, changing the 30% standard does not represent backsliding. MassDEP notes that EPA has approved the 70% standard in Connecticut’s regulations.

56. Comment: (GAC) Please revise the cleaning solvent limit in 310 CMR 7.18(25)(m)(2) by including a new provision (c) that allows for the use of 110 gallons per calendar year of non-compliant cleaning materials. This is due to the nature of the equipment being cleaned, and cleaning solutions that meet the requirements of 310 CMR 7.18(25)(m)(2)(a) and (b) are sometimes not adequate to achieve the level of cleaning required. The use of those cleaning solutions on a limited basis by all printing operations was recognized by USEPA and was included in its CTG as seen on Page 3 of the CTG where USEPA states:

“...the cleaning control approaches recommended in this CTG include limitations on the VOC composite vapor pressure of cleaning materials and limits on the VOC content of cleaning materials, with an exclusion of 110 gallons per year of cleaning materials which meet neither the low VOC composite vapor pressure recommendation nor the lower VOC content recommendation, and work practices.”

Based on the above, 310 CMR 7.18(25)(m)(2)(c) would read as follows:

Cleanup solutions not meeting the limits in 7.18(25)(m)(2)(a) and (b) are limited to less than or equal to 110 gallons per calendar year.

Response: MassDEP proposed this approach in 310 CMR 7.18(25)(c)4. However, the proposal only provided an exemption for persons subject to 310 CMR 7.18(25)(a)4., when it should also have provided that exemption for persons subject to 310 CMR 7.18(25)(a)1., as both sections require compliance with cleanup solution limits. MassDEP finalized 310 CMR 7.18(25)(c)4. to read “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.”

57. Comment: (GAC) Please modify the recordkeeping requirements in 310 CMR 7.18(25)(o) so that they are consistent with those required by the limits in the subsection and the CTG for Offset Lithographic Printing and Letterpress Printing. For example, 310 CMR 7.18(25)(o)(1) is requiring a subjected facility to track the identity, formulation, density, and quantity for each VOC containing material used. There are no existing requirements in 310 CMR 7.18(25) that require this type of recordkeeping. The compliance burden of this requirement is not commensurate with the requirements.

Likewise, there is not a requirement in the subsection that would require the collection of records to indicate the VOC content for each material used on each press as required in 310 CMR

7.18(25)(o)(5) and all presses as required in 310 CMR 7.18(25)(o)(6). Therefore, these two conditions should be deleted.

The only records that need to be kept are the VOC content and vapor pressure of cleanup solutions. If the exclusion for the 110 gallons of cleanup solutions not meeting 7.18(25)(m)(2)(a) and (b) is accepted, then the quantity of the cleanup solutions not meeting the requirements would have to be recorded on a monthly basis.

Response: MassDEP did not make the suggested change. MassDEP believes the records required will help ensure compliance. In order for MassDEP inspectors to verify compliance during an inspection, records such as the quantity used and VOC content of each individual material are necessary. For example, to determine compliance with the fountain solution % by weight VOC limits in 310 CMR 7.18(25)(g) through (j), the facility would need to know the quantity and % VOC formulation of each alcohol, alcohol substitutes and fountain solution concentrate used, to calculate the overall fountain solution VOC % by weight. Therefore, MassDEP did not make the suggested changes.

58. Comment: (GAC) Please modify the recordkeeping requirements for 310 CMR 7.18(25)(o)(3) by deleting “by volume” and replacing it with “by weight” and to allow the records to be maintained on a batch or recipe basis.

Response: Since MassDEP changed the fountain solution standards to “by weight,” MassDEP also changed the record-keeping standards to “by weight.” MassDEP agrees it is reasonable to keep fountain solution records on a batch or recipe basis, and therefore finalized 310 CMR 7.03(15)(e)2. to read “...each time alcohol or alcohol mix is added to the system ~~but no less than once per day~~,” and 310 CMR 7.18(25)(o)3. to read “For offset lithographic printing presses the percent of VOC by volume in the fountain solution as monitored whenever new fountain solution is mixed, or alcohol is added to the fountain solution, ~~or daily, whichever is more frequent~~.”

310 CMR 7.18(31) Industrial Cleaning Solvents

59. Comment: (GAC) To maintain consistency with other state industrial solvent cleaning regulations, the GAC recommends that cleaning activities associated with digital printing be exempt from the rule’s requirements. Emissions from cleaning operations associated with digital printing equipment are minimal. Further, digital printing was not recognized by the US EPA as a source category for implementation of this CTG. Other states, such as Connecticut, Illinois, Indiana, Ohio, Maryland, and Wisconsin have adopted similar language exempting this cleaning activity.

Response: Page 4 of the Industrial Cleaning Solvent CTG states “this CTG is intended to cover all industrial cleaning operations,” which would include digital printers. Thus, MassDEP’s final regulation includes Work Practices for Cleaning Operations that digital printers must follow. However, MassDEP agrees that digital printing cleaning operations should not be subject to numerical limits, and MassDEP has amended the final regulation at 310 CMR 7.18(31)(b)1.c.v., so that it exempts digital printing cleaning activities from numeric emissions limits (i.e., for

VOC Content Limitation, Vapor Pressure Limitation and add-on Air Pollution Capture and Control Equipment efficiency), since EPA has approved this approach in other states. A definition of Digital Printing has therefore been added to the final regulation.

310 CMR 7.26(20) Environmental Results Flexographic, Gravure, Letterpress and Screen Printing

60. Comment: (GAC) The GAC recommends the addition of digital printing to the list of covered printing operations. Inclusion of digital printing in this section provides clear direction and consistency in the regulatory approach for those printing facilities that are including digital printing applications.

To further clarify the printing process(es) included in this category of digital, it is recommended that the following definition be included in 310 CMR 7.26(20):

Digital Printing: A print-on-demand method of printing in which an electronic output device transfers variable data, in the form of an image, from a computer to a variety of substrates. Digital printing methods include, but are not limited to, inkjet printing, electrophotographic printing, dye sublimation printing, thermal wax printing and solid ink printing.

Response: MassDEP will evaluate whether digital printing operations should be added to the ERP printing regulations and will consider future regulation amendments if warranted.

61. Comment: (GAC) Please revise the definition of “Very Small Printer” in 310 CMR 7.26(22) to include digital printing. The proposed change would provide better clarity to the definition and would read as follows (all changes are bold):

Very Small Printer means a printer that:

- a) is connected to a municipal sewer;
- b) uses no more than 55 gallons of cleanup solution and inks/coatings/adhesives with a VOC content greater than 10% by weight as applied per rolling 12-month period (**incidental material, ink used in nonheatset offset lithographic printing, water-based ink/coating/adhesive, and digital inks. Plastisol and ultraviolet ink are excluded from this calculation**);
- (c) uses no more than 55 gallons of alcohol per rolling 12-month period; and
- (d) generates not more than 55 gallons of hazardous waste per 12-month period.

~~**Incidental material, ink used in non-heatset offset lithographic printing, water-based ink/coating/adhesive, plastisol and ultraviolet ink are excluded from this calculation.**~~

Response: MassDEP did not make this change, but will evaluate whether digital printing operations should be added to the ERP printing regulations and will consider future regulation amendments if warranted.

62. Comment: (GAC) The proposed revisions in 310 CMR 7.26(23)(a)(2), 310 CMR 7.26(23)(a)(3) and 310 CMR 7.26(27)(c) regarding the superseding of conditions in a plan approval or permit should be deleted. There are several concerns with this condition with the first being how a permitted facility will know when this occurs. Changing the requirements in an

existing plan approval or permit that have been carefully negotiated with notification to the permitted entity is not appropriate as they would be subject to an enforcement action with no knowledge that a requirement would have been changed. The other main concern with this requirement is that when a plan approval or permit is issued, the conditions are developed on a case-by-case basis considering limitations, equipment configuration, and many other items and changing those requirements via a rule may present a situation where the facility would not be able to comply with the rule's requirements. Therefore, this part of the proposed revision needs to be deleted.

Response: MassDEP did not make this change. When new RACT regulations are issued, they apply to existing facilities and existing facilities must comply with the regulations or seek a facility-specific approval for alternative emissions limits. It is the responsibility of a facility to keep up to date with the promulgation of new environmental regulations that apply to their operations, including RACT regulations. 310 CMR 7.26(23)(a)4. provides a two year timeframe for facilities to come into compliance with the new RACT emissions limitations if they find that their plan approval limits or applicable limits under 310 CMR 7.26 are less stringent than the new RACT emissions limitations.

63. Comment: (GAC) Please revise 310 CMR 7.26(24)(c)(2)(a) by deleting 30% and replacing it with 70%.

Response: MassDEP agrees and replaced "30%" with "70%" in three places in the final regulations, consistent with the 2006 Offset Lithographic Printing and Letterpress Printing CTG (see 310 CMR 7.03(15)(c)1.a., 7.18(25)(m)2.a. and 7.26(24)(c)2.a.). Facilities have historically complied with the cleaning solutions provision by following the VOC composite partial pressure standard, and not the 30% VOC content standard; therefore, changing the 30% standard does not represent backsliding. MassDEP notes that EPA has approved the 70% standard in Connecticut's regulations.

64. Comment: (GAC) Please revise 310 CMR 7.26(28)(b)(5), 310 CMR 7.26(28)(c)(4), and 310 CMR 7.26(28)(c)(6) by deleting "measured" and replace it with "determined" as using the word measured implies a test needs to be conducted every time a batch of fountain solution is prepared. Since the VOC content can be determined based on manufacturer's analytical data and mix ratios, determined is a better way to describe the approach.

Response: MassDEP agrees and replaced "measured" with "determined" in three places in 310 CMR 7.26(28) and once in 310 CMR 7.03(15)(d)2. in the final regulations.

65. Comment: (GAC) Please revise 310 CMR 7.26(28)(c)(3) by including the allowance for a 50% retention of VOC in shop towels that are used in conjunction with cleaning solutions that have a composite VOC vapor pressure of less than 10 mm Hg at 20°C (68°F).

On Page 19 of the 2006 final CTG for Offset Lithographic Printing and Letterpress Printing EPA states:

B. Retention of Low VOC Composite Vapor Pressure Cleaning Materials in Shop Towels

We recommend using a 50 percent VOC retention factor for low VOC composite vapor pressure cleaning materials in shop towels where (1) VOC composite vapor pressure of the cleaning material is less than 10 mm Hg at 20 °C, and (2) cleaning materials and used shop towels are kept in closed containers.

The retention factor for shop towels would apply to all print processes as affirmed by EPA in the Technical Support Document for Title V Permitting of Printing Operations. On Page 11, EPA states:

Are non-lithographic processes eligible for use of a retention factor where low vapor pressure cleaning solvents are used?

Yes. The 50 percent retention factor use is available for all flexographic, rotogravure, letterpress, and screen printing operations, consistent with our June 1994 guidance, “Alternative Control Technique Document: Offset Lithographic Printing.”

Response: MassDEP agrees and added the 50% retention factor for shop towels when used with low VOC composite vapor pressure cleaning materials in the final regulations (see 310 CMR 7.26(28)(c)3.).

66. Comment: (GAC) Please revise 310 CMR 7.26(28)(c)(8) by deleting “MSDSs” and replace it with “SDSs” as OSHA has revised its hazard communication standard and has replaced MSDSs with SDSs.

Response: MassDEP agrees and in the final regulations replaced “MSDSs” with “SDSs” in six places and replaced “material safety data sheet” with “safety data sheet” in the 310 CMR 7.00 definitions of “adhesion primer” and “electrostatic preparation coating.”

Other Changes:

MassDEP corrected references in 310 CMR 7.03(15) to read “and in 310 CMR 7.03(15)(~~de~~) and (f), and to the recordkeeping requirements in 310 CMR 7.03(15)(~~ed~~).”

MassDEP corrected the spelling of “difluoromethane” in the 310 CMR 7.00 definition of “volatile organic compound,” by adding the missing letter “l.”

Where regulations adopt technical standards, the Massachusetts Secretary of the Commonwealth requires the use of the most recent version available. Therefore, MassDEP revised occurrences of ASTM D523-08 to ASTM D523-14, AAMA 2604-05 and 2605-05 to AAMA 2604-17 and 2605-17, and ANSI A135.5-2004 to ANSI A135.5-2012. Also, the incorrect title “Architectural Aluminum Manufacturer Association” in the definition of “High-Performance Architectural Coating” has been corrected to “American Architectural Manufacturers Association.”

SOLVENT DEGREASING – 310 CMR 7.18(8)

67. Comment: (Ramboll Environ) MassDEP is proposing to add a fourth option under which a solvent with a vapor pressure of greater than 1.0 mm Hg may be used, namely:

d. cold cleaning degreasers used in the cleaning of high precision products for which the owner or operator has received Department and EPA approval.

We request that the word “and” currently proposed between (8)(a)1.c and (8)(a)1.d be changed to “or”, so it is only required for facilities to meet one of the four criteria rather than all four.

Response: MassDEP believes in context the word “and” is appropriate, but has added the phrase “to any of” prior to the listing of a. – d. to make clear that if any of the conditions listed are met the mercury vapor pressure requirement does not apply.

68. Comment: (Ramboll Environ) In addition, we request clarification on the new condition that has been added to (8)(e)3.i where spray operations with non-continuous fluid stream or pressure greater than 10 psi may be used if the amount of solvent consumed in such spray operations at the premises is limited to “less than 3,000 gallons in any 12-month period, excluding solvent captured and recycled.” Please provide clarification on what is meant by “captured and recycled.” If the solvent is captured and disposed of as hazardous waste, would this be considered “captured and recycled?” We believe it should, as the VOC emissions are the same either way.

Response: MassDEP added the word “on-site” after “captured and recycled” in the final regulations to clarify that solvent captured in an on-site still and then reused in the cleaning process would be considered “captured and recycled,” and therefore exempt from the 3,000 gallon per 12-month period requirement, but that solvent that is captured and disposed of would not be considered “captured and recycled.” The intent of the regulation is to limit air emissions and to encourage recycling of solvent on-site.

NO_x RACT – 310 CMR 7.19

69. Comment: (EPA) Section 310 CMR 7.19(2)(b) provides a list of NO_x control options for sources that seek an alternative RACT limit. One of the items in this list, 7.19(2)(b)(16), reads as follows:

"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)."

To maintain this as a NO_x Reasonably Available Control Technology (RACT) compliance option going forward, the ERCs allowed to be used should be limited to ERCs generated by sources subject to the updated RACT requirements that reduce their emissions below the new, presumptive RACT levels. This requirement is described within EPA's Economic Incentive Program guidance (see section 16.13 of "Improving Air Quality with Economic Incentive Programs"; January, 2001). Massachusetts should either remove this as a RACT compliance option, or revise it by limiting the type of ERCs allowed with the above restriction. The presumptive RACT level used to calculate ERCs should be the RACT levels Massachusetts adopts via this rulemaking proceeding, not emission limits from prior versions of the Commonwealth's RACT regulations which, in some cases, are less stringent.

Response: MassDEP agrees that the presumptive RACT level adopted in the final regulations must be used to calculate ERCs, rather than RACT levels from prior versions of the RACT regulations, which in some cases are less stringent.

The regulations in 310 CMR 7.00 Appendix B lay out the procedures for generating ERCs for compliance with 310 CMR 7.19. In Appendix B(2) "Baseline means the emission level set for an eligible source and calculated in accordance with methods described in 310 CMR 7.00: Appendix B(3)(c), which reflects the lower of actual emissions, or allowable emissions and which serves as the level below which emission reductions are considered surplus and can be eligible for approval by the Department as ERCs. As future allowable emission rates or emission standards become effective, the lowest of future allowable emissions, allowable emissions or actual emissions will be the baseline below which reductions must be made to be considered surplus."

An owner or operator who wants to use previously banked ERCs for complying with the new emissions limits in 310 CMR 7.19 must submit a new Emission Control Plan to MassDEP for review and approval. In such case, MassDEP will require the owner or operator to review the original basis for the creation of the banked ERCs. MassDEP has made changes to 310 CMR 7.19(2)(g) to state that if the ERCs were generated due to reductions by a large boiler, combustion turbine, or internal combustion engine for which the standards have become more stringent, MassDEP will require recalculation of their value based on the new standards. MassDEP also changed 310 CMR 7.19(3)(a)1. to clarify that the owner or operator of a facility that proposes to use ERCs to comply with the new presumptive NO_x RACT emission standards must apply for a new Emission Control Plan. These changes will ensure that MassDEP will be able to review the use of ERCs and ensure that the ERCs are based on the new presumptive NO_x

RACT emission standards, consistent with EPA's "Improving Air Quality with Economic Incentive Programs."

70. Comment: (EPA) The Commonwealth's proposed revisions include a number of exemptions that apply to emission units that operate less than 1,000 hours per year, or that operate with annual capacity factors of less than 10%. The proposed revisions require any source that uses such an exemption but subsequently exceeds it to comply with the applicable, previously avoided emission limit within 2 years. It is likely that some sources that become subject to these emission limits could meet the requisite emission limit sooner than this, and should be required to do so if at all possible. Massachusetts could accomplish this by modifying the triggering provision by requiring compliance be achieved within 1 year, unless the source requests, and is granted, additional time to meet the requisite emission limit. If additional time is granted, it should be limited to no more than 2 years from the date of the triggering event.

Response: MassDEP believes two years is an appropriate timeframe for compliance once RACT requirements are triggered in light of the time needed to install retrofit controls to meet RACT emission limits. MassDEP will not allow extensions to the 2-year deadline unless exceptional circumstances are demonstrated to MassDEP.

71. Comment: (EPA) With regard to alternative RACT requirements, section G of the Background Document notes that source specific RACT determinations will be added to a facility's Emission Control Plan, which would then be submitted to EPA as a single source SIP revision, and that EPA will hold a public comment period on the revision as part of its approval process. We note that the Commonwealth would also need to hold a public comment period and offer the opportunity for a public hearing, as that is a necessary component of any SIP submittal.

Response: MassDEP agrees and will hold a public comment period and, if requested, a public hearing prior to submitting a single source SIP revision to EPA.

72. Comment: (EPA) The provision added at section 310 CMR 7.19(1)(c)(12) exempts large boilers and combustion turbines with annual capacity factors of less than 10% from the newly proposed, tightened NOx emission limits. This is being done in light of the higher control costs associated with requiring reductions at such infrequently run units. However, although these units are not frequently run on an annual basis, those boilers and turbines used to generate electricity may still be called upon to run during days when the area is experiencing high ozone levels. We note, for example, that most of the electric generating boilers in Massachusetts that burn residual oil have low capacity factors and are uncontrolled. We suggest Massachusetts work with the region's electrical dispatch authority, ISO-New England, to evaluate the feasibility of reducing, or ideally eliminating, the need for large, uncontrolled electric generating units to operate on days forecast to have poor air quality. If this can be accomplished while maintaining sufficient electrical capacity in the region, Massachusetts should consider modifying this exemption in a way that limits or precludes their operation during days with poor air quality.

Response: Massachusetts is taking many steps to increase energy efficiency and renewable energy so that it will be less likely that ISO-New England will dispatch large uncontrolled

sources on days when ozone levels are elevated. MassDEP will continue to evaluate whether additional actions are needed to address emissions from the electricity grid on high ozone days.

73. Comment: (EPA) The new provisions applicable to large boilers, turbines, and reciprocating internal combustion engines (RICE) only apply to units that operate with an annual capacity factor of 10% or more for boilers and turbines, or, for RICE units, operate for 1,000 hours per year or more. Since these exemptions are proposed to apply on a per unit basis, a source could operate multiple units below these thresholds and remain exempt from the more stringent emission limits. Massachusetts should consider restructuring these requirements on a facility-wide basis, such that if collectively the boilers, turbines, or RICE units at a facility exceed the relevant threshold, the more stringent emission limits would become applicable.

Response: Although general applicability of the RACT regulation is based on facility-wide emissions, a RACT analysis and the resulting emissions standard is focused on a specific category of equipment, including its technology type and operating characteristics. Likewise, MassDEP believes a per-unit, categorical basis for exemption is most appropriate.

74. Comment: (EPA) In its RACT certification, Massachusetts should review its previously issued single source NO_x RACT SIP revisions to ensure that they are still sufficient for meeting RACT. In particular, any such sources for which it was previously determined that no feasible emission reductions existed, and therefore RACT involved no emission controls, should be reviewed to determine whether that conclusion is still valid.

Response: MassDEP will ensure that the previously issued single source SIP revision approvals are still sufficient for meeting RACT, including review of air pollution controls that may be feasible now.

75. Comment: (EPA) Massachusetts should include within its RACT certification an analysis of whether controls currently required by the state's existing suite of NO_x regulations are performing adequately. One means to accomplish this would be to review data from continuous emissions monitors (CEMs) available from EPA's Clean Air Markets Program, or other emissions monitoring data over a span of several years and observe whether any noticeable increase in emission rate has occurred. This could come about for various reasons, such as the degradation of a catalyst (for units controlled by selective catalytic reduction (SCR)), deterioration of control equipment effectiveness as the equipment ages, or non-use of controls for economic reasons. For example, emission units K2 and K4 at Kneeland Station both operate NO_x control technology, and the NO_x emission rates for both units in 2015 were considerably higher than what was achieved in recent, prior years.

Response: MassDEP will review data in EPA's Clean Air Markets Division emissions database as part of determining and certifying the effectiveness of existing NO_x controls.

76. Comment: (EPA) EPA commends MassDEP for proposing more stringent NO_x emission limits. As noted in the Background Document, these limits have already been implemented by either Connecticut and/or New York (depending on the type of unit) and thus would appear "reasonably available." EPA supports these tighter limits. However, it is not clear why in the

case of large boilers, MassDEP is proposing to adopt limits implemented by New York in 2014, with one exception. Specifically, Massachusetts is proposing a 0.15 lb/MMBtu limit for face-fired gas fired boilers greater than 250 MMBtu/hr, whereas New York's limit is 0.08 lb/MMBtu for these units. Massachusetts should either adopt the more stringent 0.08 lb/MMBtu limit for these units or include information in its SIP submittal that justifies why MassDEP believes the 0.15 lb/MMBtu limit represents RACT for the subject units in Massachusetts.

Response: MassDEP recognizes that New York's emissions limits for face-fired gas fired boilers greater than 250 MMBtu/hr represent current NO_x RACT. However, in Massachusetts there are no large face-fired gas-only fired boilers greater than 250 MMBtu/hr to which a 0.08 lb/MMBtu RACT emission limit would apply. Based on MassDEP's review of other state RACT emission limits, including New York's limits for boilers firing oil and gas, MassDEP has concluded that NO_x RACT for large boilers with both gas and oil firing capabilities is 0.15 lb/MMBtu.

77. Comment: (SC) Allowing facilities that installed controls under 310 CMR 7.29 to use a monthly averaging time instead of a daily averaging time for determining compliance is not appropriate. New York, Delaware and Connecticut NO_x RACT emission limits all require 24-hour averaging times, which is critical to reducing ozone precursors on high energy demand days when emission reductions are most needed. Allowing a monthly averaging time creates an unhelpful precedent, since Massachusetts has a vested interest in ensuring that upwind states operate and optimize their controls at all times and establish daily emission limitations.

Response: The provision for the owner or operator of a facility with NO_x controls installed to comply with 310 CMR 7.29 to use a rolling 30-day averaging period for RACT NO_x compliance is written very narrowly and MassDEP believes it should not set a precedent for other states or facilities. Canal station is the only operating facility subject to 310 CMR 7.29 that has installed NO_x controls, and therefore only Canal Station can take advantage of the 30-day averaging period.

MassDEP's review of Canal Station's recent continuous emissions monitoring system (CEMS) data suggests it would be very difficult for these units to meet the lower NO_x RACT limit on a daily average basis. Canal Station unit 1 has SCR installed and unit 2 has SNCR installed to control NO_x to comply with 310 CMR 7.29. For the most recent three-calendar-year period 2014-2016, the average capacity factor of each unit was less than 10%. MassDEP believes that if the capacity utilization of either unit exceeds 10%, it is unreasonable to require additional NO_x controls to meet the emissions limits on a daily basis given the advanced NO_x controls already installed. EPA allows up to a 30-day averaging period for compliance with RACT provided that the longer averaging period is assured to not result in violation of the ozone NAAQS. Massachusetts is in attainment of the 2015 ozone standard and does not contribute to downwind ozone nonattainment or maintenance issues based on EPA's most recent modeling ["Notice of Availability of the Environmental Protection Agency's Preliminary Interstate Ozone Transport Modeling Data for the 2015 Ozone NAAQS"].

78. Comment: (SC) The Sierra Club urges the Department to follow Connecticut's lead in establishing a presumptive cost-effectiveness threshold for case-by-case RACT determinations.

Under Connecticut's proposed NOx RACT regulation, facilities that elect to comply based on a case-by-case RACT demonstration must make a demonstration of technological or economic infeasibility if they decline to install an available control technology. A technology is "presumed economically feasible" for Phase 1 RACT if the cost per ton of NOx reduced is equal or less than \$13,118 and for Phase 2 RACT if the cost per ton of NOx reduced is equal or less than \$13,636. Importantly, the evaluation of cost of each feasible control alternative is made on an annualized full load basis, assuming 8,760 hours of operation per year, unless the emission unit is subject to a practically enforceable limitation on operation. Establishing a clear and robust cost-efficacy threshold similar to Connecticut's is important not only to ensure adequate control of in-state pollution sources, but also to ensure adequate control of out-of-state pollution sources as well. As noted above, Massachusetts is impacted by pollution from a number of upwind states. As these states implement their own RACT requirements for large sources, they will be looking to Massachusetts to ensure they are not over-controlling their sources. Massachusetts should emulate Connecticut in setting a beneficial example by establishing a robust presumptive cost-effectiveness threshold and ensure that the Commonwealth will benefit from a level playing field.

Response: While MassDEP can take into account RACT decisions in other states (and the basis of those decisions in terms of cost per ton of NOx reduced), MassDEP has not in the past adopted cost-specific thresholds and did not propose to do so in these regulations. Determining alternative RACT levels requires a case-by-case analysis and decision, and a single cost threshold may not be suitable for every RACT determination.

79. Comment: (DSG) Within 310 CMR 7.19(13)(b), language was added stating that a facility may choose to certify and maintain their CEMS in accordance with 40 CFR 75 in lieu of 310 CMR 7.19(13)(b)1. through (b)12. To clarify that paragraphs (b)1. through (b)12. do not apply to facilities complying with 40 CFR 75 but not otherwise subject to 40 CFR 75, we would propose updating the last sentence of paragraph (b) by incorporating the bolded language below:

...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:

Response: MassDEP agrees and has made the suggested change in the final regulations.

80. Comment: (DSG) Please confirm there are no PMA requirements for NOx and/or CO CEMS if a facility is utilizing 40 CFR 75 methodologies to gather and analyze data in lieu of 310 CMR 7.19(13)(b)1. through (b)12.

Response: MassDEP confirms that there are no performance monitoring availability (PMA) requirements for NOx and/or CO CEMS if a facility is using 40 CFR 75 methodologies to gather and analyze data in lieu of 310 CMR 7.19(13)(b)1. through (b)14. The monitoring data availability requirements for facilities using 40 CFR 75 methodologies are stated in 310 CMR 7.19(13)(b)12.

81. Comment: (DSG) Please confirm within 310 CMR 7.19(13)(b) that the use of the 40 CFR 75 diluent cap is allowed for CO if a facility chooses to utilize 40 CFR 75 procedures to “gather and analyze data.”

Response: MassDEP confirms that when 40 CFR 75 procedures are used, the applicable diluent cap is allowed for CO.

82. Comment: (DSG) Within 310 CMR 7.19(13)(b)9. we propose allowing a facility to calculate a valid hour in accordance with the 40 CFR 60 “quadrant rule.” For example, 310 CMR 7.19(13)(b)9. could be updated to incorporate the following bolded language:

...a block hourly average from at least three data points, generated by a CEMS at 15 minute intervals over each on-hour period **or in accordance with 60.13(h)(2)**

Response: MassDEP agrees and has added the suggested change in the final regulations.

83. Comment: (DSG) Within 310 CMR 7.19(13)(b)9., an operating day is defined as a calendar day containing at least 4 operating hours. Please clarify whether the definition of an operating day was intended only for the purposes of calculating a calendar month average, or whether compliance with the applicable emission limits for facilities subject to the daily emission averages should also only be evaluated for “operating days.” For example, the calendar day description could be updated by incorporating the following bolded language:

...calculate a calendar day average **for each operating day** from a block hourly average...

Response: MassDEP has added the suggested change in the final regulations. An operating day consists of a minimum of 4 hours and is intended for calculating and determining compliance for a calendar day average for each operating day as defined.

84. Comment: (DSG) Regardless of the intent for evaluating emissions compliance based on daily averages, we would propose that paragraph 7.19(13)(b)10. be updated to state the 75% valid data per day requirement applies only to operating days as defined in 7.19(13)(b)9. For example, 7.19(13)(b)10. could be updated by incorporating the bolded language below:

...in all cases obtain valid data for at least 75% of the hours per **operating** day...

Response: MassDEP agrees and has made the suggested change in the final regulations.

85. Comment: (DSG) 310 CMR 7.19(13)(b)9. can be difficult to read and understand as written. We propose updating the paragraph into separate sentences for each valid period definition. For example, the first sentence of the paragraph could be broken into three separate sentences each beginning with “Calculate a...” in order to describe how to calculate a calendar month average, a day average and an hourly average.

Response: MassDEP agrees and has broken the sentence into smaller parts and added an additional sentence to make it easier to read, as well as updated cross-references to the new sentences.

86. Comment: (DSG) Within the proposed updates to 310 CMR 7.19(4)(b), language was added to state that the “oil or oil and gas” emission limits apply even when oil and gas are combusted at different times. Please clarify that a large boiler permitted to burn any oil is subject to the “oil or oil and gas” emission limits in lieu of the gas only emission limits. Below are four specific examples of large boilers for which it would be helpful to clarify the applicable emission limit.

Example 1: Permitted to burn both gas and oil, but no oil infrastructure is currently in place.

Example 2: Permitted to burn both gas and oil, all required infrastructure is in place, but have not combusted oil in over a year due to financial or other non-regulatory reasons. The facility may choose to begin combusting oil any time in the future.

Example 3: Permitted to burn gas as a primary fuel and oil as a secondary/backup fuel with a 12-month rolling limit on the hours and/or quantity burned (e.g. volume, mass or heat input).

Example 4: Permitted to burn gas as a primary fuel and oil only for testing, maintenance or when gas is unavailable.

Response: A large boiler permitted to burn any oil is subject to the oil or oil and gas emission limits in lieu of the gas only emission limits even if the boiler is not burning oil (i.e., oil or oil and gas emission limits would apply in all four examples in the comment).

87. Comment: (DSG) 310 CMR 7.19(13)(d)4. has been updated to require a facility demonstrating compliance with NOx RACT using an annual capacity factor to submit documentation “in the first quarter of each year.” But the paragraph also states that the information “may be included in the RACT quarterly report.” These statements can be confusing as written as one may interrupt the referenced RACT quarter report to mean the first quarter RACT report due April 30th. We propose updating 310 CMR 7.19(13)(d)4. by incorporating the following bolded language:

...shall be provided to the Department in the first quarter of each **year (i.e. no later than March 31)**, and may be included in the **fourth quarter** RACT quarterly report (**due January 30**) if...

Response: MassDEP agrees and has made the suggested changes in the final regulations.

88. Comment: (DSG) 310 CMR 7.19(3)(a)3. states that any person using ERCs to demonstrate compliance with NOx RACT shall submit an Emissions Control Plan. Please clarify whether a facility that is currently using ERCs to demonstrate compliance with NOx RACT and plans to continue to utilize ERCs (i.e., no change to the compliance demonstrated) must submit an updated Emissions Control Plan. In addition, please specify the timeline (e.g. 180 days of promulgation date) to submit an Emissions Control Plan in accordance with paragraph (a)3.

Response: As stated in the Response to Comment 69, MassDEP revised 310 CMR 7.19(3)(a)1. to clarify that a facility owner or operator using, and planning to continue using, ERCs for RACT compliance must submit a new Emission Control Plan to MassDEP within 180 days of the promulgation date of the final regulations to account for the new NO_x RACT emissions limits. In such cases, pursuant to the revised 310 CMR 7.19(2)(g), MassDEP will require review of the original basis for the creation of the banked ERCs (see Response to Comment 69). If the ERCs were generated due to reductions by a large boiler, combustion turbine, or internal combustion engine for which the standards have become more stringent, MassDEP will require recalculation of their value based on the new standards.

89. Comment: (DSG) The use of “rated capacity” within the 310 CMR 7.19 definition for Annual Capacity Factor is unclear as written for combustion turbines since the rated capacity is often temperature dependent. We propose adding clarifying language for combustion turbines stating “rated capacity **at ISO conditions**” or updating the definition to read “rated capacity **or maximum firing rate**.”

Response: MassDEP agrees and has added a reference to International Organization for Standardization (“ISO”) conditions in the final regulations.

90. Comment: (Eversource) MassDEP is proposing to amend 310 CMR 7.19: Reasonably Available Control Technology (RACT) for Sources of Nitrogen Oxides (NO_x), to lower emission limits for stationary reciprocating internal combustion engines. These units are operated for electric grid reliability in difficult to serve areas. As such, the ability to retrofit the units to meet a strict NO_x emission rate will be expensive, lengthy and, based on available footprint, may not be practical. We respectfully request the compliance time frame be extended from two years to five years.

Response: MassDEP believes two years is sufficient lead time for compliance with the NO_x RACT emission limits. MassDEP notes that a facility owner or operator can apply for alternative RACT if retrofitting controls is determined to be too costly or technically infeasible.

91. Comment: (TMLP) 310 CMR 7.19(1)(c)10. Exemption for Units with an annual Capacity Factor Less than 10% (Low Utilization Units). TMLP strongly supports this provision, as any potential NO_x emission reductions from Low Utilization units is small, and the cost to benefit ratio for NO_x retrofits on these units would be very high. It is suggested, however, that this exemption be extended to medium and small size boilers subject to RACT (under 310 CMR 7.19(5) and (6)).

Response: MassDEP did not propose new NO_x emission limits for medium and small size boilers and, therefore, cannot extend the low utilization exemption to these boilers in the final regulations.

92. Comment: (NRG) In contemplating any revisions to 310 CMR 7.19 the MassDEP should take into account the significant improvements in air quality over the period of time that 310 CMR 7.19 has been in effect. Massachusetts is in attainment for all the NAAQS. The MassDEP also needs to take into consideration that the sources affected by 310 CMR 7.19 operate in a very

different Independent System Operator of New England (“ISO-NE”) market construct, than existed during the initial promulgation of the existing 310 CMR 7.19 regulations. The MassDEP regulatory efforts should be directed toward expediting the permitting for the installation of new sources. The implementation of any revisions to the regulations should take into account and follow the ISO-NE capacity market obligation calendar.

310 CMR 7.19(1)(c)10.: Exemption for Units with an annual Capacity Factor Less than 10% (Low Utilization Units).

- NRG supports 310 CMR 7.19(1)(c)10 but would like to look at expanding the Capacity Factor calculation from a three to five year average to properly take in to account a short term system-side catastrophic event that requires the operation of units for an extended period of time in any one year.

Response: Under the Clean Air Act, Massachusetts is subject to RACT based on its location in the Northeast Ozone Transport Region, not its attainment status. MassDEP believes two years is sufficient lead time for compliance with the NO_x RACT emission limits and does not believe this timeframe is inherently inconsistent with the ISO-NE market. MassDEP notes that a facility owner or operator can apply for alternative RACT if retrofitting controls is determined to be too costly or infeasible.

MassDEP believes a three-year average is appropriate for the annual capacity factor calculation and provides a longer averaging period than similar “limited use” determinations found in EPA’s Boiler Maximum Achievable Control Technology (MACT), 40 CFR Part 63 Subpart DDDDD (which uses an annual period) and National Emission Standards for Hazardous Air Pollutants (NESHAP) for Coal- and Oil-Fired Electric Utility Steam Generating Units, 40 CFR Part 63 Subpart UUUUU (which uses a 24 months period).

93. Comment: (NRG) 310 CMR 7.19(2)(b) and 7.19(3)(a) – 60 Day Timeline for Submittal of Alternative RACT Requests and Modified RACT ECPs

- The requirement to submit a modified Emission Control Plan (ECP) or Alternative RACT request within 60 days of the promulgation of the revised RACT regulations is much too short. For an emission unit that is not able to readily achieve a proposed revised NO_x standard for Large Boilers or Combustion Turbines, it would be necessary to undertake a major engineering and commercial review to conduct a technical and economic study and an associated cost/benefit analysis to properly identify and evaluate control alternatives; 60 days is not adequate to perform these tasks and prepare the associated RACT submittal, whereas one year is a more appropriate time frame for submitting an Alternative RACT or updated ECP.

Response: MassDEP notes that the draft regulations proposed a six-month timeframe for submitting an ECP or Alternative RACT request (not 60 days). MassDEP believes six months after the promulgation of the final regulations is sufficient and kept that timeframe in the final regulations.

310 CMR 7.19(4)(b) Revised RACT Limits for Large Boilers:

94. Comment: (NRG) The proposed NO_x RACT limits would require the enhancement of the current combustion controls and may require the addition of non-RACT post-combustion controls. 310 CMR 7.19(4)(b) should specify that a source only need to consider combustion controls in assessing options to meet this limit, post-combustion controls would not be considered as RACT.

Response: MassDEP believes a facility owner or operator should review all control options listed in 310 CMR 7.19(2)(b) (including combustion controls and post-combustion controls) in determining RACT. If post-combustion controls are not technically or economically feasible, they may request an alternative RACT emissions limit.

95. Comment: (NRG) Under the Alternative RACT provisions:

- a. The rule should explicitly indicate that the Alternative RACT evaluation is limited to consideration of combustion controls; and that consideration of After Treatment options shall not be required; and
- b. The RACT cost/effectiveness calculations need to be explicitly based on actual historical operational usage and emissions of the Unit, rather than the potential-to-emit emissions.

Response: MassDEP believes it is reasonable for a facility owner or operator to consider all control options to meet RACT emissions limits, including combustion controls and post-combustion controls. If post-combustion controls are not technically or economically reasonable, they may request an alternative RACT emissions limit. Determining RACT cost effectiveness (dollars per ton emitted) is based on potential emissions, rather than actual emissions that fluctuate year to year and could increase in the future. If actual emissions are well below potential emissions, the owner or operator can consider obtaining a federally enforceable limit on operations, which would change cost effectiveness so that it reflects costs closer to actual emissions.

96. Comment: (NRG) Under 310 CMR 7.19(4)(b) – The language “The averaging time for determining compliance with 310 CMR 7.19(4)(a) shall be one hour...” needs to be changed to “The averaging time for determining compliance with 310 CMR 7.19(4)(b) shall be one hour...”

Response: The language in the proposed regulation was “The averaging time for determining compliance with 310 CMR 7.19(4)(b) shall be one hour...”, which is correct. The commenter may have inadvertently commented on 310 CMR 7.19(4)(a) instead of 310 CMR 7.19(4)(b).

97. Comment: (NRG) Under 310 CMR 7.19(4)(b) – The language needs to be clarified for units subject to and in compliance with 310 CMR 7.29, the averaging period should be expanded to include a calendar month or 12 month rolling periods.

Response: The maximum averaging period allowed under EPA’s RACT requirements is 30 days, and therefore the RACT averaging period for facilities complying with 310 CMR 7.29 cannot exceed a calendar month.

310 CMR 7.19(8) Stationary Reciprocating Internal Combustion Engines

98. Comment: (NRG) There needs to be an exemption that would exclude operational hours and periods due to unforeseen emergency situations outside of the control of the owner or operator of the unit.

Response: MassDEP does not believe this exemption is warranted. RICE subject to NOx RACT must meet the applicable emission standards in all operating scenarios unless historical operating hours are less than 1,000 per consecutive 12 month period.

99. Comment: (NRG) The implementation of controls will need to occur over a longer period of time, in the five plus year time frame, to be more closely aligned with the ISO-NE Forward Capacity Market obligations. If a unit exceeds the 1,000 hours in a 12 month rolling period, it would need to comply with the 310 CMR 7.19(8) limits at the beginning of the Forward Capacity Market obligation period four years from the month in which the unit exceeded the 1,000 hours.

Response: MassDEP believes two years is sufficient lead time for compliance with the NOx RACT emission limits in 310 CMR 7.19(8)(d). MassDEP has clarified that if an engine exceeds the 1,000 hours and becomes subject to RACT it would need to comply within two years of the year in which the 1,000 hours is exceeded.

Other Changes:

1. MassDEP changed the citation 310 CMR 7.19(1)(c)12 to 310 CMR 7.19(1)(d) to clarify that a large boiler or combustion turbine that has an annual capacity factor of less than 10% is still subject to the overall 310 CMR 7.19 regulation but is not subject to the revised NOx RACT emission limits provided their annual capacity factor remains less than 10%. In addition, MassDEP moved a provision proposed in 310 CMR 7.19(3)(a)1. to 310 CMR 7.19(1)(d) regarding compliance deadlines for a large boiler or combustion turbine that initially operated below the 10% capacity factor but then operates in a manner that meets or exceeds the 10% capacity factor (averaged over a three-year consecutive period) and becomes subject to the applicable emissions limits. In this case, the owner or operator of the boiler or combustion turbine must notify MassDEP within 180 days of no longer meeting the low capacity exemption, and, if applicable, submit an Emission Control Plan, and comply with the new presumptive NOx RACT levels within two years of no longer meeting the exemption. A similar compliance deadline provision for internal combustion engines already is contained in 310 CMR 7.19(8)(d).
2. MassDEP added a clarification in 310 CMR 7.19(8)(b) that an emergency engine installed in compliance with 310 CMR 7.03(10) or 310 CMR 7.26(42), as well as 310 CMR 7.02(8)i, is not subject to the requirements of 310 CMR 7.19(8).
3. MassDEP added a clarification in 310 CMR 7.19(8)(c) that this section (i.e., previous RACT emissions limits) does not apply if an internal combustion engine has exceeded 1,000 hours of operation during any consecutive period after the promulgation date of the regulations.

4. MassDEP decided not to make proposed revisions to 310 CMR 7.19(4)(c) that would have given an owner or operator of a large boiler the option of using the provision in 310 CMR 7.19(4)(c)1. when proposing an alternative RACT emissions limit, which allows an emissions limit “equal to 0.6 times the worst NO_x emission rate.” This provision has not been used in the past, and MassDEP believes alternative RACT should be case-by-case based on technological and economic feasibility.
5. MassDEP deleted language in 310 CMR 7.19(13)(a)1. and 2. regarding past deadlines for boiler repowering.

ENGINES AND TURBINES – 310 CMR 7.02, 7.03(10), 7.26(40)-(45)

100. Comment: (EPA) EPA understands you are aligning your requirements for engines with the federal regulations for stationary engines. We noted that provisions in sections 310 CMR 7.02(8)(i)(2) and 7.03(10)(a)(4) allow emergency engines to operate when capacity deficiencies result in a deviation of voltage from the electrical supplier to the premises of 3% above or 5% below standard voltage; or periods during which the regional transmission organization directs the implementation of voltage reductions, voluntary load curtailments by customers, or automatic or manual load shedding within Massachusetts in response to unusually low frequency, equipment overload, capacity or energy deficiency, or unacceptable voltage levels. In addition, provisions in section 310 CMR 7.26(42)(d) allow emergency engines to operate for emergency demand response and the definition of emergency allows operation during voltage deviations. Please be aware, on May 4, 2016, the U.S. Court of Appeals for the D.C. Circuit vacated the provisions in the Reciprocating Internal Combustion Engine (RICE) NESHAP National Emissions Standards for Hazardous Air Pollutants and NSPS (New Source Performance Standards) which allow emergency engines to operate for up to 100 hours for emergency demand response when the Reliability Coordinator has declared an Energy Emergency Alert Level 2 or for voltage or frequency deviations of 5 percent or greater below standard voltage or frequency. Specifically, the provisions in 40 CFR 63.6640(t)(2)(ii)-(iii), 60.4211 (f)(2)(ii)-(iii), and 60.4243(d)(2)(ii)-(iii) were vacated. Emergency engines subject to sections 310 CMR 7.02(8)(i)(2), 7.03(10)(a)(4), or 7.26(42)(d) must also comply with the RICE NESHAP and/or NSPS requirements if applicable. Consequently, emergency engines operating for voltage or frequency deviations or in emergency demand response under sections 310 CMR 7.02(8)(i)(2), 7.03(10)(a)(4), or 7.26(42)(d) may be required to meet the non-emergency engine requirements of the NESHAP and NSPS regulations.

Response: MassDEP has added the following language to 310 CMR 7.02(8)(i)(2), 7.03(10)(a)(4), and 7.26(42)(d): “Additional limitations and conditions may apply, including but not limited to 40 CFR Part 63, Subpart ZZZZ; 40 CFR Part 60, Subpart JJJJ; and 40 CFR Part 60, Subpart IIII.” The added language alerts owners of engines that EPA’s regulations contain additional limitations and conditions that may apply to the operation of engines.

101. Comment: (EPA) Section 310 CMR 7.26(42)(b)(2) requires subject engines to comply with applicable model year emission limits in Part 60 Subpart IIII for compression ignition engines. Section 310 CMR 7.26(42)(b)(3) requires a certificate of conformity but allows spark ignition engines to provide a letter or other documentation from the supplier that the engine meets the applicable emission limit. The NSPS emission limits for spark ignition engines are contained in Part 60 Subpart JJJJ, but section 310 CMR 7.26(42)(b)(2) does not require emission limits in Part 60 Subpart JJJJ. Section 310 CMR 7.26(42)(b)(2) should require spark ignition engines to meet the NSPS Subpart JJJJ emission limits. In addition, MassDEP should allow emergency spark ignition engines to either conduct a performance test to demonstrate compliance with the emission limits or to obtain an EPA certificate of conformity under a manufacturer voluntary certification program as allowed by NSPS Subpart JJJJ.

Response: Under 310 CMR 7.26(42), the owner/operator must certify that the engine meets the applicable model year emission limitations set by EPA for nonroad compression ignition engines

contained in 40 CFR part 89. The part 89 emissions standards were incorporated by reference into the stationary compression ignition NSPS, 40 CFR part 60 subpart IIII, and are more stringent than the federal emission limits for at least some emergency spark-ignition engines in part 60 subpart JJJJ. Owners/operators of such spark ignition engines installed in Massachusetts have arranged for the suppliers to equip such engines with catalytic control devices that reduce emissions sufficiently to meet the more stringent 40 CFR 89 compression ignition standards, and received a letter or other documentation from the supplier attesting to this, as required by the MassDEP's regulations. Many spark ignition emergency engines have been certified in this way. Where compliance with subpart JJJJ results in emissions performance equal to or better than part 89, then the owner or operator of a stationary spark ignition engine will be able to certify under 310 CMR 7.26(42) without add-on controls.

102. Comment: (EH&E) It is our understanding that one intent of the proposed changes is to provide a path for emergency engines as well as non-emergency engines which are not able to become certified through the ERP process to be able to permit through the 310 CMR 7.02(5)(c) permitting process. We suggest that clarification be added to emphasize that this pathway applies to emergency engines as well, even if it requires them to be willing to become permitted as non-emergency engines.

Response: MassDEP has clarified in 310 CMR 7.02(5)(a)3.c. that the owner/operator of an engine may choose to apply for a plan approval under 310 CMR 7.02(5)(c) instead of complying with the emergency or non-emergency engine requirements in 310 CMR 7.26(42) and 7.26(43), respectively.

103. Comment: (AIM, EH&E, Epsilon, Epsilon and co-signers, NAIOP, Raytheon) MassDEP should better align its emergency engine regulations with EPA's National Emissions Standards for Hazardous Air Pollutants (NESHAP). The NESHAP allows use of an emergency generator for non-emergency purposes for up to 50 hours per year. We urge MassDEP to modify the emergency RICE provisions of 310 CMR 7.02, 310 CMR 7.03, and 310 CMR 7.26, to include a 50-hour allowance per year for general non-emergency operation (a subset of the standard 100-hour per year allowance for manufacturers' recommended maintenance and testing), consistent with federal emergency RICE regulations (40 CFR 63, Subpart ZZZZ; 40 CFR 60, Subpart IIII; and 40 CFR 60, Subpart JJJJ).

This would address a very serious issue for many companies that need such backup power for critical maintenance activities in order to keep equipment working safely. Often these facilities are required to rent generators to create power during planned shutdown of electrical infrastructure components – sometimes the same generators the facility has onsite – despite the fact that renting these generators is not only costly, but also increases air emissions and creates unnecessary safety risks. While a Plan Approval can be filed in Massachusetts for use of emergency generators in non-emergency situations, a Plan Approval, specifically to allow limited run time during planned electrical maintenance activities on infrastructure equipment, is not warranted and is overly cumbersome for an activity that is currently allowed under the NESHAP. The recommended change will result in the following benefits:

- *Protection of public safety.* Facility managers have a public obligation to maintain critical safety systems in good working order (supporting fire pumps, medical patient care systems, elevators, smoke control, airport lighting, etc.), and the revisions proposed herein will provide the flexibility to maintain these systems in accordance with applicable safety codes and industry standards.
- *Protection of air quality.* The current restrictions on emergency RICEs require facilities to utilize less stringently regulated portable/rental generators to perform short-term projects. In contrast, EPA’s air quality rulemaking was specifically crafted to avoid such an outcome.
- *Alignment with federal air quality regulations and existing safety standards.* EPA’s RICE air quality standards, as well as the safety codes applicable to each class of emergency system, have been implemented in their current form after rigorous evaluation from stakeholders over a number of years. A similar allowance at the State level would represent best industry practices while also streamlining the compliance strategy and administrative requirements.

This allowance would provide reasonable assurance that public safety obligations can be met, resolve the current “patchwork” where different emergency RICE guidance is provided by MassDEP and EPA Region 1, simplify the compliance strategy and the associated administrative/recordkeeping activities for each emergency RICE, and would be consistent with the Commonwealth’s overall regulatory streamlining initiative (re: Executive Order 562).

In addition, MassDEP’s definition of “normal maintenance and testing procedures as recommended by the manufacturer” is inconsistent with EPA’s emergency RICE regulations that allow emergency RICEs to be “operated 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.” Under MassDEP’s language, it is not clear that emergency RICE could be operated to meet safety code compliance obligations. We recommend that MassDEP adopt EPA’s language.

The following language is proposed for addition within the amended emergency RICE provisions of 310 CMR 7.00:

Replacement language for 310 CMR 7.02(8)(i)(2) and 310 CMR 7.03(10)(a)(4)

The engine shall operate only during:

- (i) Emergency situations, as defined within 310 CMR 7.26(41);*
- (ii) Up to 100 hours per calendar year 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;*
- (iii) Up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of*

the 100 hours per calendar year for maintenance and testing provided in paragraph (ii).

Replacement language for 310 CMR 7.26(42)(d)(1)

The engine shall operate only during:

(i) Emergency situations;

(ii) Up to 100 hours per calendar year 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;

(iii) Up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in paragraph (ii).

A non-turn-back hour counter shall be installed, operated and maintained in good working order on each unit.

Response: MassDEP agrees and has added language to 310 CMR 7.02(8)(i)(2), 7.03(10)(a)(4), and 7.26(42)(d) similar to that used in EPA's RICE NESHAP regarding 100 hours per year for maintenance checks and readiness testing (or as otherwise approved by EPA) and also has added a provisions that allow emergency engines to operate for up to 50 hours per year for non-emergency situations, consistent with EPA's RICE NESHAP.

104. Comment: (DSG) MassDEP has proposed to include "readiness testing" as an allowable operating reason, which we agree is an important clarification for facilities to remain in compliance with other applicable regulations (e.g. the fire code). However, the addition of the readiness testing language may not be enough to allow some facilities to continue to operate critical equipment (in accordance with other applicable regulations) when a building loses power during planned maintenance. We propose that the following bolded language be added to 310 CMR 7.02(8)(i)2.a.

The normal maintenance and testing procedure as recommended by the **engine** manufacturer, **normal maintenance and testing procedures of any system(s) supporting or supported by the engine**, or readiness testing;

In addition to the readiness testing language, we propose that following bolded language from the definition of "Emergency Stationary RICE" in 40 CFR 63 Subpart ZZZZ and 40 CFR 60 Subpart IIII be incorporated into 310 CMR 7.02(8)(i)2.b.

periods of electrical power outage due to failure of the grid, in whole or in part, onsite disaster, local equipment failure, flood, fire or natural disaster, **or to produce power for critical networks or equipment (including power supplied to portions of a facility)**

when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted;

Response: For planned maintenance, MassDEP has added to 310 CMR 7.02(8)(i)(2), 7.03(10)(a)(4), and 7.26(42)(d) a provision that allows emergency engines to operate for up to 50 hours per year for non-emergency situations, consistent with EPA's RICE NESHAP. MassDEP has changed "grid" to "electrical supply" in 310 CMR 7.02(8)(i)(2), 7.03(10)(a)(4), and 7.26(42)(d) to account for both electrical supply from the grid and from self-generation by a facility.

105. Comment: (DSG, EH&E, Epsilon, ESS, Irwin) Please clarify that the removal of the 300 operating hour/year restriction is effective upon promulgation of the final version of these proposed updates, even if an existing Plan Approval or Operating Permit includes such restrictions, so long as the operating hour restriction within the Plan Approval or Operating Permit cites the applicable sections of 310 CMR 7.00 and not another source (e.g. an operating hour restriction proposed within a Plan Approval application in order to remain under an emission threshold).

Many facilities with existing emergency generators currently hold plan approvals limiting the operating hours for those emergency engines to 300 hours per year. Please clarify whether MassDEP would require applications from those facilities to increase the allowed number of operating hours for existing emergency generators.

Consideration should be given as to whether this will increase potential emissions for facilities and to creating easy pathways for facilities to avoid falling into unnecessary high permit categories. The 25%/50% caps could be a good mechanism for many facilities. Outreach should be made to affected facilities and enough time allowed for facilities to change their status so they will not be inadvertently brought into inappropriate permit categories such as the Operating Permit program. Consideration should be given as to how this elimination of a federally enforceable limit will impact different types of facilities.

We recommend that you also clarify the default assumption in the absence of an absolute limit, such as the current 300 hours per year, for estimating potential to emit from emergency generators. An alternative default is 500 hours per year of operation per this EPA guidance: <https://www.epa.gov/sites/production/files/2015-08/documents/emgen.pdf>

Response: The removal of the 300 hour operating restriction for emergency engines is effective upon promulgation of the final amendments. Owners of emergency engines that have plan approvals that limit operation to 300 hours per year may apply to MassDEP for an administrative amendment of the plan approval to remove the 300 hours limit. In the interim, if an actual emergency situation required the owner to operate the engine for more than 300 hours MassDEP will exercise enforcement discretion on a case-by-case basis. Owners can also choose to keep the 300 hour restriction in their permit if they so desire.

A September 6, 1995 EPA memo states that "The EPA believes that 500 hours is an appropriate default assumption for estimating the number of hours that an emergency generator could be

expected to operate under worst-case conditions. Alternative estimates can be made on a case-by-case basis where justified by the source owner or permitting authority (for example, if historical data on local power outages indicate that a larger or smaller number would be appropriate).” MassDEP agrees with EPA’s guidance for calculating the potential to emit for an emergency engine (i.e., assume 500 hours of engine operation unless there are site-specific reasons that warrant a different estimate). If owners want a further restriction in engine operating hours, they can file a 25% or 50% registration with MassDEP to limit potential emissions.

106. Comment: (Irwin) For facilities that install new emergency generators larger than one megawatt and conduct an air modeling evaluation pursuant to 310 CMR 7.26(42(d)4.c., please clarify what MassDEP’s policy would be for calculating average emissions rates in the absence of a specific limit on the number of operating hours.

Response: MassDEP would expect average emission rates to be calculated based on operating the engine for 500 hours in the absence of a specific limit on the number of operating hours. (See Response to Comment 105).

107. Comment: (Epsilon) 7.26 (40)-(45) Stack Height and Emission Dispersion. This has historically been an area of uncertainty and inconsistency in design and installation of engine stacks and DEP inspectors’ review of these stack installations. It appears that DEP has been seeking to protect all individuals including on-site workers from the engine exhaust regardless of whether this is an appropriate area for regulation. DEP regulations should provide a reasonable assurance that NAAQS will be maintained at any offsite receptors and should not regulate worker protection which more appropriately falls with the purview of OSHA for example. Emergency generators by definition operate rarely and individuals are more likely to be exposed to diesel exhaust from passing vehicles than they are from diesel engines on emergency generators. Furthermore, EPA regulations on new engines are increasingly stringent so emergency generator emissions should be less of a concern for new engines. With this in mind, we recommend that the word “restrict” be replaced with “impede” in the stack height parts of both the emergency and non-emergency engines (a narrowing of the exit diameter should be allowed, but a stack cap should not), that the two sections be consistent with respect to stack height (have identical requirements), that any sensitive receptors be defined as offsite (adjacent property with separate ownership for example). We believe that any generator should be given the option of defining stack height based on use of an EPA Guideline air quality model based on offsite impacts just as for any other source. It is reasonable to simplify this to allow default heights above the engine enclosure for outdoor units or above shorter buildings but currently there are variations on 5-10 feet above the lower or higher or various heights in the proposed amendments. These should be logical and consistent whether emergency or non-emergency engines given that non-emergency already have very stringent emission limit. It is not reasonable to require very tall stacks on emergency generators due to the fact that an inspector arbitrarily judges that they “cause a condition of air pollution.”

Response: The intent of MassDEP’s stack height and siting criteria is to use common sense measures to protect receptors from emissions (e.g., engine exhaust should not be directly under a building air intake or point toward a close by college dormitory window). These measures are

separate from any modeling exercise that would follow EPA guidelines and focus on off-site receptors. MassDEP has replaced the term “restrict” with “impede” as suggested by the commenter in the final regulations.

108. Comment: (TMLP) It is suggested that 310 CMR 7.26(42) explicitly specify that Black Start Diesel Engines be treated the same as emergency engines, consistent with the federal rule 40 CFR 63 Subpart ZZZZ (see Subpart ZZZZ Table 2c). At Cleary-Flood Generation Station, the Unit #9 combustion turbine is started-up using a Black Start Engine. This engine is used solely to startup a combustion turbine. Moreover, the Black Start Engine is the only means of starting up the combustion turbine (i.e., there is no alternative electrical startup mechanism), so it is used at every combustion turbine startup, not just when electricity is unavailable.

Each operating event for the Black Start Engine is approximately 20 minutes, and the Black Start Engine is used exclusively at initial lite-off of the combustion turbine. Annual usage is typically in the range of 35-50 hours. Moreover, the very short operating times of these engines at each startup event makes use of SCR type controls largely ineffective, as the engine basically shuts down before the SCR would reach its activation temperature.

The existing MassDEP rules do not explicitly address Black Start Engines which can cause difficulties in permitting new units and performing major maintenance on older units. Black Start Engines should be included as an applicable emission unit type under 310 CMR 7.26(42).

The following revisions to 310 CMR 7.26(42) are requested:

In the Title for this provision, add the words " and Black Start"
(42) Emergency **and Black Start** Engines and Emergency Turbines
Modify 7.26(42)(d). "Operational Requirements" to explicitly reference Black Start Engines.
Suggested language is provided below:

1. Operation and Maintenance.

An engine or turbine shall operate only during normal maintenance and testing procedures as recommended by the manufacturer, readiness testing, during an emergency, or for emergency demand response, **or as a black start engine**. A non-resettable back hour counter shall be installed, operated and maintained in good working order on each unit.

Response: Black start engine installations are typically associated with major PSD/NSR projects and/or major facilities and therefore would be subject to case-by-case plan review. Final plan approvals issued would have conditions for when black start engines can operate. Any new black engine installation can either meet the 310 CMR 7.26(42) emergency engine requirements or the non-emergency requirement, or apply for a plan approval.

109. Comment: (TMLP) It is suggested either in the 310 CMR 7.00 Definitions or in the 310 CMR 7.26(41)Definitions, a definition of "Black Start Engine" be added, and that the Definition be the same as used in 40 CFR 63 Subpart ZZZZ - namely, *Black start engine* means an engine whose only purpose is to start up a combustion turbine.

It is suggested that the MassDEP Air Regulation provisions applicable to Emergency Engines, such as 310 CMR 7.26(42), also be applied to Black Start Diesel engines, in the same manner as is done in 40 CFR 63 Subpart ZZZZ.

Response: Since MassDEP has chosen not to include black start engines with emergency engines, no definition is needed. However, a black start engine may be considered an emergency engine if it meets the requirements of 310 CMR 7.26(42). (see Response to Comment 108)

110. Comment: (TMLP) 310 CMR 7.26(43)(b) - Compression Ignition Engine ERP NO_x Emission Limit. The 310 CMR 7.26(43)(b) provision establishing an ERP NO_x limit of 0.15 lb/MWh for diesel (compression ignition) engines is much too restrictive, and TMLP believes it is impossible to achieve at this time. It is more than an order of magnitude more stringent than the EPA Subpart IIII Tier 4 compression ignition engine standard, which is a state of the art standard. In recent discussions TMLP had with engine manufacturers, no manufacturer was able to provide an engine that could achieve this MassDEP ERP NO_x Limit, or anything close it.

The current engine NO_x ERP Limit for compression ignition engines is less than half of the NO_x ERP standard for oil fired combustion turbines (= 0.34lb/MWh - see 310 CMR 7.26(43) Table 2), and about an order of magnitude more stringent than the ERP standard for oil fired boilers(= 0.15 lb/MMBtu, which is~ equivalent for 1.5 lb/MWh for a typical heat rate of 10,000 Btu/KWh).

TMLP believes that the Subpart IIII Tier 4 standard represents the most appropriate ERP NO_x limit for compression ignition engines. Further, it is suggested that this NO_x engine ERP be specified as installation of either: (a) a Subpart IIII Tier 4 Certified unit; or (b) an engine that achieves the Subpart IIII Tier 4 emission standards at applicable operating loads. Tier 4 engines incorporate state of the art emission controls for a compression ignition engine, including an SCR (typically 90% reduction) and often a CO catalyst as well.

Response: MassDEP did not propose to amend any of the ERP emissions limits, and therefore a change in emissions limits without prior proposal and public comment is beyond the scope of the current amendments. MassDEP established stringent limits for non-emergency engines to ensure that the simplified ERP certification pathway (with no upfront MassDEP plan review) does not adversely affect air quality. A NO_x emission limit of 0.15 lbs/MWh is required, which some natural gas-fired engines have been able to meet. While a compression-ignition engine currently may not be able to meet this limit, an owner who wishes to install a non-emergency compression ignition engine can apply to MassDEP for a plan approval.

MassDEP's non-emergency ERP emissions limits were based on limits in "Model Regulations for the output of Specified Air Emissions from Smaller Scale Electric Generation Resources," developed by the Regulatory Assistance Project (RAP) in 2002 under contract with the National Renewable Energy Laboratory (NREL). The RAP Rule was developed with a working group that included several state utility and air pollution regulators, representatives of the distributed resources industry, environmental advocates, and federal officials. The emission standards were considered "stretch goals" intended to push technology improvements. The NO_x emission limit

was set very low, but within the range of reasonable expectations for technology improvements at the time.

NO_x OZONE SEASON BUDGET PROGRAM – 310 CMR 7.34

111. Comment: (EPA) We support the mechanism that you propose in section 310 CMR 7.34(8) to address any exceedance of the state-wide budget of 1,799 tons of NO_x per ozone season. If this budget is exceeded, MassDEP would notify the MassNO_x facilities that exceeded their emissions budget and these facilities would be required to buy Cross State Air Pollution Rule (CSAPR) NO_x Ozone-Season allowances (2017 vintage or later) and transfer these to MassDEP.

Response: MassDEP appreciates EPA's support.

112. Comment: (EPA) Pursuant to conversations with MassDEP staff, we understand that it is MassDEP's intention to maintain the MassNO_x budget at the same level of 1,799 tons of NO_x, even if some facilities retire in the future. Furthermore, it is our understanding that the tons of NO_x allocated to these retired facilities will remain in the state-wide budget, but will not be allocated to other MassNO_x facilities. This approach is not, however, discussed in the proposed rule or the Background Document. Therefore, we recommend that MassDEP clarify its approach to retired units.

Response: MassDEP agrees and has clarified in 310 CMR 7.34(7)(c)-(d) of the final regulations that the state-wide budget will not be affected by retirements and that the emissions budget of a retired unit will not be allocated to any other MassNO_x facility. MassDEP also has amended the language of 310 CMR 7.34(4)(d) to clarify the reporting requirements for permanently retired units.

113. Comment: (EPA) MassDEP issued its proposed rule prior to EPA's September 7, 2016 issuance of the final CSAPR Update. Some changes were made from the CSAPR Update proposal to the final version of EPA's rule. MassDEP should ensure that the citations that appear in 310 CMR 7.34 are appropriate based on the final version of the CSAPR Update rule. For example, references to 40 CFR 97 subpart BBBB in section 310 CMR 7.34(2) should be changed to reference subpart EEEEE.

Response: MassDEP agrees and has updated citations to match the CSAPR Update rule in the final regulations.

114. Comment: (DSG) Within 310 CMR 7.34(7)(b): Table A, the unit designations are inconsistent between Part 75 IDs and Permit IDs. For example, Mystic Station references the permit IDs of EU4 and EU10 instead of the Part 75 IDs of MJ-1 and 7, while MBTA South Boston Power references the Part 75 IDs of A and B instead of the permit IDs of EU01 and EU02. We suggest making the table consistent for ease of understanding.

Response: MassDEP recognizes that there is a difference between the federal and state identifications (IDs) for units. The IDs MassDEP has used in the regulation are consistent with the unit IDs contained in all MassDEP-issued permits. Therefore, to retain consistency with existing permits MassDEP has not changed the unit IDs in the final regulations.

APPEALS – 310 CMR 7.51

115. Comment: (EPA) Since it is a state requirement that a person must exhaust his or her administrative remedies before requesting judicial review of a permit in state court, limiting standing in the regulations may indirectly restrict a person's opportunity to request judicial review depending on exactly how the state requirement is drafted.

In addition, although not a required element for a SIP, a state's administrative procedures for appealing air permits can have unintended consequences for CAA permitting. Specifically, section 502(b)(6) of the CAA requires a state's title V operating permit program to provide:

"Adequate, streamlined, and reasonable procedures for expeditiously determining when applications are complete, for processing such applications, for public notice, including offering an opportunity for public comment and a hearing, and for expeditious review of permit actions, including applications, renewals, or revisions, and including an opportunity for judicial review in State court of the final permit action by the applicant, any person who participated in the public comment process, and any other person who could obtain judicial review of that action under applicable law."

The EPA has interpreted this provision of Title V to require that a state's Title V operating permit program provide standing to appeal a Title V permit in state court consistent with Article III of the U.S. Constitution's standing requirements. The Fourth Circuit Court of Appeals upheld EPA's interpretation in *Commonwealth of Virginia v. Browner*, 80 F. 3d 869 (4th Cir. 1996). Since MassDEP's statutory authority under M.G.L. chapter 111, section 142B provides standing to appeal a Title V permit that is consistent with section 502(b)(6) of the Clean Air Act, and this provision is included in EPA's approval of MassDEP's State Plan to implement Title V of the Clean Air Act, EPA believes that MassDEP's final regulations must reflect this requirement.

Response: MassDEP agrees and amended the final regulation to require persons to comment on the proposed approval, including the Operating Permit, to make it consistent with section 502(b)(6) of the Clean Air Act and to assure that the air appeal regulation does not impede a person's standing to seek judicial review of an operating permit.

116. Comment: (NAIOP) Proposed 310 CMR 7.51 would establish rules for requesting an adjudicatory hearing on decisions by MassDEP on applications filed under 310 CMR 7.00. Subsection 7.51(1)(c) would exempt certain such decisions as listed in that subsection. NAIOP notes while only certain LPAs would require public notice under the new proposed 7.02(3)(h), all LPAs require applications under 310 CMR 7.00, and none are exempted under 7.51(1)(c). Accordingly, an adjudicatory hearing could be requested even for an LPA for which no public notice was issued and no comment period occurred. In those circumstances, the Department could be forced to participate in an adjudicatory hearing without having first provided an opportunity to receive and consider comments from the public.

NAIOP believes the better course would be for adjudicatory hearings to be available only for CPAs and those LPAs for which public notice is required under 310 CMR 7.02(3)(h). The

remaining LPAs are minor in potential impact and should be included within the exemptions under 7.51(1)(c).

Response: MassDEP did not make this change. LPAs have historically been subject to appeal and very few LPAs, if any, would trigger public comment under 310 CMR 7.02(3)(h). Very few LPAs are appealed, and MassDEP does not believe maintaining appeal rights for LPAs will pose an unnecessary burden. Moreover, there are other permit decisions issued pursuant to 310 CMR 7.00 that do not require a public comment that also are not exempt from the air appeal regulation.

117. Comment: (NAIOP) The proposed regulation require ten persons groups to submit comments during the public comment period in order to have a right to initiate the adjudicatory hearing, but aggrieved persons would not. NAIOP believes that the Department should also require aggrieved persons to submit comments in order to have a right to initiate an adjudicatory hearing. Due to the public notice provisions in proposed 7.02(3)(h), potential aggrieved persons will be on notice with time to provide comments. It is neither fair to applicants, nor wise for the Department, to have to address the concerns of aggrieved persons for the first time in an adjudicatory hearing. Doing so would increase the likelihood that their concerns are known, addressed and resolved during the writing of the permit. The Department has included such additional limitations elsewhere in its permitting regulations. See 310 CMR 9.17(1)(b) (a person may seek an adjudicatory hearing as an aggrieved person only if the person submitted comments), and 310 CMR 10.05(j) (aggrieved person may request adjudicatory hearing on a wetlands superseding order of conditions (SOC) only if the person participated at SOC stage). The Department can and should do the same under 310 CMR 7.00.

Response: MassDEP agrees and the final regulations require aggrieved persons to submit comments during the public comment period, if there is one, as a prerequisite for standing to request an adjudicatory hearing. This is also consistent with some of MassDEP's other programs and will satisfy EPA's request (see Response to Comment 111) to make the regulations consistent with 502(b) of the Clean Air Act.

118. Comment: (NAIOP) Proposed 7.51(1)(i) limits the issues to be adjudicated to the subject matter of the Department's decision. NAIOP believes that this provision merely states the obvious, and should go further. The issues to be adjudicated should be limited to issues that had been raised in the comments on the proposed decision. The Department has included such additional limitations elsewhere in its permitting regulations. See 310 CMR 16.05(c) (issues in an adjudicatory hearing on a recycling permit limited to issues raised in comments, unless it was not reasonably possible with due diligence, or for good cause shown). The Department can and should do the same under 310 CMR 7.00. Otherwise, even though there was a public comment period, persons or competitors could sit back and then initiate a time-consuming adjudicatory hearing over issues that should have been and could have been resolved earlier. Sound use of MassDEP resources, as well as fairness to applicants, compel such limitations on indiscriminate use of adjudicatory hearings.

Response: MassDEP agrees and has revised 310 CMR 7.51(1)(i) so that if a public comment period is held, the issues that may be raised in a request for an adjudicatory hearing are limited to matters raised during the public comment period, unless a matter could not reasonably have been

known at the time of the public comment period or for other good cause shown. This is consistent with other MassDEP programs and EPA's appeal regulations, which limit the issues to be adjudicated to those raised in the comments received.

119. Comment: (ESS) It is our opinion that this section [7.51(1)(c) regarding exemptions from appeals for certain types of MassDEP decisions] infringes upon the right of businesses to contest certain decisions made by the department in an adjudicatory setting, to allow for a neutral and independent authority to evaluate the basis for the decision. The appeals process would only permit a review by the MassDEP, the authority imposing the action, and would not allow for additional review from a neutral source, via the adjudicatory review process. Although there may not be a specific dollar amount associated with one of the above actions, there may be consequential operational or compliance costs to businesses that may result and cause irreparable harm requiring diversion of funds that would normally be used to support business growth initiatives.

Response: The regulations exempt certain types of activities under 310 CMR 7.00 from the right to request an adjudicatory hearing under 310 CMR 7.51(1) because those types of activities are not the type of activities where MassDEP has to issue a decision (e.g., notices or certifications) or they are discretionary waivers of regulatory requirements.

In addition, there are existing laws that specifically require certain MassDEP decisions to be appealed to the Courts or other jurisdictions. For example, under MassDEP's Certification of Tunnel Ventilation Systems in the Metropolitan Boston Air Pollution Control District regulation, 310 CMR 7.38, any appeal of MassDEP's decision to approve MassDOT's Tunnel Ventilation Renewal Certification must be filed in Massachusetts Superior Court. Moreover, federal law and the delegation agreement between EPA and MassDEP for the implementation of the federal Prevention of Significant Deterioration (PSD) program specifically require all appeals of permits be filed with EPA's Environmental Appeals Board. MassDEP does not have jurisdiction to handle these appeals.

The enforcement regulations at 310 CMR 7.51(3) specifically require persons to appeal an enforcement order within 10 days of the issuance of that action, while the air appeal regulations at 310 CMR 7.51(1) give persons 21 days to request an appeal of a permit decision. Therefore, appeals of enforcement orders are governed by 310 CMR 7.51(3), not 310 CMR 7.51(1). Similarly, appeals of administrative penalty assessments are governed by 310 CMR 5.00 and must be exempted from 310 CMR 7.51(1).

120. Comment: (Epsilon) With respect to the addition of a public comment period and the "clarification" of the adjudicatory appeals process, we concur with the comments made to you by e-mail from Thomas A. Mackie, Esq. on 9/20. We also generally agree with the comments made by NAIOP with respect to limitations suggested on the availability, rights to initiate, and the subject matter of hearings. We are concerned that amendments as proposed will open the door to frivolous or harassing appeals.

Response: See Responses to Comments 115 and 117 with respect to the limitations suggested on the availability, rights to initiate, and the subject matter of the hearings. MassDEP does not

believe that the amendments will open the door to frivolous or harassing appeals. MassDEP believes the air appeal regulations will have the opposite effect by providing certainty as to who has standing and the process for appealing air permit decisions. Prior to adopting the air appeal regulation, MassDEP received a number of appeals of air permit decisions that were on issues unrelated to the air permit (e.g., water and wetland issues), requested by persons who did not have standing, and/or were not filed within the 21 day appeal period. MassDEP believes that the air appeal regulation may cut down on the number of frivolous appeals because people will know that their appeal may be dismissed if it does not comply with the air appeal regulation.

121. Comment: (Thomas A. Mackie) I note that these rules are ostensibly being promulgated under E.O. 562, which was designed to streamline permitting, reduce unnecessary regulatory burden and dispose of requirements that are needlessly more stringent than federal requirements. The adjudicatory hearing provisions in these proposed rules are not consistent with that mandate. Provision of the opportunity to initiate an adjudicatory appeal/hearing by aggrieved persons and 10 citizen groups is NOT legally mandated by the Administrative Procedures Act or the Massachusetts Clean Air Act, with exception to the incorporation in the latter of appeal rights on certain federal permits. With minor exceptions not applicable here, under the General Laws and existing MassDEP regulations the only person entitled to request an adjudicatory hearing is the person whose “legal rights, duties or privileges” are determined under the permit (i.e. the permittee), and the rights of ten citizen groups and affected persons are limited to “intervention” in the adjudicatory hearing, if any, requested by that person. Thus, these are not mere “clarifications,” but a wholesale re-write of long standing rules.

The Department should provide that air plan approvals remain valid during the pendency of an appeal unless the appellant requests, and the Presiding Officer grants, a stay in effectiveness of the approval. There is no legal mandate that the effectiveness of the permit be stayed pending appeal. There is precedent to the opposite in the DEP’s RCC permit appeal rules at 310 CMR 16.50 and similarly in G.L. c. 40A governing appeal of zoning special permits. The applicant should be entitled to proceed at risk rather than giving appellants, who have a low bar, the opportunity to kill a project through delay.

The Department should make clear in a discussion document exactly what the federal law and regulations require in the form of public participation and opportunity for hearing on Department issued permits as opposed to permits that are NOT subject to such federally mandated public participation and/or adjudicatory review procedures. See, in particular, the reference in M.G.L. c. 111, § 142B to the federal Clean Air Act, section 502 (b) (6), 42 U.S.C. section 7661a (b) (6). You should be very clear about where you are including public notice provisions to conform the Massachusetts SIP to federal requirements for same and areas where the public participation and perhaps further review are being provided solely in the discretion of the MassDEP. You should also make clear when the Massachusetts Clean Air Act requires the Department to provide an opportunity for appeal and the standing requirements thereunder.

Finally, I anticipate, perhaps wrongly, that the “tailoring rule” CO2 thresholds being added to the rules (as confirmed today) may be tightened after public comment, particularly in light of the new Executive Order and the Kain decision. In combination with the liberalization on initiation

of adjudicatory hearings, this should give the Department (and the Administration) pause. What may sound like a great idea today, may turn around to haunt the Department in the future.

Response: The final air appeal regulation does not give intervenors standing to appeal. The regulations require aggrieved persons or 10 person groups to submit written comments during the public comment period as a prerequisite to gain standing to request an adjudicatory hearing at MassDEP.

Although the Administrative Procedures Act, M.G.L. c. 30A is silent on giving aggrieved persons and 10 person groups standing to request an adjudicatory hearing, the broad language in the statute give MassDEP the authority to adopt its own adjudicatory hearing regulations which may provide standing to parties other than the applicant. Specifically M.G.L. c. 30A, § 9 gives MassDEP broad authority to adopt adjudicatory proceeding regulations that include other requirements besides the procedures explicitly required. Therefore, MassDEP is relying on this broad authority to provide standing to aggrieved persons and 10 person groups that submit written comments during the public comment period, where a public comment period is provided.

Allowing persons who comment on the permit decision to have standing to appeal the decision is consistent with MassDEP's other program regulations. For example, the Waterways regulations at 310 CMR 9.17 allow aggrieved persons and ten persons groups to request an adjudicatory hearing, and the Recycling, Composting and Conversion permit regulations at 310 CMR 16.03 et seq. allow aggrieved persons, ten persons groups and municipalities to request an adjudicatory hearing.

In addition, M.G.L. c. 111, § 142B explicitly allows "any person who participates in any public participation process required by the federal Clean Air Act, section 502(b)(6)¹, 42 U.S.C. section 7661a (b)(6), ...or any regulation enacted thereunder [operating permit regulation 310 CMR 7.00: Appendix C] with respect to the department's final action on operating permits governing air emissions, and who has standing to sue with respect to the matter pursuant to federal constitutional law, may initiate an adjudicatory hearing pursuant to chapter thirty A, and may obtain judicial review, pursuant to chapter thirty A, of a final decision therein." EPA has interpreted this provision of Title V to require that a state's Title V operating permit program must provide all parties who comment on draft permits during a public comment period standing to request an agency hearing and to appeal a Title V permit in state court consistent with Article III of the U.S. Constitution's standing requirements. The Fourth Circuit Court of Appeals upheld EPA's interpretation in Commonwealth of Virginia v. Browner, 80 F. 3d 869 (4th Cir. 1996).

¹ § 502(b) The administrator shall promulgate...regulations establishing the minimum elements of a permit program to be administrated by any pollution control agency. These elements shall include each of the following:

(6)...and including an opportunity for judicial review in State court of the final permit action by the applicant, any person who participated in the public comment process, and any other person who could obtain judicial review of that action under applicable law.

Since MassDEP's statutory authority under M.G.L. c. 111, §142B, provides standing to appeal a Title V permit that is consistent with section 502(b)(6) of the Clean Air Act, and this provision is included in EPA's approval of MassDEP's State Plan to implement Title V of the Clean Air Act, EPA provided comments that it believes that MassDEP's final regulations must reflect this requirement. While this provision requires MassDEP to provide standing to all parties who comment on Operating Permits within the public comment periods required under 310 CMR 7.00: Appendix C, MassDEP has committed to adopting regulations that establish clear, rational and orderly regulations for adjudicatory hearings regarding all air plan application decisions under the air regulations. *See also In the Matter of Palmer Renewable Energy, LLC*, Final Decision, Docket Nos. 2011-021 & 022 (September 11, 2012).

MassDEP also believes that these regulations are consistent with the streamlining efforts required by Executive Order 562 because the regulations are intended to clarify procedures for requesting an adjudicatory hearing for an air permit decision and streamline procedures for applicants as well as for other parties. In the absence of these regulations, there have been a number of appeals during which many hours have been spent litigating over the date on which the appeal period began, the process for delivery of notice of the permit decision and the standing of parties to request hearings. The clarity and specificity of the regulations will reduce the time that all parties need to spend in litigation of procedural issues. In addition, the requirement for all parties to comment prior to their right to request a hearing will ensure that their concerns are stated early in the process so that they may be addressed prior to issuing the final permit. This should minimize the number of issues that would remain to be adjudicated at an agency hearing.

As for the issue of when a MassDEP approval of a proposed air plan should be stayed, MassDEP is continuing its long-standing policy of staying construction of a project during the pendency of an adjudicatory hearing until a final decision is issued by the Commissioner. This policy is based on the language of the regulations in 310 CMR 7.02(1)(b), which prohibits construction prior to obtaining MassDEP's approval of an application. MassDEP follows EPA Guidance documents for federal PSD Permits regarding activities that are considered construction of the project and those activities that may proceed prior to the Commissioner's final decision, such as site clearing and other pre-construction activities. After issuance of the Commissioner's final decision, project construction is allowed to proceed.

MassDEP agrees that the regulations should be clear on when federal and state regulations require public comment on a permit before it is issued; however, 310 CMR 7.52 is not the appropriate location for this clarification. MassDEP is simultaneously promulgating amendments to 310 CMR 7.02 that require a public comment period on draft plan approvals for non-major comprehensive plan approvals prior to issuing a decision. The final regulations also define the federally required process for posting a notice of public comment and for having a public comment period. These amendments are proposed to conform to requirements of federal law. See the Responses to Comments 9 and 10.

At this time, MassDEP is not making the thresholds for GHGs more stringent than the proposed thresholds.

Attachment 4 Background Document on Proposed Amendments to Municipal Waste Combustor Regulations, May 2013



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

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PROPOSED AMENDMENTS TO

THE CLEAN AIR ACT SECTION 111(d)/129 STATE PLAN, INCLUDING THE MUNICIPAL
WASTE COMBUSTOR REGULATION 310 CMR 7.08(2)

&

THE CLEAN AIR ACT SECTION 110 OZONE STATE IMPLEMENTATION PLAN, INCLUDING
THE MUNICIPAL WASTE COMBUSTOR REGULATION 310 CMR 7.08(2);
THE NO_x REASONABLY AVAILABLE CONTROL TECHNOLOGY REGULATION 310 CMR 7.19;
AND THE DELETION OF 310 CMR 7.27, 7.28 AND 7.50, AND ASSOCIATED CHANGES TO 310
CMR 7.02, 7.29, 7.00: *APPENDIX A*, AND 7.00: *APPENDIX B*

&

CLEAN AIR ACT SECTION 110 STATE IMPLEMENTATION PLANS,
INCLUDING THE DEFINITIONS AT 310 CMR 7.00

May 2013

Contents

A.	SUMMARY	3
B.	BACKGROUND	3
1.	LARGE MWC EMISSIONS GUIDELINES (EGs) AND THE MWC STATE PLAN	3
2.	MWC RACT AND THE OZONE STATE IMPLEMENTATION PLAN (SIP)	4
C.	DESCRIPTION OF THE PROPOSED AMENDMENTS	5
1.	MWC EGs.....	5
2.	NO _x RACT.....	5
3.	EFFECTIVE DATES, APPLICATION DEADLINES AND IMPLEMENTATION DEADLINES	9
4.	DELETING THE MERCURY WAIVER	10
5.	ADDING DEFINITION OF NAAQS	10
6.	DELETING OUTDATED REGULATIONS	10
D.	DETAILS OF PROPOSED AMENDMENTS TO THE MWC REGULATION AND NO _x RACT REGULATION	11
1.	INCORPORATING THE REVISED FEDERAL EGs IN 310 CMR 7.08(2).....	11
2.	INCORPORATING ADVANCES IN MWC NO _x RACT	12
3.	STREAMLINING 310 CMR 7.08(2)	12
4.	CORRECTING TYPOGRAPHIC AND EDITORIAL ERRORS.....	13
E.	AIR QUALITY IMPACTS.....	13
F.	IMPACT ON SMALL BUSINESS	13
G.	IMPACT ON CITIES AND TOWNS	13
H.	AGRICULTURAL IMPACTS	14
I.	MASSACHUSETTS ENVIRONMENTAL POLICY ACT (MEPA).....	14
J.	IMPACTS ON OTHER PROGRAMS – AIR TOXICS	14
K.	PUBLIC PARTICIPATION	14
	APPENDIX A	16

A. SUMMARY

The Massachusetts Department of Environmental Protection (MassDEP or Department) is proposing amendments to two sets of regulations that apply to municipal waste combustors (MWCs). The first set of changes make Massachusetts regulations consistent with federal regulations, as explained in section B.1. and C.1. below, and make the federal provisions state-enforceable. The second set of changes lowers the allowable level of nitrogen oxides (NO_x) that can be emitted by MWCs in Massachusetts, consistent with MassDEP's finding that current reasonably available control technology (RACT) has improved to allow greater control of NO_x emissions, as explained in sections B.2. and C.2. below. In addition, MassDEP is proposing to add a definition for National Ambient Air Quality Standards (NAAQS) as explained in section C.5. below, and to delete outdated regulations as explained in section C.6. below.

B. BACKGROUND

1. LARGE¹ MWC EMISSIONS GUIDELINES (EGs) AND THE MWC STATE PLAN

The Clean Air Act Amendments of 1990 (CAA) direct the United States Environmental Protection Agency (EPA) to periodically review and, if appropriate, revise regulations to control air pollution from municipal solid waste (MSW) incineration units. Pursuant to §§111(d) and 129 of the CAA, EPA required states to submit a Municipal Waste Combustor State Plan (MWC State Plan) for implementing EPA's 1995 Emissions Guidelines (EGs). The MWC State Plan must contain a number of elements, including regulations for MWCs and a list of facilities subject to the MWC State Plan. On August 21, 1998, MassDEP promulgated a *Municipal Waste Combustors* regulation at 310 CMR 7.08(2), which included emission limitations and requirements at least as stringent as those contained in the 1995 EGs. MassDEP then promulgated minor revisions to 310 CMR 7.08(2) in 2001 ("the 2001 MWC regulation") and submitted the regulations as part of its MWC State Plan to EPA on November 16, 2001. On October 9, 2002, EPA approved the Massachusetts MWC State Plan for implementing and enforcing provisions for existing large MWC units that were at least as protective as the federal EGs.

On May 10, 2006, EPA promulgated amendments to *Emissions Guidelines and Compliance Times for Large Municipal Waste Combustors That are Constructed on or Before September 20, 1994* in the Code of Federal Regulations (CFR) Title 40 Part 60 Subpart Cb (40 CFR 60 subpart Cb), amending the original Emissions Guidelines (EGs) promulgated on December 19, 1995.

The amended EGs reflect the performance levels being achieved by existing MWC units at the time EPA proposed the EGs in 2005. EPA's amendments to the EGs revise: (1) previously established particulate matter, cadmium, lead and mercury emission limits, and dioxin/furan emission limit for facilities with electrostatic precipitators (ESPs); (2) compliance testing and monitoring provisions; and (3) operating practices.

Now that EPA has updated its EGs for MWCs, MassDEP must amend its MWC regulations to incorporate EPA's 2006 EGs so that the state MWC regulations are at least as stringent as the 2006 EGs.

The amended EGs in 40 CFR 60 subpart Cb at 60.39b(h) state, "... all designated facilities ... shall be in compliance with all of the guidelines ... and the revised testing provisions ... no later than May 10,

¹ "Large MWCs" are those with the capacity to combust more than 250 tons of MSW per day. "Small MWCs" are those with the capacity to combust at least 35, but no more than 250, tons of MSW per day.

2011.”² That means that all large MWC facilities must meet the 2006 EGs. The amended EGs are currently federally enforceable. MassDEP cannot enforce the amended EGs, since they have not yet been incorporated in Massachusetts regulations and the MWC State Plan. In addition, because the revised provisions of the amended EGs have not yet been incorporated into Massachusetts regulations and the MWC State Plan, the MWC State Plan is not at least as protective as the amended EGs as required under the CAA.

At this time, MassDEP is proposing to amend its existing 2001 MWC regulation to incorporate EPA’s revised 2006 EGs for large MWCs. Once finalized, MassDEP will submit the amended regulations to EPA as a modification to MassDEP’s approved Massachusetts MWC State Plan, in accordance with §§111(d) and 129 of the CAA. In addition, MassDEP is proposing to remove the closed Fall River MWC, which ceased operation in June 1999, from the list of existing Massachusetts MWC facilities subject to the MWC State Plan.³ All of the other sections of the MWC State Plan have previously undergone public comment and hearing and have been approved by EPA. Therefore, since the Department is not proposing amendments to other MWC State Plan sections, it is only taking comments on the proposed amendments to the 2001 MWC regulation and deletion of the Fall River MWC from the list of existing Massachusetts MWC facilities subject to the MWC State Plan. See Sections C and D below for a description of proposed amendments to the 2001 MWC regulation, and see Appendix A for the text of the proposed amendments.

2. MWC RACT AND THE OZONE STATE IMPLEMENTATION PLAN (SIP)

The 1990 CAA, §182(f), requires states to adopt RACT⁴ for all major stationary sources of NO_x. In 1999, EPA approved 310 CMR 7.08(2) *Municipal Waste Combustors* and 310 CMR 7.19 *Reasonably Available Control Technology (RACT) for Sources of Oxides of Nitrogen (NO_x)*, subsection (9) *Municipal Waste Combustor Units* as components of the Massachusetts ozone SIP containing NO_x limits representing then-current RACT for MWCs.

MassDEP has reviewed its RACT requirements for purposes of the 1997 and 2008 updates to the ozone NAAQS to determine if existing NO_x controls on the MWC category still constitute RACT and whether it is cost effective to further reduce NO_x emissions from existing MWCs. The analysis concluded that RACT for MWCs needed to be revised.

At this time, MassDEP is proposing to amend the existing NO_x emission standards contained in its regulation for large MWCs (at 310 CMR 7.08(2)) and its regulation for small MWCs (at 310 CMR 7.19(9)) to incorporate the revised NO_x RACT limits. Once finalized, MassDEP will submit the amended regulations to EPA to be incorporated into the Massachusetts ozone SIP in accordance with §110 of the CAA. See Sections C and D below for a discussion of the proposed amendments to the regulations, and see Appendix A for the text of the proposed amendments.

² Emission tests conducted after May 10, 2011 must demonstrate compliance with the revised provisions.

³ Removing the closed Fall River MWC from the list of existing MWC facilities subject to the MWC State Plan does not allow a new incinerator to open without first applying for and receiving MassDEP construction approval. In addition, the current Massachusetts Solid Waste Master Plan prohibits any new MWC incinerators in Massachusetts.

⁴ EPA has defined RACT as: “the lowest emission limitation that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility” (44 FR 53762; September 17, 1979).

C. DESCRIPTION OF THE PROPOSED AMENDMENTS

1. MWC EGs

In order to incorporate the revised federal EGs into 310 CMR 7.08(2), the pollutants and emission limits in the following Table are proposed to be revised. In addition, operating practices and compliance testing and monitoring provisions are proposed to be revised to align with the federal EGs as detailed in section D.1. below.

Pollutant (milligram per dry standard cubic meter, corrected to 7% oxygen (mg/dscm @ 7% O ₂ , except as indicated)	Old limit	Revised limit
Particulate matter	27	25
Cadmium	0.040	0.035
Lead	0.440	0.400
Dioxin/Furan with electrostatic precipitator (nanogram/dscm @ 7% O ₂)	60	35
Mercury in any quarterly test	0.080	0.050

MassDEP is seeking comment on these proposals.

2. NO_x RACT

MassDEP's RACT analysis concluded that RACT for MWCs needed to be revised based on technological advances, on New Jersey's current NO_x RACT standard and Connecticut's NO_x emission standards for MWCs, and on existing NO_x emissions and approvals⁵ for certain Massachusetts MWCs.

Current NO_x emission standards

The Table below shows NO_x emission standards currently effective for MWCs under Massachusetts, federal, and other state regulations, and proposed under Massachusetts regulations.

⁵ Existing approvals can be more stringent than existing regulations for a number of reasons, typically resulting from review of equipment upgrade applications or as an outcome of an enforcement action.

MWC type	Regulatory Citations and MWC NO_x Emission Standards (daily average parts per million by volume dry basis (ppmvd) corrected to 7% oxygen (O ₂) ^a)							
	310 CMR 7.19(9)		310 CMR 7.08(2)		40 CFR 60 Subpart Cb (large MWCs)	40 CFR 62 Subpart JJJ (small MWCs)	Regulations of Connecticut State Agencies 22a-174-38	New Jersey Administrative Code 7:27- 19.12
	Current	Proposed	Current	Proposed				
Mass Burn Waterwall constructed on or before December 31, 1985	349 (= 0.6 pounds per million British thermal units (lb/mmBtu)) (hourly average)	See regulation 310 CMR 7.08	205	150	205	No sources in these categories exist in MA	200	150
Mass Burn Waterwall constructed after December 31, 1985							177	
Refuse- Derived Fuel Stoker			250	146	250		146	n/a
Mass Burn Refractory		125	205	See regulation 310 CMR 7.19	No limit	350	177	

^a All NO_x parts per million smokestack concentrations in this document are corrected to an oxygen level of 7%.

Technological advances

Due to advances in technology, the ability to control NO_x emissions from MWCs has improved. In particular, the use of selective non-catalytic reduction (SNCR) and optimization of combustion and emissions controls allow MWCs to operate at lower NO_x levels than in the past.

SNCR is a chemical process in which an ammonia or urea reagent is injected in a boiler to chemically convert NO_x created during combustion into nitrogen gas and water vapor. SNCR performance depends on factors including, for example, flue gas temperature, residence time for the reagent and flue gas, amount of reagent injected, reagent distribution, uncontrolled NO_x level and carbon monoxide and oxygen concentrations.

Optimization of existing SNCR air pollution control systems can often result in additional emission reductions at relatively low capital cost. Control optimization may include applying computational fluid dynamic modeling to determine better distribution of reagent or addition of reagent injection ports.

New Jersey's NO_x RACT limit for Mass Burn Waterwall MWCs

On April 20, 2009, New Jersey adopted a MWC NO_x RACT emission standard of 150 ppmvd for MWCs equivalent to Massachusetts' "Mass Burn Waterwall" MWC category. New Jersey has already demonstrated in its rulemaking process that a NO_x emission limit of 150 ppmvd is feasible for Mass Burn Waterwall MWCs through use of RACT. MassDEP is therefore proposing a NO_x RACT emission standard that is at least as stringent as 150 ppmvd for these MWCs.

Current NO_x Emissions and Connecticut's NO_x limit for Refuse-Derived Fuel Stoker MWCs

Approvals and permits of the three large refuse-derived stoker MWC units at SEMASS in Rochester, MA contain daily NO_x emission limits equivalent to 151, 151 and 180 ppmvd NO_x, which are more stringent than required by the existing Massachusetts and federal regulations indicated in the above chart.

On October 26, 2000, Connecticut adopted a MWC NO_x emission standard of 146 ppmvd for a MWC equivalent to Massachusetts' "Refuse-Derived Fuel Stoker" MWC category starting May 1, 2003. Since this Connecticut facility has already demonstrated⁶ that a NO_x emission limit of 146 ppmvd is reasonably achievable for Refuse-Derived Fuel Stoker MWCs, MassDEP must propose a NO_x RACT emission standard that is at least as stringent as 146 ppmvd for these types of MWCs in Massachusetts.

Current NO_x Emissions and Approvals for Mass Burn Refractory MWCs

Approvals and permits of the small mass burn refractory MWCs in Pittsfield, MA and Agawam, MA contain daily NO_x emission limits of 192 and 167 ppmvd NO_x, which are more stringent than the existing NO_x emissions limits required by the Massachusetts and federal regulations indicated in the above chart. In addition, the facilities are subject to 365-day rolling average limits of 122 and 137 ppmvd NO_x, respectively. As explained by the Agawam facility's owner, "mass burn refractory units ... by design emit relatively low NO_x through combustion controls and flue gas recirculation, and they typically operate in a range of about 120+ ppm." The following factors were considered to propose a NO_x RACT level for these units:

- The low NO_x emission limits in these approvals and permits, and the emissions from the Agawam MWC, demonstrate that it is feasible for small MWCs in Massachusetts to meet a daily emission standard below the NO_x RACT emission standards of 146 and 150 ppmvd proposed for other types of Massachusetts MWCs.

⁶ See NO_x emission data at http://www.crra.org/pages/emiss_mc_1.htm#nox

- No Mass Burn Refractory MWC that has retrofitted NO_x controls was found in EPA's RACT/BACT/LAER Clearinghouse⁷; therefore, there is no evidence that add-on NO_x controls represent RACT for this type of MWC.

Therefore, MassDEP proposes 125 ppmvd as NO_x RACT for Mass Burn Refractory MWCs, based on the NO_x emission data from the Agawam MWC.

Proposed NO_x RACT

Based on technological advances, on the currently effective New Jersey NO_x RACT and Connecticut emission standards for MWCs, and on existing NO_x emissions and emission standards for certain Massachusetts MWCs, MassDEP is proposing revised daily NO_x RACT emission limits of 150 ppmvd for Mass Burn Waterwall MWCs, 146 ppmvd for Refuse-Derived Fuel Stoker MWCs, and 125 ppmvd for Mass Burn Refractory MWCs. Proposing lower MWC NO_x RACT emission limits will set a precedent for the adoption of more stringent NO_x emission limits in upwind states whose NO_x emissions are transported to Massachusetts, where they contribute to the formation of ozone in Massachusetts.

For ease of implementation, MassDEP is proposing to incorporate the NO_x RACT limit for large MWCs into 310 CMR 7.08(2), rather than 310 CMR 7.19, so that all of the emission limits for large MWCs will be in a single regulation.

Two MWC facilities each have three small MWC units in Massachusetts. Since 310 CMR 7.08(2) applies only to large MWC units,⁸ MassDEP is proposing to incorporate the NO_x RACT limit for small MWCs into 310 CMR 7.19(9).

It is possible that individual MWCs may have site-specific conditions that make achieving the proposed NO_x emission limit technologically or economically infeasible. Therefore, MassDEP is proposing to add an option allowing owners of large MWCs who believe they cannot comply with the revised NO_x RACT limit to apply for a source specific alternative NO_x limit, using the same procedures currently specified in 310 CMR 7.19 and available to small MWCs. If the required technological and economic feasibility evaluation is submitted, an alternative to the proposed NO_x RACT limit may be approved. However, to ensure NO_x emissions do not exceed an upper "backstop" limit, the regulation proposes that an alternative NO_x limit can be no greater than 185 ppmvd, lower than the federal EGs NO_x limit of 205 ppmvd included in the current 310 CMR 7.08(2). Feedback submitted by MWC owners as part of the stakeholder process to develop this proposed regulation (see "Public Participation" below) indicated that all MWCs in Massachusetts could reduce NO_x emissions to at least 185 ppmvd.

MWCs may utilize equipment that uses ammonia or urea to control NO_x emissions. To minimize any ammonia (or urea that has converted to ammonia) that "slips" by a control device unused, the department is considering two alternatives. One alternative would require MWC units that use ammonia or urea injection for NO_x control to:

- conduct ammonia optimization testing,
- submit a report to MassDEP correlating NO_x emissions and ammonia slip, and
- propose an ammonia emission limit that the Department:

⁷ See <http://cfpub.epa.gov/RBLC/>

⁸ The small MWCs in Pittsfield and Agawam were required, through Administrative Consent Orders ACO-WE-99-9001-27-SEP and ACO-WE-03-7001-SEP, to meet the 205 ppmvd NO_x limit in 310 CMR 7.08 as in effect on August 21, 1998 and April 26, 2002, respectively. The Consent Orders do not require the small MWCs to comply with any future amendments to 310 CMR 7.08. However, this limit has been superseded in the facilities' permits by NO_x emissions limits of 192 and 167 ppmvd NO_x, as determined through MassDEP's review and approval of applications submitted by the MWCs located in Pittsfield and Agawam.

- will review,
- may modify in a draft approval published for public comment, and
- will finalize in an approval or disapproval.

The other alternative would allow each facility to choose between conducting optimization testing or complying with a presumptive ammonia limit. The Department is soliciting comment on whether to include such a presumptive ammonia limit, and, if so, what that value should be. Natural gas-fired power plants in Massachusetts have ammonia limits as low as 2 ppmvd, while some Massachusetts MWC units have an existing ammonia limit of 10 ppmvd in conjunction with complying with the current 205 ppmvd NO_x limit. The specific equipment MWCs use to comply with a lower NO_x RACT limit could result in a range of outcomes, from MWCs that are able to eliminate use of ammonia and urea by reducing the formation of NO_x to begin with, to others that may need to increase use of ammonia and urea.

The deadlines for ammonia testing and the associated submittals would be specified in the approval issued by the Department (see “Effective Dates, Application Deadlines And Implementation Deadlines” below for discussion of Department approvals).

Lastly, the current 310 CMR 7.08(2) includes an option allowing the NO_x emissions at facilities with more than one MWC unit to be averaged, while keeping the average below a NO_x limit (which varies by the type of MWC) of either 185 or 230 ppmvd. MassDEP is proposing to delete the NO_x averaging option, or, as an alternative, replace the current 185 and 230 limits with a limit equal to the proposed revised NO_x RACT limit for that type of MWC. Feedback received from MWC owners indicates that all the MWC units expected to be able to achieve a revised NO_x limit expect to do so at every unit at the facility, therefore making the averaging provision unnecessary.

MassDEP is seeking comment on these proposals.

3. EFFECTIVE DATES, APPLICATION DEADLINES AND IMPLEMENTATION DEADLINES

The small MWCs are expected to be able to comply with the revised NO_x RACT limit using currently approved equipment, and, if so, would be required to notify the Department within a month of the regulation being promulgated, and comply with the revised NO_x RACT limit within three months of the regulation being promulgated. If the small MWCs instead choose to install new air pollution control equipment to comply with the revised NO_x RACT limit, they would be required to submit a 310 CMR 7.19 emission control plan (ECP) application within six months of the regulation being promulgated and comply with the revised NO_x RACT limit within a year of receiving MassDEP approval of the ECP application, but in no case later than 2 years after the regulation being promulgated.

As indicated in section B.1., the large MWCs are already required to comply with the revised EGs; therefore, the revised EGs provisions being incorporated in 310 CMR 7.08(2) are proposed to take effect upon promulgation of the 310 CMR 7.08(2) amendments. However, the large MWCs will need to apply for a new 310 CMR 7.08(2) ECP approval within six months of the regulation being promulgated in order to incorporate the revised federal EGs limits. This application would also be used to obtain approval of any new air pollution control equipment needed to comply with the revised NO_x RACT limit. Large MWCs would be required to comply with the revised NO_x RACT limit within a year of receiving MassDEP approval of the ECP application, but in no case later than 2 years after the regulation being promulgated.

MassDEP is seeking comment on these proposed processes and timelines.

4. DELETING THE MERCURY WAIVER

In order to streamline the MWC regulations, MassDEP is proposing to delete the Limited Waiver from Mercury Limit section of the MWC regulations that is no longer available to the MWCs.

The “Limited Waiver from Mercury Limit” at 310 CMR 7.08(2)(g)4. resulted from a Settlement Agreement between MassDEP and the Integrated Waste Services Association (IWSA), dated April 30, 2001. Under the Limited Waiver section, MWCs using ESPs could apply for a waiver from the mercury emission limit. However, the provisions of 310 CMR 7.08(2)(g)4. have limited effect, as follows. Under 310 CMR 7.08(2)(g)4.e., Extension of the Mercury Waiver, “A petition to the Department for the extension of a limited waiver beyond the December 31, 2003 deadline may be submitted by plants using electrostatic precipitators no later than August 1, 2003. The Department may grant a maximum two year extension.” Therefore, the latest date on which such waiver could remain in effect would be December 31, 2005.

Because the time by which a MWC could apply for a limited waiver has passed, and the provision is no longer applicable, MassDEP is proposing to delete 310 CMR 7.08(2)(g)4. in its entirety from the MWC regulations.

MassDEP is seeking comment on this proposal.

5. ADDING DEFINITION OF NAAQS

310 CMR 7.00 uses the term National Ambient Air Quality Standards (NAAQS) but does not define the term or indicate to which version of the standards the air regulations refer. EPA has indicated that in order for EPA to approve MassDEP’s *Certification of State Implementation Plan (SIP)* with respect to the 1997 and 2006 particulate matter NAAQS, MassDEP must, by September 2013, add a definition of NAAQS that includes a calendar date, to make clear to which NAAQS version MassDEP’s regulations refer.

MassDEP is proposing to add a definition of “NAAQS” explicitly listing the date the NAAQS were last revised (December 14, 2012). The new definition of NAAQS has the effect of MassDEP only being able to implement and enforce NAAQS adopted by EPA on or before December 14, 2012. MassDEP will need to amend the date in the definition of NAAQS in the future when EPA adopts new NAAQS or updates existing NAAQS. This approach is very similar to the approach MassDEP has taken in referring to the federal MWC EGs in 310 CMR 7.08(2), as discussed elsewhere in this document.

MassDEP is seeking comment on this proposal.

6. DELETING OUTDATED REGULATIONS

MassDEP is proposing to delete three regulations that are no longer in effect: 310 CMR 7.27 *NOx Allowance Program*, 310 CMR 7.28 *NOx Allowance Trading Program* and 310 CMR 7.50 *Variances*. This proposal is consistent with MassDEP’s broader effort to streamline regulations by eliminating obsolete and redundant requirements (see www.mass.gov/dep/about/priorities/regreform.htm).

310 CM 7.27 was superseded by 310 CMR 7.28, which was itself superseded by 310 CMR 7.32 *Massachusetts Clean Air Interstate Rule (Mass CAIR)*, which is still in effect. Citations to 310 CMR 7.27 and 7.28 are proposed to be deleted, and updated to 7.32 where appropriate, throughout 310 CMR 7.00.

310 CMR 7.50's origins are in a 1972 Department of Public Health, Division of Environmental Health, Bureau of Air Quality Control (DPH) "Regulation 50. Variances" that provided the right to apply for a one year variance from the application of DPH's regulations. In 1974, DPH included a sunset provision so that any variance granted did not extend beyond May 31, 1975, or such later date as may be prescribed by federal law. After 1974, the variance provision was included in MassDEP's general air regulations at 310 CMR 7.50. Since the regulation does not allow variances to extend beyond May 31, 1975, and federal law has not extended that date, MassDEP is no longer allowed to grant variances from the air regulations under this provision. Moreover, individual state and federal regulations include processes for requesting alternatives for testing, recordkeeping and monitoring from EPA and flexibility in achieving various emission limits. These provisions will remain in effect regardless of whether 310 CMR 7.50 is removed from the air regulations. Therefore, MassDEP is proposing to delete 310 CMR 7.50 *Variances* from the air regulations.

MassDEP is seeking comment on this proposal.

D. DETAILS OF PROPOSED AMENDMENTS TO THE MWC REGULATION AND NO_x RACT REGULATION

1. INCORPORATING THE REVISED FEDERAL EGs IN 310 CMR 7.08(2)

- Numerous provisions in 310 CMR 7.08(2) cite the date of federal amendments to the EGs, and would be updated to refer to the most recent May 10, 2006 amendment date.
- 310 CMR 7.08(2)(f)1.b. would be amended to provide the same exemption from compliance with combustor load and particulate matter control device operating parameter limits preceding and during mercury testing, as the existing regulation already provides for dioxin/furan testing, and to allow exemption from compliance with average mass carbon feed rate limits during mercury and dioxin/furan testing.
- 310 CMR 7.08(2)(f)2. would be amended to revise the existing particulate matter, cadmium and lead emission limits, and the dioxin/furan emission limit for facilities with ESPs. The existing dioxin/furan emission limit for facilities with fabric filters, and existing opacity, mercury and acid gas limits remain unchanged. Although the mercury emission limit in 40 CFR 60.33b(a)(3) was revised from 0.080 to 0.050 mg/dscm, the annual Massachusetts limit is already more stringent than the federal standard at 0.028 mg/dscm. Therefore, the Department is proposing no change to the existing annual mercury emission limit.
- 310 CMR 7.08(2)(f)6.b., (h)11., (i)1., and (i)1.h. would be amended to adopt procedures and associated recordkeeping, notification and reporting provisions for occasions when control room operators provisionally certified under the American Society of Mechanical Engineers (ASME) *QRO-1 Standard for the Qualification and Certification of Resource Recovery Facility Operators* process may perform duties ordinarily restricted to QRO Certified operators and shift supervisors.
- 310 CMR 7.02(2)(g)1.d. and (h)4.e. would be amended and 310 CMR 7.02(2)(g)3.d. would be added to incorporate procedures for calculating 8-hour block average carbon or equivalent usage rates where carbon injection (or equivalent) is used to comply with dioxin/furan and mercury emission limits.
- 310 CMR 7.08(2)(g)2. would be amended to revise the maximum mercury emission limit in any quarterly test from 0.080 to 0.050 mg/dscm. Note that the existing annual mercury standard in

310 CMR 7.08(2) is 0.028 mg/dscm and is not proposed to be amended. The average of the quarterly tests may be no greater than the annual limit of 0.028 mg/dscm, while emissions of any single quarter's test can be no higher than the quarterly limit (now proposed to be 0.050 mg/dscm).

- 310 CMR 7.08(2)(g)2., (h)6. and 7., (i)1.a. and c. and (i)2.a. would be amended, and 310 CMR 7.08(2)(g)1.e., (g)7., 8. and 9., (h)2.i., j. and k., (h)5.e. and f., and (i)3. would be added, to reflect newly available compliance options and related notification, recordkeeping and reporting for continuous particulate matter, mercury, lead, cadmium and hydrogen chloride emissions monitoring and continuous automated mercury and dioxin/furan sampling, in lieu of stack testing using EPA reference methods required under the current regulation.
- 310 CMR 7.08(2)(g)5.a. would be deleted as unnecessary due to the revised more stringent EPA emissions data capture requirements.
- 310 CMR 7.08(2)(h) and 310 CMR 7.08(2)(i) (introductory paragraphs) would be amended to incorporate the recordkeeping and reporting requirements of the federal EGs by reference.
- 310 CMR 7.08(2)(j)1. and 6. and (k) would be amended to revise obsolete deadlines for applying for an ECP approval and complying with the revised EGs.

2. INCORPORATING ADVANCES IN MWC NO_x RACT

- 310 CMR 7.08(2)(f)3. and 310 CMR 7.19(9)(a) would be amended to revise the existing MWC NO_x emission limits of 205 ppmvd and 0.6 lb/mmBtu to revised NO_x RACT limits of 150, 146 or 125 ppmvd, depending on the type of MWC.
- 310 CMR 7.08(2)(f)3. and (k) and 310 CMR 7.19(2)(b) and (9)(a) would be amended to revise the existing dates for complying with the revised NO_x RACT limit.
- 310 CMR 7.08(2)(k) would be amended to add a provision allowing large MWCs that believe they cannot comply with the revised NO_x RACT limit to apply for a source specific alternative NO_x limit, using the same procedures currently specified in 310 CMR 7.19.
- 310 CMR 7.08(2)(f)4. would be amended to remove the current NO_x averaging provisions, and replace them with ammonia provisions applicable to large MWC units that use ammonia or urea injection for NO_x control.
- 310 CMR 7.19(1)(c), (2)(b), (3)(a) and (9) would be amended to clarify that large MWC NO_x emission limits are in 310 CMR 7.08(2), not in 310 CMR 7.19.
- 310 CMR 7.19(9)(c) would be amended to add ammonia provisions applicable to small MWC units that use ammonia or urea injection for NO_x control.

3. STREAMLINING 310 CMR 7.08(2)

- 310 CMR 7.08(2)(g) would be amended and (g)4. would be deleted in its entirety to remove an obsolete provision that allowed for a limited waiver from the mercury emission limits. The last date for MWCs to take advantage of this waiver has passed.

4. CORRECTING TYPOGRAPHIC AND EDITORIAL ERRORS

- 310 CMR 7.08(1)(h) would be amended to clarify the requirement for Plan Approval for incinerators by adding explicit reference to Plan Approval pursuant to 310 CMR 7.02(3) and (5).
- 310 CMR 7.08(2)(g) would be amended to use language consistent with other parts of the regulation (“any” instead of “each”).
- 310 CMR 7.08(2)(h)2.e. would be amended to clarify that reporting the highest emissions level is required, but reporting the highest reduction level is not.
- 310 CMR 7.08(2)(h)3. would be amended to match the long-standing federal EG requirement to report opacity exceedances.
- 310 CMR 7.08(2)(j)2. would be amended to include the missing letter “C.”

MassDEP is seeking comment on these proposals.

E. AIR QUALITY IMPACTS

As proposed, the NO_x amendments to the MWC regulation will result in reductions in actual emissions of NO_x, an ozone precursor, from MWCs. These reductions are part of Massachusetts’ overall strategy designed to improve air quality. The amendments lowering the particulate matter, cadmium, lead and dioxin/furan standards in 310 CMR 7.08(2) to be consistent with federal regulations for large MWCs will make the reductions state-enforceable as well as federally-enforceable.

F. IMPACT ON SMALL BUSINESS

The proposed amendments to the regulations will not adversely impact small businesses. There are seven MWC facilities in the Commonwealth that will be subject to aspects of the proposed amendments. None of the MWC facilities is classified as a small business.

G. IMPACT ON CITIES AND TOWNS

The proposed amendments to 310 CMR 7.08(2) that make Massachusetts’ large MWC regulations consistent with federal regulations have no additional cost impact beyond costs the facilities may have already incurred to comply by May 10, 2011, as required by the federal standards.

The proposed amendments to the 310 CMR 7.19 NO_x standard for small MWCs are not expected to add any additional costs to the cities and towns that have contracts with the two small MWC facilities beyond costs the facilities may have already incurred to comply with existing requirements, because the facilities are expected to be able to meet the revised NO_x standard with existing equipment.

Of the 11 large MWC units at five MWC facilities:

- two meet the lower NO_x limits,
- seven have installed SNCR equipment and could inject more urea or ammonia to meet the lower NO_x limit, and
- two units have installed SNCR but are expected to apply for a less stringent source-specific alternative.

The large MWC units could have one-time costs of approximately \$800,000 (representing approximately 0.4% of the annual state-wide tipping revenue of over \$200 million) and ongoing cost increases of approximately \$280,000 (approximately 0.1% of annual state-wide tipping revenue).

The proposed amendments to the NO_x RACT standard for large MWCs could add additional small costs to the cities and towns that have contracts with the five facilities, depending on the terms of the contracts between the cities and towns and the MWCs. As discussed in section C.2. above, any MWC unit may apply for a source specific alternative NO_x limit, which the Department would review to evaluate technological and economic feasibility; resulting compliance costs would depend on the characteristics of a particular MWC unit.

H. AGRICULTURAL IMPACTS

Pursuant to M.G.L. c. 30A, § 19, state agencies should evaluate the impact of the proposed programs on agriculture within the Commonwealth. The Department has determined that the proposed amendment to the MWC regulation will have no adverse effect on agricultural facilities. The impacts to agriculture will be beneficial, as the regulation will help Massachusetts attain National Ambient Air Quality Standards for ozone and other harmful pollutants, specifically mercury, and therefore, lower crop damage attributable to air pollution.

I. MASSACHUSETTS ENVIRONMENTAL POLICY ACT (MEPA)

The proposed regulations are exempt from the “Regulations Governing the Preparation of Environmental Impact Reports,” 301 CMR 11.00, in that no MEPA review threshold set forth in 310 CMR 11.03 is met or exceeded. In addition, these proposed regulations do not reduce standards for environmental protection, nor do they reduce opportunities for public participation in review processes or public access to information generated or provided in accordance with the regulations (see MEPA review threshold pertaining to promulgation of regulations at 301 CMR 11.03(12)).

J. IMPACTS ON OTHER PROGRAMS – AIR TOXICS

Air toxics are a group of chemical air contaminants that are associated with significant environmental impacts or adverse health effects such as cancer, reproductive effects and birth defects. Toxics use reduction is a MassDEP priority. Toxics use reduction is defined as in-plant practices that reduce or eliminate the total mass of contaminants discharged to the environment. The proposed amendments to the regulations align the state emission standards for large MWCs with the lower federal limits for the air toxics cadmium and dioxin/furan, which have been in effect since May 10, 2011.

K. PUBLIC PARTICIPATION

MassDEP held a public stakeholder meeting on June 9, 2011, inviting the public and other stakeholders, including the MWCs, municipalities, and environmental organizations, to provide feedback on a pre-hearing draft version of amendments to the MWC and NO_x RACT regulations. The proposed regulation was revised to adopt many of the suggestions offered during this process.

As provided by state law, M.G.L. 30A, the Department publishes a notice at least 21 days prior to a public hearing on proposed amendments. However, as required by EPA when regulation amendments will be submitted to EPA as part of the MWC State Plan and ozone SIP, the Department publishes a notice at least 30 days prior to a public hearing on proposed amendments. The hearings will be held in accordance with the procedures of M.G.L. Chapter 30A. A copy of the Background Document and the Proposed Amendments to the MWC regulation can be obtained for review by interested parties at

MassDEP's headquarters, One Winter Street, Boston, as well as in each of the four MassDEP regional service centers. In addition, the documents are available on the MassDEP website at <http://www.state.ma.us/dep>.

The Department will hold a public hearing on these proposed amendments at 10am on July 1, 2013 at MassDEP's headquarters, One Winter Street, Boston. The Department will consider the comments received at this hearing in its final decision on these amendments.

MassDEP requests that written comments be submitted electronically via e-mail to: DEP.Stationary@state.ma.us.

Written comments may also be sent to: Sharon Weber, Department of Environmental Protection, Bureau of Waste Prevention, One Winter Street, Boston, MA 02108.

Questions about this document may be addressed to Sharon Weber at 617-556-1190, sharon.weber@state.ma.us, or the address above.

APPENDIX A

THE COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE PREVENTION
BUSINESS COMPLIANCE DIVISION
ONE WINTER STREET
BOSTON, MASSACHUSETTS 02108

AMENDMENTS TO 310 CMR 7.00
REGULATIONS FOR THE
CONTROL OF AIR POLLUTION

STATUTORY AUTHORITY
M.G.L. c. 111, S. 142A THROUGH 142N

Attachment 5 Response to Comments on Proposed Amendments to Municipal Waste Combustor Regulations, March 9, 2018



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

One Winter Street Boston, MA 02108 • 617-292-5500

Charles D. Baker
Governor

Karyn E. Polito
Lieutenant Governor

Matthew A. Beaton
Secretary

Martin Suuberg
Commissioner

RESPONSE TO COMMENTS and FINAL AMENDMENTS TO

CLEAN AIR ACT SECTION 111(d)/129 STATE PLAN, INCLUDING
MUNICIPAL WASTE COMBUSTOR REGULATION 310 CMR 7.08(2)

and

CLEAN AIR ACT SECTION 110 OZONE STATE IMPLEMENTATION PLAN, INCLUDING
MUNICIPAL WASTE COMBUSTOR REGULATION 310 CMR 7.08(2);
NO_x REASONABLY AVAILABLE CONTROL TECHNOLOGY REGULATION 310 CMR 7.19;
DELETION OF 310 CMR 7.27, 7.28 AND 7.50;
AND ASSOCIATED CHANGES TO 310 CMR 7.00: APPENDIX B

March 9, 2018

This information is available in alternate format. Contact Michelle Waters-Ekanem, Director of Diversity/Civil Rights at 617-292-5751.

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I. Regulation History

On July 1, 2013, the Massachusetts Department of Environmental Protection (MassDEP) proposed amendments to the Municipal Waste Combustor (MWC) Rule, 310 CMR 7.08(2), for large MWCs and the NOx Reasonably Available Control Technology (RACT) rule, 310 CMR 7.19, for small MWCs. On March 31, 2015, Governor Baker issued Executive Order 562 commissioning a complete and comprehensive review of all existing Executive Branch regulations. As determined through the Executive Order 562 process (see <http://www.mass.gov/governor/legislationexecorder/execorders/executive-order-no-562.html>), MassDEP is finalizing these regulations because they implement federal minimum requirements and also eliminate unnecessary regulations and increase flexibility for regulated parties.

The purposes of the proposed amendments were as follows:

- As required under the federal Clean Air Act (CAA), make the state MWC Rule as stringent as the most current federal Emission Guidelines (EGs) for MWCs, 40 CFR Part 60 Subpart Cb, which were amended in 2006, by:
 1. establishing more stringent emission limits for particulate matter, cadmium, lead, and dioxin/furan;
 2. allowing owners of MWCs more options for monitoring emissions; and
 3. creating new requirements for operating MWCs.
- In order to maintain attainment of the National Ambient Air Quality Standards (NAAQS) for ozone and to help reduce NOx emissions, lower the existing NOx emission limits to 150 ppm for Mass Burn Waterwall MWCs, 146 ppm for Refuse-Derived Fuel Stoker MWCs, and 125 ppm for Mass Burn Refractory MWCs.
- To satisfy EPA's requirement that MassDEP have a NAAQS definition in our regulations.
- To streamline and remove unneeded regulations, delete sections of the air regulations that have expired.

II. Public Comment Process

MassDEP held one public hearing and solicited oral and written comments on the proposed amendments in accordance with M.G.L. Chapter 30A. On May 30, 2013, MassDEP published in two newspapers, the Boston Globe and the Springfield Republican, notice of the public hearing and public comment period on the proposed amendments, and notified interested parties via electronic mail. The public hearing notice was published in the Massachusetts Register on June 7, 2013. The public hearing was held at MassDEP's Boston office on Monday, July 1, 2013. The public comment period closed on July 11, 2013. Covanta Energy Corporation, Wheelabrator Technologies, Inc., and the United States Environmental Protection Agency (US EPA) submitted comments.

III. Comments and Responses

A. Covanta Comments

Comment: Covanta believes that 150 parts per million of nitrogen oxides on a volumetric dry-basis at 7% oxygen (ppmvd NOx@7% O₂, hereafter expressed as “ppm”) is a potentially achievable emission limit for the two MWC units at the Haverhill facility. Both MWC units have been modified with the Covanta “Low NOx” (LNTM) system). Early use of LNTM before 2011 resulted in accelerated refractory damage on the furnace walls due to the higher temperatures in certain sections of the combustion zone. Covanta continues to evaluate the use of LNTM in conjunction with selective non-catalytic reduction (SNCR) to improve the emissions long-term, with the goal of achieving 150 ppm. If this evaluation demonstrates that 150 ppm is economically infeasible, an appropriate source-specific limitation will be proposed.

Response: MassDEP concurs with the comment. If the facility believes the cost is prohibitive, then Covanta can apply for approval of a source-specific alternative NOx emissions limit in accordance with the regulation as originally proposed. Therefore, MassDEP is finalizing the 150 ppm NOx limit for mass burn waterwall MWCs, and finalizing the option for applying for an alternative NOx limit, as proposed.

Comment: Covanta believes that a limit of 150 ppm for SEMASS (Rochester) would be more appropriate than the proposed 146 ppm because it would make the regulation more consistent (i.e., 150 ppm for all waterwall MWCs). There does not appear to be a requirement to establish a limit based on one other refuse derived-fuel (RDF)-fired combustor in Connecticut (which is a different design and not directly comparable). That said, 146 ppm is achievable with SNCR and LNTM. Due to the differences in fuel feeding of SEMASS compared to Haverhill, we do not expect the refractory damage problem experienced at Haverhill to occur at SEMASS.

Response: EPA has established mass burn waterwall and refuse-derived fuel MWCs as separate MWC technology categories in federal regulations. Therefore, it is more appropriate to establish a NOx RACT limit for SEMASS’ RDF MWCs based on other RDF MWCs, than on mass burn waterwall MWCs. MassDEP expects that all 3 units at SEMASS can achieve 146 ppm with LNTM and SNCR controls. Therefore, MassDEP is finalizing the 146 ppm NOx limit for RDF MWCs as proposed. As noted above, if the facility believes that this is economically infeasible, then Covanta can apply for approval of a source-specific alternative NOx emissions limit in accordance with the regulation.

Comment: The proposed NOx limit of 125 ppm on a 24-hour block average for Agawam and Pittsfield is not consistently achievable on a daily basis, due to the lack of a specific NOx control system other than the basic MWC design and combustion air controls. Covanta requests that NOx RACT for Agawam and Pittsfield remain at the 167 and 192 ppm NOx limits in their existing approvals, respectively. As an alternative for Pittsfield, the standard could be made equivalent to the Connecticut standard of 177 ppm for mass burn refractory MWCs. Establishing the limit at 177 ppm would be consistent with MassDEP’s position regarding the 146 ppm limit for RDF MWCs applicable to SEMASS. The Pittsfield facility has not exceeded 177 ppm since January 2012. However it did come close during 2 days in February 2013. If the limit is established as 177 ppm, Covanta may submit a proposal for a source-specific NOx limit in accordance with 310 CMR 7.19(2)(b).

Response: MassDEP acknowledges that while the Pittsfield and Agawam facilities operate at a long-term NOx level around the 125 ppm NOx limit proposed by MassDEP, they do not have controls that would allow the facilities to achieve 125 ppm NOx on a daily basis, which is the averaging time typically

required of NO_x RACT emission limits. As detailed in the Technical Support Document that accompanied the regulatory proposal, MassDEP does not consider selective catalytic reduction (SCR) or SNCR to be RACT for these facilities as these technologies are not economically feasible for small mass burn refractory MWCs such as Agawam and Pittsfield, since a spray dryer at Pittsfield and low temperatures at Agawam would require reheating of exhaust gases for these specific control technologies to operate effectively and efficiently. MassDEP considers flue gas recirculation and air combustion controls RACT for these facilities. Therefore, in response to the comment, MassDEP is including a NO_x RACT limit of 167 ppm for Massachusetts' small MWCs at Agawam and Pittsfield in the final regulation.

Standards for NO_x RACT

Comment: It is possible that Covanta will be submitting proposals for source specific NO_x RACT limits for some of its facilities, especially if MassDEP does not accept our comments to modify the proposed NO_x limits in the proposed regulation. We request that MassDEP offer guidance on the economic thresholds applicable in this determination. Specifically, we recommend a threshold "dollar per tons of NO_x removed" similar to that presented in Table 3, be provided.

Response: MassDEP does not as a normal course of practice issue guidance on the thresholds (in dollar per ton of NO_x removed) for RACT. MassDEP reviews the technologies and economic impacts of proposed control strategies as part of a source-specific RACT determination. MassDEP evaluates the appropriate control technology level that may be economically infeasible in accordance with EPA's RACT guidance. In a RACT review, all applicable control technologies should be addressed, and if technical infeasibilities exist such as physical space limitations, then that control technology is eliminated. Then capital cost estimates are examined to determine whether a control technology's cost is reasonable in relation to other control technologies.

Revision of 310 CMR 7.08(2)(h)3.

Comment: The proposal would modify this section of recordkeeping as follows:

"3. Identification of the calendar dates when any of the average emissions-concentrations, **opacity levels, or** percent reductions, 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."

The emission standard for SO_x includes either a maximum stack concentration or minimum percent reduction. The removal of the word "or" after "emission concentrations" may be interpreted, for the purposes of recordkeeping, as the percent reduction option not being applicable. A facility would then need to develop a detailed description of those times when the percent reduction option was used, even though it was in compliance with its permit and the regulations. Covanta suggests instead that the term "opacity levels" be moved and word "or" restored as follows:

"3. Identification of the calendar dates when any of the average emission concentrations or percent reductions, opacity, or operating parameters..."

Response: MassDEP agrees with the commenter and has amended the language so that it reads as suggested.

Ammonia Slip

Comment: MassDEP requested comments on the options available for establishing an ammonia limit for facilities that use SNCR. Covanta suggests that a presumptive limit of 20 ppmvd @7% O₂ be established, with an option for a facility to propose and conduct ammonia optimization testing pursuant to proposed 310 CMR 7.08(2)(f)4. if it is believed that such a limit cannot be consistently achieved. As stated in the

background document, some MWCs currently have ammonia limits of 10 ppm in conjunction with a NOx limit of 205 ppm. Achieving a NOx limit of 150 ppm may result in higher ammonia slip.

Response: It is recommended that facilities to work with their MassDEP regional office to conduct optimization testing so that a reasonable unit-specific ammonia limit can be developed. Since the NOx limits finalized in this package are lower than the previous limits, ammonia injection rates will be altered to lower NOx to meet this more stringent number. However, Covanta has a Low NOx patented technology that has been identified to reduce NOx as well. Combining the two NOx reduction technologies should allow for less ammonia/urea injection so that ammonia slip can be minimized. Therefore, MassDEP is not finalizing a presumptive ammonia limit and is instead requiring optimization testing to determine a technically-appropriate ammonia emission limit for each MWC.

Comment: In addition, we recommend clarification in the regulation as to how compliance with the slip limit would be demonstrated. The most common method is currently discrete stack testing runs during normal 9-month stack testing using a test method such as CTM27 or Modified EPA Method 26 (or other method approved by MassDEP), taking the average of at least 3 test runs. This is acceptable and should be clarified. In addition, Covanta believes that continuous monitoring methods should be offered as an alternative, such as EPA Method 320 (FTIR) or other MassDEP approved method. If a continuous option is selected, the averaging time of the ammonia limit should be a 24 hour block to coincide with the limit for NOx. Standards for data availability under this option should be similar to that for other continuously-monitored parameters and should be included in the regulation.

Response: The appropriate averaging time for a unit's ammonia limit should be established based on the compliance monitoring approach. Either stack testing (using CTM27 or Method 26 or other method approved by MassDEP) or continuous emissions monitoring (using differential NOx, FTIR, or other CEMS) is acceptable for determining ongoing compliance. The use of CEMS is beneficial, as it can be used as a process control to determine how much ammonia to inject moment to moment, and could allow for an ammonia limit with an averaging time shorter than 24 hours. The averaging time should be established based on the optimization testing to establish a unit-specific ammonia limit. If an MWC chooses to use an ammonia CEMS, standards for data availability will be the same as for other continuously monitored gaseous pollutants and such amendments are included in the final regulation.

Revision of 310 CMR 7.08(2)(k)2. and 310 CMR 7.19(2)(b)

Comment: These two sections describe the technical review required by a facility that proposes a source-specific NOx emission limit. Section 7.19(2)(b) is already in place for NOx RACT sources other than small MWCs subject to 7.19(9), and 7.08(2)(k)2. is a new section that duplicates the requirements for large MWCs. Some of the listed NOx control technologies are not applicable to MWCs, and should be removed from proposed 7.08(2)(k)2. These are “burners out of service”, “ignition timing retard”, “fuel switching” and “separate circuit after cooling.” Since section 7.19(2)(b) applies to a variety of source types, it would not be practical to remove those technologies from that list. Covanta assumes that if a source-specific limit is proposed for Agawam or Pittsfield that a “not applicable” statement would be sufficient for that analysis.

Response: MassDEP agrees with Covanta and has removed from 310 CMR 7.08(2)(k)2. those NOx control technologies that are not applicable to large MWCs including “burners out of service,” “ignition timing retard,” “fuel switching” and “separate circuit after cooling.” MassDEP also agrees with Covanta that the list in 7.19(2)(b) applies to a variety of source types, and it would not be practical to remove these four technologies from that list. If a source specific limit is proposed for Agawam or Pittsfield, then MassDEP

would expect that a “not applicable” statement for these four technologies with a brief explanation would suffice.

Removal of the NOx Emissions Averaging Plan (current 310 CMR 7.08(2)(f)4.)

Comment: Covanta will likely continue to achieve new NOx limits on each individual MWC as the background document notes, except at the Agawam and Pittsfield facilities (since they have a combined stack). However, we believe that the averaging plan should remain in the regulations to provide for flexibility in case that plan changes due to technical or economic considerations. There would be no negative environmental impact of utilizing this option.

Response: MassDEP agrees, and is retaining the NOx emissions averaging plan option, with updated NOx emissions limits for each technology, as discussed in the Technical Support Document.

Effective Dates, Application Deadlines and Implementation Deadlines for NOx

Comment: The proposal would establish the NOx implementation deadline for large MWCs within one year of MassDEP approval of the Emission Control Plan (ECP) application, but in no case later than two years of rule implementation. Covanta requests that this deadline be modified to set the implementation deadline to two years after rule implementation, regardless of when the ECP application is approved. A facility will probably not commence design or construction of modified or new NOx control equipment without approval of the ECP, especially if a source-specific NOx limit is being proposed. It is also not certain that MassDEP would approve the ECP and/or the proposed source-specific limit. Setting a fixed two-year deadline would allow for changes in the ECP if needed and provide adequate time to adjust to those changes. Covanta makes the same request for small MWCs in case MassDEP does not agree with our recommendation to change the proposed NOx limits for Agawam and Pittsfield. Those plants would then need to submit an ECP application and request for source-specific NOx RACT limit.

Response: MassDEP believes that the provision requiring the NOx limit to be met no later than one year after ECP approval allows sufficient time to modify NOx control equipment, since the necessary equipment will already have been identified in order to submit the ECP application. Therefore, the regulatory deadlines are being finalized as proposed.

Miscellaneous

Comment: Covanta agrees with the proposed deletion of the mercury waiver and with all additions to the regulations that are consistent with the 2006 amendments to the Federal EGs.

Response: MassDEP appreciates the comment and is finalizing these provisions as proposed.

B. Wheelabrator Technologies Comments

Comment: We support many of the proposed amendments including:

- 310 CMR 7.08(2)(f)1.b. that provides an exemption from compliance with combustor load and particulate matter control device operating parameter limits preceding and during mercury testing, as currently provided for dioxin/furan testing, and including the exemption from compliance with average mass carbon feed rate limits during mercury and dioxin/furan testing.
- 310 CMR 7.08(2)(f)6.b., (h)11., (i)1., and (i)1.h. that clarify the Operator Training and Certification procedures and associated recordkeeping, notification and reporting provisions for occasions when control room operators provisionally certified under the American Society of

Mechanical Engineers (ASME) *QRO-1 Standard for the Qualification and Certification of Resource Recovery Facility Operators* process performs duties ordinarily restricted to QRO Certified operators and shift supervisors.

- 310 CMR 7.02(2)(g)1.d. and (h)4.e. and addition of 310 CMR 7.02(2)(g)3.d. that clarify procedures for calculating 8-hour block average carbon or equivalent usage rates where carbon injection is used to comply with dioxin/furan and mercury emission limits.
- 310 CMR 7.08(2)(h) and 310 CMR 7.08(2)(i) that incorporate the recordkeeping and reporting requirements of the USEPA EGs by reference.

Response: MassDEP appreciates the comment and is finalizing these provisions as proposed.

CEM Availability Requirements in 310 CMR 7.08(2)(g)5.

Comment: The proposed amendments delete the current CEM availability requirements on the basis they are made unnecessary due to the more stringent CEM availability requirements in the EGs. This deletion would bury the revised CEM availability requirements within the 40 CFR 60.58b Subpart Eb performance testing requirements making them difficult to find. To provide clear confirmation of CEM availability requirements, we suggest that 310 CMR 7.08(2)(g) Compliance and Performance Testing, 5. Continuous Emissions Monitoring Systems Data requirements not be deleted but be amended as follows: “a. *Continuous Emissions Monitoring Systems (CEMS) which monitor nitrogen oxides, sulfur dioxide, **opacity** and operating practices parameters (e.g., carbon monoxide, unit load and particulate matter control device inlet temperature) shall obtain, at a minimum, valid continuous emissions monitoring system **hourly averages for 90% of the operating hours per calendar quarter and 95% of the operating days per calendar year. At least two data points per hours shall be used to calculate each 1-hour arithmetic average***”. This suggested revision also keeps continuous opacity monitoring systems subject to data availability requirements.

Response: MassDEP did not seek public comment on adding an opacity data availability requirement to 310 CMR 7.08(2), and that change is outside the scope of this rulemaking. However, owners and operators of MWCs should be familiar with all the compliance and performance testing provisions of 40 CFR 60.58b, which have long been incorporated by reference in 310 CMR 7.08(2)(g). MassDEP does not believe selecting a partial subset of provisions from 40 CFR 60.58b to repeat in 310 CMR 7.08(2)(g)5.a. is necessary.

Performance Testing Schedule Flexibility

Comment: The May 2006 EG revisions revised the compliance and performance testing requirements to provide much needed flexibility in the annual performance test schedule. This flexibility allows for a 3 month window on either side of the 12 calendar month period performance test schedule and has helped MWC facilities cope with unplanned outages, stack tester scheduling conflicts and severe weather induced test delays without facing violation of the performance test schedule requirements. This same test schedule flexibility should be incorporated in the 9 month stack test schedule specified in 7.08(2)(g)(6). The suggested language change to 310 CMR 7.08(2)(g)6. Compliance Testing Schedule might be as follows:” ... ***shall conduct compliance testing for all designated pollutants on a 9 month basis (no less than 6 calendar months nor more 12 calendar months following the previous compliance test and must conduct 4 compliance tests in each 3 calendar year period.)***” Such language would also be incorporated into the dioxin testing schedule in 7.08(2)(g)(1)b. This would provide flexibility without reducing the actual number of performance tests.

Response: MassDEP agrees with the commenter that providing flexibility in test scheduling is necessary due to unexpected delays in scheduling with test companies, unplanned outages, and severe weather-induced test delays. MassDEP already considers such issues when working with MWCs to schedule tests, and does not believe a regulatory change is needed. MassDEP will continue to allow flexibility during the compliance test period due to such extreme conditions, while noting that Massachusetts General Laws chapter 21H, section 5(c) requires MWCs to conduct dioxin testing at least once every nine months.

NSPS Subparts E and Db Exemptions for MWCs Subject to EGs

Comment: DEP should adopt the NSPS Subparts E and Db exemptions that were also promulgated with the May 2006 Subpart Eb/Cb or EG revisions to eliminate the old Subpart E/Db monitoring and recordkeeping requirements and replaced them with EG operating practices and monitoring, recordkeeping and reporting requirements. These NSPS exemptions most likely could be added to applicability section of 7.08(2)(e). The NSPS exemptions are: 1) Subpart Db applicability: 60.40b -Any facility covered by an EPA approved section 111/129 plan implementing Subpart Cb or subpart BBBB of this Part (40 CFR 60) is not covered by this Subpart (Db), and 2) Subpart E applicability: 60.50(d) -Any facility covered by an EPA approved section 111/129 plan implementing Subpart Cb or subpart BBBB of this Part (40 CFR 60) is not covered by this Subpart (E). Once the exemptions are adopted and the revised MA MWC State Plan approved by EPA, the Title V operating permits can be amended accordingly as will be done anyways to incorporate the final 7.08(2) amendments including the revised emission limits.

Response: MassDEP does not agree that the regulation should include a list of NSPS Subpart E and Db exemptions. If any MWC's Title V Operating Permit incorrectly lists obsolete NSPS regulations as applicable requirements, the facility owner should apply to revise the Operating Permit during the next Operating Permit renewal (or sooner if a facility applies for a modification prior to the next required renewal). It would not be appropriate to create a list in 310 CMR 7.08(2) of all regulations that facilities are not subject to.

Proposed Amendments to MWC NO_x RACT Requirements

Comment: We concur that the basis for the revised NO_x RACT limit should be enhancement/optimization of existing SNCR systems as NJDEP concluded when they established the 150 ppm RACT limit for mass burn waterwall MWCs in 2009.

Response: MassDEP agrees with the commenter and is finalizing the limit as proposed.

Alternative NO_x RACT Limit

Comment: As DEP alludes to in the technical support document, DEP is aware that the Saugus MWC facility has site specific conditions (older short furnace/tail end type boilers) that already make achieving the proposed 150 ppm limit technologically and economically infeasible. Further, the facility is already subject to a 185 ppm/30 day rolling average NO_x limit based on optimization of the existing SNCR NO_x control system for implementation of Best Available Retrofit Technology (BART) NO_x controls under the Massachusetts regional haze attainment SIP. Consequently, Saugus has already adequately demonstrated it is only technologically feasible to achieve the 185 ppm alternative RACT limit as has been approved by DEP in the modified ECP issued in March 2012. As such the current 185/30 day rolling average BART based limit should be incorporated into the Table 3 NO_x emission limits in 7.08(2)(f)3. and Saugus should be exempt from applying for a source specific alternative NO_x RACT limit in 7.08(2)(k)2. Otherwise, the alternative RACT analysis requirement should be revised to specify that submittal of the NO_x control system optimization test report required for BART implementation meets the alternative

NOx RACT analysis requirement. Both the proposed 150 ppm RACT limit and 185 ppm alternative limit are based on enhancement/optimization of existing SNCR control technology. As such the alternative NOx feasibility evaluation should be limited to enhancements/optimization of existing SNCR systems.

Response: MassDEP has determined that the proposed 150 ppm limit does constitute RACT for mass burn waterwall MWCs, and, therefore, MassDEP is not making the requested change in the NOx RACT standard. However, a facility could choose to apply for an Alternative NOx RACT emission limit by evaluating NOx controls and applying the RACT qualification criteria (i.e., technological and economic feasibility) based on data specific to the design or physical layout of the emission unit. To the extent this has been performed for BART, the demonstration will be simpler. Wheelabrator Saugus submitted an optimization report to MassDEP that assessed different locations for injection of ammonia from the ammonia grid for SNCR NOx control. Wheelabrator Saugus did not, however, discuss all other potentially applicable control technologies (listed in 310 CMR 7.08(2)(k)2.), as would be necessary to support an alternative RACT demonstration. Control strategies such as flue gas recirculation and combustion optimization with parametric sensors are just two of the other control technologies that could be evaluated by Wheelabrator Saugus.

NOx RACT Limit Averaging Time

Comment: We strongly recommend that any NOx RACT limit be based on 30 day rolling average. The longer averaging period would help reduce excessive ammonia slip conditions by allowing a slower SNCR system response time to reduce excessive urea feed conditions while still achieving the same degree of NOx emissions reductions. This would also result in lower facility specific ammonia slip limits based on optimization testing. The 30 day rolling average period is also consistent with current BART limit imposed on Saugus. Note: For either a 24 hour average or 30 day rolling average limit, the optimized SNCR control system set point will remain the same but response time can be slowed to avoid rapid increases in urea feed and over feed conditions. We also believe DEP's approach to implementing BART based NOx controls at Saugus would be a model for the alternative RACT analysis.

Response: EPA has indicated to MassDEP that RACT limits typically should be for an averaging period of no longer than 24 hours, as the purpose of RACT is to reduce emissions of NOx and volatile organic compounds that are precursors to the formation of ozone, which is of health concern on specific days. BART has different goals (seeking to reduce haze in national parks, forests, and monuments in stages by the year 2064) and therefore appropriately utilizes a longer 30-day averaging time. Therefore the NOx limits are being finalized as proposed, based on a 24-hour daily average.

Application for Source Specific Alternative NOx Emission Limit

Comment: A MWC facility applying for an alternative NOx RACT limit in the emission control plan application should not be required to evaluate the technology and economic feasibility of all the potentially applicable control technologies. Further there are no criteria for DEP to determine acceptability of alternative RACT analysis or schedule.

Response: If a facility chooses to apply for an alternative NOx RACT emission limit, it must conduct the same technological and economic feasibility evaluation that has been followed by other Massachusetts facilities over the years. The technological and economic feasibility criteria are the basis of RACT as stated in EPA's definition of RACT as: "the lowest emission limitation that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility" (44 FR 53762; September 17, 1979). The potentially applicable

control technologies have been added at 310 CMR 7.08(2)(k)2. based on the long-standing list of technologies at 310 CMR 7.19(2)(b).

Optimization Testing To Determine Ammonia Slip Limit

Comment: The Department is soliciting comments on whether to include a presumptive ammonia limit in 7.08(2) and allow each facility to choose between conducting ammonia optimization testing or complying with a presumptive ammonia limit. At this time it would be difficult to prescribe a specific presumptive limit given that facilities will need to meet a stricter NO_x limit between 150 and 185 ppm based on optimization of existing SNCR systems. As such the option for conducting ammonia optimization testing to provide a facility specific ammonia limit that coincides with final achievable RACT limit must be included in the final 7.08(2) amendments. Wheelabrator favors establishing a facility-specific ammonia limit based on optimization testing.

Response: MassDEP agrees with the commenter and is finalizing the regulation with a requirement to conduct ammonia optimization testing rather than specifying a presumptive limit.

Amendments to 7.08(2)(g) Compliance and Performance Testing Requirements

Comment: DEP has proposed amendments to allow the optional use of continuous emission monitoring systems (CEMs) for particulate, trace metals (cadmium and lead), mercury, hydrogen chloride and dioxins in lieu of the EPA performance test methods. Certainly the performance test results for MWCs over the last 12 years confirm that the current 7.08(2) continuous emission monitoring, parametric monitoring and periodic testing requirements have proven very effective in ensuring emissions are minimized and compliance is being continuously achieved. While the optional or voluntary use of these CEMs is consistent with EPA's May 2006 EG revisions, it must be noted that all of these optional CEMs have not been validated on modern MWCs with respect to long term accuracy, reliability, cost and ability to meet EPA performance specifications. Further there are no EPA performance specifications for hydrogen chloride, trace metals and dioxin CEMs for which to assess performance/accuracy of these optional CEMS. Importantly, as EPA acknowledged in the May 2006 EG revisions, the use of mercury and particulate CEMs would theoretically require EPA to revise these emission limits based on actual data collected using these CEMS. Additionally, as EPA further explained, since there were no particulate or mercury CEM data available to develop CEM based emission limits EPA just increased the averaging time (from a 3 test run average to 24 hours average) and then encouraged future potential users of such CEMs to notify EPA once data is collected to determine if an alternative emission limit is appropriate. This would be the case for use of any other optional CEMs as well. Given the above significant limitations and uncertainties, optional use of these CEMs has no advantage over current 7.08(2) compliance and performance testing requirements as [has] been successfully used over the last 12 years. At this time optional use of these CEMs is technologically or economically feasible notwithstanding that an MWC facility could actually being able to obtain EPA approval for alternative CEM based limits if subsequent data confirms that an alternative limit is warranted. Based on the above and in the interest of streamlining the 7.08(2) requirements, DEP should omit from the 7.08(2) the optional CEMS text from federal regulations at 40 CFR 60.58b.

Response: MassDEP is retaining the optional CEMs provisions in the regulations. As technology advances, EPA provides additional performance specifications (e.g., EPA proposed a hydrogen chloride CEMs performance specification on May 14, 2014, see 79 FR 27689), and MassDEP would like to facilitate the ability of MWC owners and operators to utilize the optional CEMS provisions, if they so choose.

C. US EPA Comments

Comment: We support MassDEP finalizing the proposed amendments that set more stringent emissions limits for MWCs than the federal standards. We encourage MassDEP to adopt the proposed amendments and submit them to EPA as a revision to the Massachusetts State Plan for MWCs.

Response: Thank you for your support, and we will submit the final amendments to EPA for approval into our State Plan for MWCs.

Comment: MassDEP's proposed amendment exempts large MWC units from 310 CMR 7.19, NO_x RACT, if the unit is subject to 310 CMR 7.08(2). Therefore, MassDEP should ensure that in its submittal to EPA, it specifically requests that the NO_x provisions in 7.08(2) are approved and made part of both the State Implementation Plan for NO_x and the State Plan for MWCs.

Response: When submitting the MWC regulations to EPA for approval, MassDEP will request that the NO_x provisions in 7.08(2) be included in the State Implementation Plan and the State Plan for MWCs.

Comment: MassDEP is proposing to add a new definition of NAAQS or federal Ambient Air Quality Standards to the definitions section in 310 CMR 7.00. The definition references standards in effect on December 14, 2012, the date that EPA signed the rulemaking notice and announced the new fine particle standards. However, since the standard was not published in the Federal Register until January 15, 2013 (78 FR 3086) and became effective on March 18, 2013, EPA recommends that MassDEP revise the NAAQS definition to reference March 18, 2013 to ensure the new fine particle standards are included.

Response: To address this issue, MassDEP promulgated a NAAQS definition in separate regulatory amendments on March 9, 2018.

D. Miscellaneous

MassDEP noticed that 310 CMR 7.08(2)(f)2.: *Table 1* unnecessarily includes provisions for "Mass Burn Refractory" MWCs. As there are no Massachusetts Mass Burn Refractory MWCs subject to 310 CMR 7.08(2)(f)2.: *Table 1*, we have deleted the Mass Burn Refractory provisions from 310 CMR 7.08(2)(f)2.: *Table 1*. This edit is parallel to the similar edit to 310 CMR 7.08(2)(f)3.: *Table 3* that we are finalizing as proposed.

In addition, MassDEP added a missing occurrence of the phrase "as last amended May 10, 2006" to 310 CMR 7.08(2)(h) 4.e.

MassDEP is finalizing the deletion of 310 CMR 7.27, 7.28 and 7.50 as proposed. MassDEP also proposed conforming amendments to 310 CMR 7.02, 7.29 and 7.00: Appendix A that added citations to 310 CMR 7.32. Those proposed conforming amendments have become obsolete due to separate regulatory amendments promulgated on March 9, 2018 that delete 310 CMR 7.32, add 310 CMR 7.34 and contain superseding amendments to 310 CMR 7.02, 7.29 and 7.00: Appendix A that reference 310 CMR 7.34.