



Commonwealth of Massachusetts  
Executive Office of Energy & Environmental Affairs

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# Department of Environmental Protection

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## **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**

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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<sub>x</sub> RACT – page 29**
- H. NO<sub>x</sub> 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 (CO<sub>2</sub>e) for new facilities and 75,000 tons CO<sub>2</sub>e 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since it is no longer enforceable because the U.S. Environmental Protection Agency's (EPA) Clean Air Mercury Rule is no longer in effect.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<sub>x</sub> RACT:** update RACT for sources of nitrogen oxides (NO<sub>x</sub>) 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<sub>x</sub> Ozone Season Budget Program:** replace MassCAIR program with new ozone season NO<sub>x</sub> budget program in accordance with EPA requirements to preserve ozone season NO<sub>x</sub> emissions limitations.

- Exempt facilities whose permitted NO<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub>) 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.<sup>1</sup> 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..."<sup>2</sup> Under PSD review, case-by-case BACT analysis always is required. For some Plan

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<sup>1</sup> 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.

<sup>2</sup> 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** (CO<sub>2</sub>e) 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 CO<sub>2</sub>e for a new facility and 75,000 tons CO<sub>2</sub>e 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<sub>x</sub>), carbon monoxide (CO), volatile organic compounds (VOC), toxics, particulate matter (PM), and carbon dioxide (CO<sub>2</sub>). 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)<sup>3</sup> 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<sub>x</sub>) 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.

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<sup>3</sup> 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.

<b>Table 1</b>			
<b>§ 183(e) CTG List</b>			
<b>Category</b>	<b>EPA regulation</b>	<b>CTG</b>	<b>MassDEP addressing CTG in proposed regulations?</b>
<b>Group I:</b>			
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
<b>Group II:</b>			
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		EPA 453/R-06-004 September 2006	
<b>Group III:</b>			

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	
<b>Group IV:</b>			
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.<sup>4</sup>

## 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.

<sup>4</sup> 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).

Topic	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)	(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 VOC<sup>5</sup> 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.

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<sup>5</sup> 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<sub>x</sub>)* 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<sub>x</sub> emissions of 50 tons per year or more).

Massachusetts is located within the Ozone Transport Region (OTR)<sup>6</sup>. Pursuant to the Clean Air Act (CAA),<sup>7</sup> states in the OTR are required to adopt RACT<sup>8</sup> for major sources of NO<sub>x</sub> irrespective of their ozone attainment status. NO<sub>x</sub> 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<sub>x</sub> RACT obligations for the 2008 and the 2015 ozone NAAQS.

MassDEP compared its existing NO<sub>x</sub> 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.

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<sup>6</sup> 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.

<sup>7</sup> CAA Sections 184(b)(2) and 182(f).

<sup>8</sup> 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<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> Emission Limits**

Large Boilers (100 MMBtu/hr or greater) Type and Size	MassDEP NO <sub>x</sub> RACT-310 CMR 7.19(4) lb/MMBtu			NYSDEC NO <sub>x</sub> 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) Proposed	(0.15) Proposed	(0.08) 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) Proposed	(0.15) Proposed	(0.15) Proposed			
100 ≤ X < 250 MMBtu/hr Heat release >70,000 Btu/hour-ft <sup>3</sup>	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 <sup>3</sup>	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<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> control and must meet a NO<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> Emission Limitations**

Type of turbine	MassDEP (current) ppm @ 15% O <sub>2</sub>	MassDEP (proposed) ppm@ 15% O <sub>2</sub>	CT DEEP (proposed Phase 2 effective June 1, 2022) ppm@ 15% O <sub>2</sub>
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<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub>) to meet a 2017 and beyond budget for emissions of oxides of nitrogen (NO<sub>x</sub>) from large fossil-fuel-fired electric power and steam-generating units during the ozone season (May 1<sup>st</sup> through September 30<sup>th</sup>). NO<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> reductions resulting from MassCAIR.

Under MassCAIR, each facility was given a NO<sub>x</sub> budget. If the budget was exceeded the facility had to purchase NO<sub>x</sub> 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<sub>x</sub> allowances than they needed (i.e., more than their permitted NO<sub>x</sub> emissions) and could sell them to less efficient facilities that were given fewer than they needed. Under MassCAIR, MassDEP recalculated each facility's NO<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub>) 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<sub>x</sub> program in consultation with EPA. The program would give each facility the same NO<sub>x</sub> budget it received in the last year (2015) of the MassCAIR program as its MassNO<sub>x</sub> emissions budget. Under this approach, cleaner, more efficient units are given more NO<sub>x</sub> 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<sub>x</sub> because they could never emit above the budget they were given. This reduces the total number of facilities subject to MassNO<sub>x</sub> from 32 to 24 facilities and also reduces the state-wide NO<sub>x</sub> emissions budget from 6,656 tons to 1,799 tons.

Over the past five years the total ozone season NO<sub>x</sub> mass emissions from all facilities (including those that would be excluded under MassNO<sub>x</sub>) 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<sub>x</sub> Ozone Season Allocation from MassDEP that was less than the unit's annually permitted NO<sub>x</sub> 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<sub>x</sub> Units within the same MassNO<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> emission budget for each MassNO<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> mass emissions per ozone season is exceeded, the proposed amendments require MassDEP to notify the owner or operator of each MassNO<sub>x</sub> Facility whose NO<sub>x</sub> 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<sub>x</sub> Ozone Season Allowances to MassDEP at a rate of one 2017 vintage or later CSAPR NO<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> Unit to comply with the reporting requirements of 40 CFR Part 75 to submit reports for NO<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> emissions budget would be required to purchase CSAPR allowances only if the overall state-wide NO<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> (whereas MassCAIR required a permit);
- MassNO<sub>x</sub> would not apply to new facilities (whereas MassCAIR applied to new facilities that met the MassCAIR applicability criteria), since new facility NO<sub>x</sub> 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.<sup>9</sup>

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

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<sup>9</sup> 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 *Denny 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/](http://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](mailto:marc.wolman@state.ma.us).

**Appendix A: Examples of NO<sub>x</sub> Emissions Limits in some Ozone Transport Commission States**

General Fuel/Unit Type	CT 5/31/95, 12/28/00 non-ozone season average lb/MMBtu unless noted	DE 1/1/2012 (coal/residual oil boilers), 11/24/93 all others lb/MMBtu unless noted	MD 11/9/08 lb/MMBtu unless noted	ME 1/1/05 lb/MMBtu unless noted	NJ On and after 5/1/15(coal and residual oil boilers and turbines), 5/1/10 (distillate oil and natural gas boilers), 3/7/07 (engines) lb/MMBtu unless noted	NY On and after 7/1/14 (boilers), 7/8/10 (turbines and engines) lb/MMBtu unless noted	PA 5/1/05lb/MMBtu unless noted	RI 5/31/95 lb/MMBtu unless noted	MA 2016 Proposed lb/MMBtu unless noted
<b>Coal Boilers</b>	0.38 (24-hr average by CEMS; Average of three 1-hr tests by Stack test); 0.15 (non-ozone Season average), (RCSA section22a-174-22(e) Table22-1,-22(e)(3),-22(k)(1),-22(k)(4))	0.125 (rolling 24-hr average), (Regulation 1146 4.3)	Average or averages of Stack test duration), (Regulation 26.11.09.08B.(1)(c), 26.11.09.08B.(2)(d) and(e))	0.15 (90 day rolling average), (Chapter1453 .B.(2)(b))	1.50lb/MWh (Calendar day over ozone season, 30-day over non-ozone season if CEMS, average of three 1-hr stack tests if no CEMS), (7:27-19.4 TABLE 3, 7:27-19.15(a))	0.12 (not including Fluidized bed) (1-hr Average unless CEMS (24-hr average)), (227-2.4(a))	0.17 (1 year average emission rate or maximum hourly permit rate if no CEMS), (129.201(c)(2), 129.204(b))	No limit identified	Large Boilers 0.12 tangential and wall fired 24-hr CEMS (unless subject to 310 CMR 7.29)
<b>Residual Oil Boilers</b>	0.25 (24-hr average by CEMS; average of three1-hr tests by stack test); 0.15 (non-ozone Season average), (RCSA section22a-174-22(e)Table22-1,-22(e)(3),-22(k)(1),-22(k)(4))	0.125 (rolling 24-hr average), (Regulation 1146 4.3)	0.25 (30-dayrolling Average or averages of stack test duration), (Regulation 26.11.09.08B.(1)(c), 26.11.09.08B.(2) (d) and(e))	0.15 (90 day Rolling average), (Chapter 1453.B.(2)(b))	2.00lb/MWh ( Calendar day over ozone season, 30-day over non-ozone season if CEMS, average of three 1-hr stack tests if no CEMS), (7:27-19.4 TABLE 3, 7:27-19.15(a))	0.20 (1-hraverage Unless CEMS(24-hr average)),(227-2.4(c))	0.17 (1 year average emission rate or maximum hourly permit rate if No CEMS (129.201(c)(2), 129.204(b))	0.25 (24-hr average), (Regulation 27.4.1,27.5.4)	0.15 24-hr CEMS (unless subject to 310 CMR 7.29)
<b>Distillate Oil Boilers</b>	0.20 (24-hr average by CEMS; average of three1-hr tests by stack test); 0.15 (non-ozone season average), (RCSA section 22a-174-22(e)Table22-1,-22(e)(3),-22(k)(1),-22(k)(4))	0.25 (rolling 24-hr average), (Regulation12 Table I)	0.25 (30-day rolling average or averages of stack test duration), (Regulation 6.11.09.08B.(1)(c), 26.11.09.08B.(2)(d) and(e))	0.15 (90-day rolling average), (Chapter 1453.B.(2)(b))	0.08 (Calendar day over ozone season, 30-day over non-ozone season if CEMS, average of three 1-hr stack tests if no CEMS), (7:27-19.7 TABLE9, 7:27-19.15(a))	0.08 (1-hraverage unless CEMS (24-hr average)), (227-2.4(c))	0.17 (1 year average emission rate or maximum hourly permit rate if no CEMS), 129.201(c)(2), 129.204(b)	0.12 (1-hr average), (Regulation 27.4.2,27.5.5)	0.15 24-hr CEMS (unless subject to 310 CMR 7.29)
<b>Natural gas boilers</b>	0.20 (24-hr average by CEMS; Average of three1-hr tests by Stack test); 0.15(non-ozone season average), (RCSA section22a-174-22(e) Table22-1,-22(e)(3),-22(k)(1),-22(k)(4))	0.20 (rolling 24-hr average), (Regulation 12 Table I)	0.20 (30-day rolling Average or averages of stack test duration), (Regulation 6.11.09.08B.(1)(c),2 6.11.09.08B.(2)(d) and (e))	0.15 (90-day rolling average), (Chapter1453 .B.(2)(b))	0.05 (calendar day over ozone season, 30-day over non-ozone season if CEMS, average of three 1-hr stack tests if no CEMS), (7:27-19.7 TABLE9,7:27-19.15(a))	0.05 (1-hr average unless CEMS (24-hr average), (227-2.4(c))	0.10 (1 year average emission rate or maximum hourly permit rate if no CEMS (129.201(c)(1),129.204(b))	0.10 (1-hr average), (Regulation 27.4.2,27.5.5)	.08 (24-hr CEMS) average of three 1-hr tests by stack test)
<b>Oil-fired Simple Cycle Turbines</b>	75ppmvd (24-hr average by CEMS; average of three 1-hr tests by stack test); 0.15 (non-Ozone season average), (RCSA section22a-174-22(e)Table22-1,-22(e)(3),-22(k)(1),-22(k)(4))	88ppm (1-hr average), (Regulation12 Table II)	No limit identified	No limit identified	1.60 lb/MWh (Calendar day over ozone season, 30-day over non-ozone season if CEMS, average of three 1-hr stack tests if no CEMS), (7:27-19.5 TABLE 7, 7:27-19.15(a))	100 ppmvd(1-hr average unless CEMS (24-hr average) (227-2.4(e))	0.17 (1-year average emission rate or maximum hourly permit rate if no CEMS), (129.202(c)(2), 129.204(b))	No limit identified	50 ppmvd (24-hr average by CEMS; average of three 1-hr tests by stack test)

<b>Gas-fired Simple Cycle Turbines</b>	55ppmvd (24-hr average by CEMS; average of three 1-hr tests by stack test); 0.15 (non-Ozone season average), (RCSA section22a-174-22(e) Table22-1,-22(e)(3),-22(k)(1),-22(k)(4))	42ppm (1-hr average), Regulation 12 Table II)	No limit identified	No limit identified	1.00 lb/MWh (Calendar day over ozone season, 30-day over non-ozone season if CEMS, average of three 1-hr stack tests if no CEMS),(7:27-19.5 TABLE 7, 7:27-19.15(a))	50 ppmvd (1-hr average unless CEMS (24-hr average), 227-2.4(e))	0.17 (1-year average emission rate or maximum hourly permit rate if no CEMS, (129.202(c) (2), 129.204(b))	No limit identified	40 ppmvd (24-hr average by CEMS; average of three 1-hr tests by stack test)
<b>Lean burn Oil-fired Engines</b>	8 grams/bhp-hr (24-hr average by CEMS; average of three 1-hr tests by stack test), (RCSA section22a-174-22(e) Table22-1,-22(k)(1),-22(k)(4))	No limit identified	No limit identified	No limit identified	2.3 grams/bhp-hr (Calendar day over ozone season, 30-day over non-ozone season if CEMS, average of three 1-hr stack tests if no CEMS), (7:27-19.8 TABLE 10,7:27-19.15(a))	2.3 grams/bhp-hr (1-hr average unless CEMS (24-hr average)),(227-2.4(f))	2.3 grams/bhp-hr (1-year average emission rate or maximum hourly permit rate if no CEMS), (129.203(c)(2), 129.204(b))	9.0 grams/bhp-hr (1-hr average), (Regulation 27.4.3,27.5.5)	2.3 grams/bhp-hr (24-hr average by CEMS; average of three 1-hr tests by stack test)

**Appendix B – Affected Major Source NO<sub>x</sub> RACT Facilities under 310 CMR 7.19**

<b>RICE</b>	<b>Turbines</b>	<b>Large Boilers</b>
BRAINTREE ELECTRIC	ANP BELLINGHAM	BRAYTON POINT ENERGY LLC
BRAYTON POINT ENERGY LLC	ANP BLACKSTONE	ESSENTIAL POWER MASSACHUSETTS LLC
CHICOPEE ELECTRIC LIGHT	BRAINTREE ELECTRIC	GENERAL ELECTRIC AIRCRAFT ENGINES
HOPKINTON LNG CORP	DIGHTON POWER LLC	HARVARD UNIVERSITY BLACKSTONE STEAM PLAN
HUDSON LIGHT & POWER DEPARTMENT	ESSENTIAL POWER MASSACHUSETTS LLC	KENDALL GREEN ENERGY LLC
IPSWICH MUNICIPAL LIGHT	EXELON WEST MEDWAY LLC	KRAFT FOODS GROUP INC
MARBLEHEAD MUNICIPAL WILKENS	FORE RIVER STATION	MASSACHUSETTS INSTITUTE OF TECHNOLOGY
MEDICAL AREA TOTAL ENERGY PLANT	GENERAL ELECTRIC AIRCRAFT ENGINES	MASSPORT LOGAN AIRPORT
NRG CANAL LLC - OAK BLUFFS	KENDALL GREEN ENERGY LLC	MEDICAL AREA TOTAL ENERGY PLANT
NRG CANAL LLC - WEST TISBURY	MASSACHUSETTS INSTITUTE OF TECHNOLOGY	MWRA DEER ISLAND
SHREWSBURY ELECTRIC AND CABLE OPERATIONS	MASSPOWER	MYSTIC STATION
SPECIALTY MINERALS	MBTA SOUTH BOSTON POWER	NRG CANAL LLC
UMASS MEDICAL SCHOOL	MEDICAL AREA TOTAL ENERGY PLANT	SOLUTIA INCORPORATED
USAF HANSCOM AFB 66 ABG/CEV	MILFORD POWER LLC	ST GOBAIN ABRASIVES, INC
WELLESLEY COLLEGE	MILLENNIUM POWER PARTNERS LP	TAUNTON MUNICIPAL LIGHT PLANT
	MYSTIC STATION	UMASS MEDICAL SCHOOL
	PEABODY MUNICIPAL LIGHT PLANT	VEOLIA ENERGY BOSTON INC
	PITTSFIELD GENERATING COMPANY LP	
	STONY BROOK ENERGY CENTER	
	TANNER STREET GENERATION LLC	
	TAUNTON MUNICIPAL LIGHT PLANT	

### Appendix C: MassNO<sub>x</sub> Unit Identification

Unit	ORISPL Code <sup>1</sup>	Heat Input Rating from Facility's Operating Permit (MMBtu/hr)	Emissions Restrictions from Facility's Operating Permit	Permitted Ozone Season Emissions from Operating Permit (NO <sub>x</sub> tons)	2015 CAIR Allocations (NO <sub>x</sub> tons) <sup>2</sup>	MassNO <sub>x</sub> Unit (Y/N)
ANP Bellingham 1	55211	2,183	Annual NO <sub>x</sub> restricted to 148 tpy. Emissions restricted to 0.0074 lb/MMBtu (no steam aug) and 0.013 (steam aug). Calculations for ozone season operation are: [direct permitted lb/MMBtu (no steam aug) factor] x hours of operation / 2000 lbs per ton = 135 tons NO <sub>x</sub> /ozone season.	135	390	N
ANP Bellingham 2	55211	2,183				
ANP Blackstone 1	55212	2,183	Annual NO <sub>x</sub> restricted to 148 tpy. Emissions restricted to 0.0074 lb/MMBtu (no steam aug) and 0.013 (steam aug). Calculations for ozone season operation are: [direct permitted lb/MMBtu (no steam aug) factor] x hours of operation / 2000 lbs per ton = 135 tons NO <sub>x</sub> /ozone season.	135	344	N
ANP Blackstone 2	55212	2,183				
Berkshire Power Company 1 & 2	55041	2,112	Annual NO <sub>x</sub> restricted to 109 tpy. Emissions restricted to 0.0121 lb/MMBtu (NG) and 0.0522 lb/MMBtu (Oil) Calculations for unrestricted ozone season operation are: (permitted Oil lb/MMBtu x maximum firing rate x 22 hours/regular operation x 153 days/ozone season) + (permitted startup 1.0 lb/MMBtu x 1 hour/startup x 153 days/ozone season) + (permitted shut down 1.0 lb/MMBtu x 1 hour/shutdown x 153 days/ozone season) = 196 tons NO <sub>x</sub> /ozone season. Therefore, the facility is limited to 109 tons NO <sub>x</sub> /ozone season since actual unrestricted operations would be more than the annual restriction.	109	167	N

<sup>1</sup> ORISPL code is a unique identification number assigned to power plants by Department of Energy's (DOE) Energy Information Administration (EIA).

<sup>2</sup> See <http://www.mass.gov/eea/docs/dep/air/community/noxal15.pdf>

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Braintree Electronic Potter II (#3)	1660	975.5	Emissions restricted to 0.1574 lb/MMBtu (NG) and 0.0522 lb/MMBtu (Oil). Startups restricted to 11.15 lb/hr (Oil) and 6.14 lb/hr (NG). Shut downs restricted to 10.95 lb/hr (Oil) and 6.06 lb/hr (NG). Calculations for ozone season operation are: (regular operation permitted Oil lb/MMBtu x maximum firing rate x 22 hours/regular operation x 153 days/ozone season)+(startup permitted Oil lb/hr x 1 hour/startup x 153 days/ozone season) + (shut down permitted Oil lb/hr x 1 hour/shut down x 153 days/ozone season) = 416 tons NO <sub>x</sub> /ozone season.	416	4	Y
Braintree Electric Watson 1 (EU#4)	1660	545.1	Oil use restricted to 2,880 hrs/year. Emissions restricted to 0.0091 lb/MMBtu (NG) and 0.0189 lb/MMBtu (Oil). Startups restricted to 11.15 lb/hr (Oil) and 6.14 lb/hr (NG). Shut downs restricted to 10.95 lb/hr (Oil) and 6.06 lb/hr (NG). Calculations for ozone season operation are: (startup permitted Oil lb/hr x 1 hour/startup x 153 days/ozone season/ 2000 lb/ton conversion) + (shut down permitted Oil lb/hr x 1 hour/shut down x 153 days/ozone season/ 2000 lb/ton conversion) + (permitted Oil lb/MMBtu x maximum firing rate x (2880 hours/year oil restriction - (2 hours/startup and shut down * 153 days/ozone season)/ 2000 lb/ton conversion) x (regular operation permitted lb/MMBtu NG x maximum firing rate x (3672 hours/ozone season - 2880 hours/year of Oil restriction/ 2000 lb/ton conversion) = 17 tons NO <sub>x</sub> /ozone season.	17	9	Y

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Braintree Electric Watson 2 (EU#5)	1660	545.1	Oil use restricted to 2,880 hrs/year. Emissions restricted to 0.0091 lb/MMBtu (NG) and 0.0189 lb/MMBtu (Oil). Startups restricted to 11.15 lb/hr (Oil) and 6.14 lb/hr (NG). Shut downs restricted to 10.95 lb/hr (Oil) and 6.06 lb/hr (NG). Calculations for ozone season operation are: (startup permitted oil lb/hr x 1 hour/startup x 153 days/ozone season/ 2000 lb/ ton conversion) + (shut down permitted oil lb/hr x 1 hour/shut down x 153 days/ozone season/ 2000 lb/ton conversion) + (permitted Oil lb/MMBtu x maximum firing rate x (2880 hours/year Oil restriction - (2 hours/startup and shut down * 153 days/ozone season)/ 2000 lb/ton conversion) x (regular operation permitted lb/MMBtu NG x maximum firing rate x (3672hours/ozone season - 2880 hours/year of Oil restriction)/ 2000 lb/ton conversion) = 17 tons NO <sub>x</sub> /ozone season.	17	9	Y
Brayton Point Energy, LLC 1	1619	2,250	EPA Consent decree governs. 30-day rolling average restricted to <0.088 lb/MMBtu but 30-day rolling average restricted to <0.09 lb/MMBtu is allowed if the owner or operator provides EPA with data and calculations to demonstrate that if low load using natural gas had occurred the <0.088 lb/MMBtu standard would have been maintained. There is a plant-wide restriction of 4,600 tpy NO <sub>x</sub> . There are no restrictions for startup and shut down for this unit. Calculations for ozone season operation are: (permitted lb/MMBtu x maximum firing rate x 3672 hr/ozone season / 2000 lbs/ton conversion) = 372 tons NO <sub>x</sub> /ozone season.	372	246	Y

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Brayton Point Energy, LLC 2	1619	2,250	EPA Consent decree governs. 30-day rolling average restricted to <0.28 lb/MMBtu. There is a plant wide restriction of 4,600 tpy NO <sub>x</sub> . There are no restrictions for startup and shut down for this unit. Calculations for ozone season operation are: (permitted lb/MMBtu x maximum firing rate x 3672 hr/ozone season / 2000 lbs/ton conversion) = 1,157 tons NO <sub>x</sub> /ozone season.	1,157	239	Y
Brayton Point Energy, LLC 3	1619	5,655	EPA Consent decree governs. 30-day rolling average restricted to <0.088 lb/MMBtu but 30-day rolling average restricted to <0.09 lb/MMBtu allowed if the owner or operator provides EPA with data and calculations to demonstrate that if low load using gas had occurred the <0.088 lb/MMBtu standard would have been maintained. There is a plant-wide restriction of 4,600 tpy NO <sub>x</sub> . There are no restrictions for startup and shut down for this unit. Calculations for ozone season operation are: (permitted lb/MMBtu x maximum firing rate x 3672 hr/ozone season / 2000 lbs/ton conversion) = 934 tons NO <sub>x</sub> /ozone season.	934	497	Y

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Brayton Point Energy, LLC 4	1619	4,800	EPA Consent decree governs. There is a restriction of no more than 1.5lb/MWH calculated over any consecutive 12 month period and no more than 3.0 lb/MWH calculated over any individual month. There is a plant-wide restriction of 4,600 tpy NO <sub>x</sub> . There are no restrictions for startup and shut down for this unit. Calculations for ozone season operation are: (permitted lb/MMBtu x maximum firing rate x 3672 hr/ozone season / 2000 lbs/ton conversion) = 2,754 tons NO <sub>x</sub> /ozone season.	2,754	7	Y
Dartmouth Power Associates 1 & 2	52026	656	Emission restricted for startup is 105 lbs/hr. Emission restriction for shutdown is 105 lb/hr. Emission restriction for regular operation is 18.3lb/hr (NG) and 39.5 lb/hr (Oil). Annual NO <sub>x</sub> restriction is 96 tpy. Calculations for ozone season operation are: (startup permitted lb/hr x 3 hour/startup x 153 days/ozone season) + (shutdown permitted lb/hr x 1 hour/shut down x 153 days/ozone season) + (permitted oil lb/MMBtu x maximum firing rate x 20 hours of operation * 153 days per year / 2000 lb/ton conversion.) = 93 tons NO <sub>x</sub> /ozone season.	93	32	Y
Dartmouth Power Associates 5	52026	267.1	No allocations provided for this unit. Therefore, calculations based on permitted operations are unnecessary.		0	Y

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Dighton Power, LLC	55026	1,423.1	Emission restriction for startup is 0.74 lb/MMBtu. Emission restriction for shut down is 0.74 lb/MMBtu. Emission restriction for regular operation is 0.0129 lb/MMBtu Restriction for 12 month rolling period of 75.0 tons NO <sub>x</sub> . Calculations for ozone season operation are: (startup permitted lb/MMBtu x maximum firing rate x 4hours/cold startup x 153 days/ozone season/ 2000 lb/ton conversion) + (regular operation permitted lb/MMBtu x maximum firing rate x 18.5 hours/regular operation x 153 days/ozone season/ 2000 lb/ton conversion) x (shutdown permitted lb/MMBtu x maximum firing rate x 1.5 hours/shutdown x 153 days/ozone season/ 2000 lb/ton conversion) = 469 tons NO <sub>x</sub> /ozone season. This is more than the 12-month rolling restriction so the 12-month rolling restriction of 75 tons NO <sub>x</sub> is the permitted emissions total/ozone season.	75	79	N
Essential Power Massachusetts LLC Woodland Road	1643	244	No allocations provided for this unit. Therefore, calculations based on permitted operations are unnecessary.		0	Y
Essential Power Massachusetts Doreen St.	1631	230	No allocations provided for this unit. Therefore, calculations based on permitted operations are unnecessary.		0	Y
Essential Power West Springfield 10 (EU 17)	1642	244	No allocations provided for this unit. Therefore, calculations based on permitted operations are unnecessary.		0	Y

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Essential Power West Springfield 3 (EU 15)	1642	1,150	Emission restricted to 0.25 lb/MMBtu (Oil) and 0.20 lb/MMBtu (NG). There is a restriction to combust less than or equal to 10,074,000 MMBtu heat input from NG or Oil combined in a 12-month period. This is approximately 1,249 tpy NO <sub>x</sub> . Calculations for ozone season operation are: direct permitted lb/MMBtu x maximum firing rate x hours of operation/ 2000 lb/ton conversion = 528 tons NO <sub>x</sub> /ozone season. There are no startup or shut down emissions restrictions for this unit.	528	9	Y
Essential Power West Springfield CTG1	1642	462.6 (NG); 437 (oil)	There is an annual emissions restriction of 19.3 tpy NO <sub>x</sub> for CTG1 and CTG2 combined. Emission restriction of 0.0129 lb/MMBtu (NG) and 0.0231 lb/MMBtu (Oil). Calculations for ozone season operation are: direct permitted lb/MMBtu x maximum firing rate x hours of operation/ 2000 lb/ton conversion. This is higher than allowable (19 tpy per unit) so the restriction of 19.3 is used for permitted ozone season emissions. There are no startup or shut down emissions restrictions for these units.	19	11	Y
Essential Power West Springfield CTG2	1642	462.6 (NG); 437 (oil)			9	
Exelon Framingham FJ-1	1586	186	No allocations provided for this unit. Therefore, calculations based on permitted operations are unnecessary.		0	Y
Exelon Framingham FJ-2	1586	186	No allocations provided for this unit. Therefore, calculations based on permitted operations are unnecessary.		0	Y
Exelon Framingham FJ-3	1586	186	No allocations provided for this unit. Therefore, calculations based on permitted operations are unnecessary.		0	Y

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Exelon New Boston NBJ1	1589	263	No allocations provided for this unit. Therefore, calculations based on permitted operations are unnecessary.		0	Y
Exelon West Medway J1T1 & J2T2	1592	784	Only 1 ton allocated provided for these units. Therefore, calculations based on permitted operation are unnecessary.		1	Y
Exelon West Medway J2T1 & J2T2	1592	784				
Exelon West Medway J3T1 & J3T2	1592	784				
Fore River Energy Center 1	55317	2,955 (NG); 3,001 (ULSD)	There is a <1.6 lb/MWH NO <sub>x</sub> restriction and a restriction for <29,074,350 gallons of oil per 12 month rolling period. There is a 12-month rolling restriction of 50 tons of oil and a 12-month rolling restriction for all fuels of < 218 tons. Emission restrictions for startups and shutdowns are 0.46 lb/MMBtu (NG). Emission restrictions for regular operations are 0.0074 lb/MMBtu (NG) and 0.0233 lb/MMBtu (Oil). Calculations for ozone season operation are: (startup permitted lb/MMBtu x maximum firing rate x 5hours/startup x 153 days/ozone season/ 2000 lb/ton conversion) + (regular operation permitted lb/MMBtu x maximum firing rate x 17 hours/regular operation x 153 days/ozone season/ 2000 lb/ton conversion) + (shutdown permitted lb/MMBtu x maximum firing rate x 2 hours/shutdown x 153 days/ozone season/ 2000 lb/ton conversion) = 819 tons NO <sub>x</sub> /ozone season. This exceeds the 12-month rolling restriction for all fuels of < 218 tons so 218 tons is used.	218	607	N
Fore River Energy Center 2	55317	2,955 (NG); 3,001 (ULSD)				

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General Electric Aircraft Engines 3 (Unit 99-5)	10029	382.8	Emission restriction is 0.28 lb/MMBtu for Unit 99-5. Emission restriction is 0.3 lb/MMBtu for Unit 99-3. Facility-wide restriction 50 tons per month and 383 tpy. According to the permit the direct permitted lb/MMBtu rate is to be used for startups and shut downs. Calculations are (permitted lb/MMBtu x maximum firing rate x 3672 hours/ozone season/ 2000 lb/ton conversion) = 346tpy. This exceeds the 50 tons/month restriction, so 50 tons/month is used for the ozone season (5 months) = 250 tons.	250	10	Y
General Electric Aircraft Engines 5 (Unit 99-3)	10029	270	No allocations provided for this unit. Therefore, calculations based on permitted operations are unnecessary.		0	Y
Harvard University Blackstone Steam Plant B11	1594	286	Emission restriction is 0.28 lb/MMBtu. Calculations for ozone season operation are: (permitted lb/MMBtu x maximum firing rate x 3672 hours/ozone season/ 2000 lb/ton conversion) = 147 tons NO <sub>x</sub> /ozone season. There are no provisions in the permit for startup and shut down permitted lb/MMBtu limits.	147	4	Y
Harvard University Blackstone Steam Plant B12	1594	286	Emission restriction is 0.28 lb/MMBtu. Calculations are (permitted lb/MMBtu x maximum firing rate x 3672 hours/ozone season/ 2000 lb/ton conversion) = 147 tons NO <sub>x</sub> /ozone season. There are no provisions in the permit for startup and shut down permitted lb/MMBtu limits.	147	4	Y
Kendall Green Energy LLC 2	1595	273	There is a facility-wide restriction to 389.2 tpy NO <sub>x</sub> . Calculation is (389.2 tpy) – (amount of calculated	296	67	Y
Kendall Green Energy LLC 3	1595	409				

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Kendall Green Energy LLC S6	1595	308	emissions from Unit 4) = 296 tons NO <sub>x</sub> /ozone season. There are no provisions in the permit for startup and shut down emissions restrictions.			
Kendall Green Energy LLC 4	1595	2,722	There is a restriction for 30 day (720 hr/yr) Oil restriction and a restriction for 93.6 tpy NO <sub>x</sub> . Emission restriction for startup is 0.37 lb/MMBtu (NG) and 1.0 lb/MMBtu (Oil). Emission restriction for regular operation is 0.0074 (NG) and 0.023 (Oil). Calculations are (startup permitted Oil lb/MMBtu x 4 hours/startup x 153 days/ozone season) + (direct permitted Oil lb/MMBtu x maximum firing rate x 720 hr/year restriction) + (direct permitted NG lb/MMBtu x maximum firing rate x ozone season hours of operation - 720hr/year restriction/ 2000 lb/ton conversion) =855 tpy NO <sub>x</sub> . This is more than the 93.6 tpy NO <sub>x</sub> restriction so 93.6 tpy is used.	94	216	N
Kneeland St Station 1	880023	500	Emission restrictions are 0.28 lb/MMBtu (Oil) for units 1, 2, and 3. Emission restriction is 0.2 lb/MMBtu (NG) for Unit 4. There is a 30-day rolling average of allowable NO <sub>x</sub> emissions calculation used for daily allowable NO <sub>x</sub> emission limits. It is ALENO <sub>x</sub> in pounds based on the following equation: ALENO <sub>x</sub> = [0.28 lb/MMBtu x (B6 + BNG + B2)] + [0.20 lb/MMBtu x BNG3] where B6 = heat input in MMBtu/day from E1, 2, 3, 4 when using No. 6 oil; BNG =	105	60	Y
Kneeland St Station 2	880023	500				
Kneeland St Station 3	880023	600				

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Kneeland St Station 4	880023	500	heat input in MMBtu/day from EU1, 2, 3, 4, inclusive when burning gas; B2 = heat input in MMBtu/day from EU 1, 2, 3, 4, inclusive when burning NO 2 fuel oil, BNG3 = heat input in MMBtu/day from EU3 when burning gas. Calculations for ozone season operation are: (ALENO <sub>x</sub> x 153 days/ozone season / 30 days per month / 2000 lbs per ton conversion) = 105 tons NO <sub>x</sub> /ozone season.			
L'Energia Energy Center 2	54586	686	Emission restrictions are 0.0074 lb/MMBtu (NG) and 0.023 lb/MMBtu (Oil) There is an annual 60 day (1440 hr) oil restriction. Calculations for ozone season operation are: (permitted lb/MMBtu Oil x max firing rate x 1440 hours / 2000 lbs per ton conversion) + (permitted lb/MMBtu NG x max firing rate x (3672 hours/ozone season – 1440 hours) / 2000 lbs per ton conversion) = 17 tons NO <sub>x</sub> /ozone season. There are no additional provisions for startup and shut down operations.	17	18	N
Massachusetts Institute of Technology (GT-42-1A) and (HRSG-42-1B)	54907	439.7	Emission restrictions are 24.4 lb/hr (NG) and 46.6 lb/hr (Oil). There is an annual restriction of 185 tpy NO <sub>x</sub> . There is an oil usage restriction of <30 days per 12 month period and only when natural gas is unavailable. Calculations for ozone season operation are: (permitted lb/hr Oil x max firing rate x 30 days x 24 hours/day / 2000 lbs per ton conversion) + (permitted lb/hr NG x max firing rate x (153days/ozone season – 30 days) x 24 hours / day / 2000 lbs per ton conversion) = 53 tons NO <sub>x</sub> /ozone season. There are no additional provisions for startup and shut down operations.	53	77	N

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Masspower 1	10726	1,250	There is an annual 394.0 tpy NO <sub>x</sub> restriction. The restriction of 300 lb/ startup or shutdown event and applies to natural gas firing only. Each event may last up to 3 hours. Emission restriction for regular operations is 0.036 lb/MMBtu (NG) and 0.070 lb/MMBtu (Oil). Calculations for ozone season operation are: (startup permitted lb/3 hrs x 153 days/ ozone season/ 2000 lb/ton conversion factor) + (shutdown permitted lb/3 hrs x 153 days/ozone season/ 2000 lb/ton conversion factor) + (regular operation emissions lb/MMBtu x maximum firing rate x 18 hr/day x 153 days/ozone season/ 2000 lb/ton conversion factor) = 166 tons NO <sub>x</sub> /ozone season for each unit.	166		Y
Masspower 2	10726	1,250	There is an annual 394.0 tpy NO <sub>x</sub> restriction. The restriction of 300 lb/ startup or shutdown event and applies to natural gas firing only. Each event may last up to 3 hours. Emission restriction for regular operations is 0.036 lb/MMBtu (NG) and 0.070 lb/MMBtu (Oil). Calculations for ozone season operation are: (startup permitted lb/3 hrs x 153 days/ ozone season/ 2000 lb/ton conversion factor) + (shutdown permitted lb/3 hrs x 153 days/ozone season/ 2000 lb/ton conversion factor) + (regular operation emissions lb/MMBtu x maximum firing rate x 18 hr/day x 153 days/ozone season/ 2000 lb/ton conversion factor) = 166 tons NO <sub>x</sub> /ozone season for each unit.	166	93	Y
MBTA South Boston Power A & B	10176	792	There is an annual 202 tpy NO <sub>x</sub> restriction. Operation of each unit restricted to no more than 2,500 hours of operation per 12 months. There are no specific startup/shutdown emissions provisions in the permit.	202	1	Y
Milford Power, LLC	54805	1,401	There is an annual 190 tpy NO <sub>x</sub> restriction. Emission restriction for startup is 460 lb/3 hrs. Emission restriction for shut down is 70 lb/hr. Emission restriction for regular operation is 45.95 lb/hr. Calculations for ozone season operation are: (startup permitted lb/3 hr x 153 days/ozone season/ 2000 lb/ton conversion) + (shutdown permitted lb/hr x 153 days/ozone season/ 2000 lb/ton conversion) + (regular operation permitted gas lb/MMBtu x maximum firing rate x 18hrs/ day x 153 days/ozone season/ 2000 lb/ton conversion) = 104 tons NO <sub>x</sub> /ozone season.	104	76	Y

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Millennium Power Partners	55079	2,534	Emission restrictions are 0.013 lb/MMBtu (NG) and 0.035 lb/MMBtu (Oil). There is a 30 day (720 hr) oil restriction. Calculations for ozone season operation are: (permitted Oil lb/MMBtu x max firing rate x 720 hrs/ year / 2000 lb/ton conversion) + (permitted NG lb/MMBtu x max firing rate x (3672hr/ozone season – 720 hr/year restriction) / 2000 lb/ton conversion) = 81 tons NO <sub>x</sub> /ozone season. There are no specific startup/shutdown emissions provisions in the permit.	81	302	N
MWRA Deer Island S42	10823	256.3	No allocations provided for this unit. Therefore, calculations based on permitted operations are unnecessary.		0	Y
MWRA Deer Island S43	10823	256.3	No allocations provided for this unit. Therefore, calculations based on permitted operations are unnecessary.		0	Y
Mystic Station (5&6) 81 & 82	1588	5,910	Emission restriction is 0.0074 lb/MMBtu. Calculations for ozone season operation are: direct permitted oil lb/MMBtu x maximum firing rate x hrs of operation = 80 tons NO <sub>x</sub> /ozone season. There are no specific emissions provisions for startups and shut downs in the permit.	80	586	N
Mystic Station (7 & 8) 93 & 94	1588	5,910	Emission restriction is 0.0074 lb/MMBtu. Calculations for ozone season operation are: direct permitted oil lb/MMBtu x maximum firing rate x hrs of operation = 80 tons NO <sub>x</sub> /ozone season. There are no specific emissions provisions for startups and shut downs in the permit.	80	686	N

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Mystic Station 7 (EU 4)	1588	5,505	Emission restriction of 0.25 lb/MMBtu. There is a facility-wide restriction of less than 3,000 tpy NO <sub>x</sub> or 3,820 tons of NO <sub>x</sub> / 12 month rolling period. Calculations for ozone season operation are: direct permitted lb/MMBtu x maximum firing rate x hrs of operation = 2,527 tons NO <sub>x</sub> /ozone season. There are no startup/ shut down provisions in the permit.	2,527	42	Y
Mystic Station Jet (EU 10)	1588	186	No allocations provided for this unit. Therefore, calculations based on permitted operations are unnecessary.		0	Y
NEA Bellingham 1	10307	1,280 (NG); 1,236 (ULSD)	Emission restriction for startup is 865 lb/2 hours (Oil). Emission restriction for shut down is 1080 lb/2 hr (Oil). Emission restriction for regular operation is 0.0859 lb/MMBtu (NG) and 0.1497 lb/MMBtu (Oil). There is a 12 month rolling period restriction of 884.0 tons NO <sub>x</sub> for NG. There is a restriction of 720 hours (30 days) for Oil as long as the facility doesn't exceed a total of 1440 hours/ calendar year. Calculations for ozone season operation are: (startup permitted oil lb/2 hrs x 153 days/ozone season/ 2000 lb/ton conversion) + (shut down permitted oil lb/2 hrs x 153 days/ozone season / 2000 lb/ton conversion) + (regular operation permitted oil lb/MMBtu x maximum firing rate x (1440 hours - 1216 hours (startup and shutdown hours in an ozone season)/ 2000 lb/ton conversion) + ( regular operation permitted natural gas lb/MMBtu x maximum firing rate x (3672 hrs- 1440 hrs)/ 2000 lb/ton conversion) = 583 tons NO <sub>x</sub> /ozone season.			
NEA Bellingham 2	10307	1,280 (NG); 1,236 (ULSD)		583	138	Y

Unit	ORISPL Code <sup>1</sup>	Heat Input Rating from Facility's Operating Permit (MMBtu/hr)	Emissions Restrictions from Facility's Operating Permit	Permitted Ozone Season Emissions from Operating Permit (NO <sub>x</sub> tons)	2015 CAIR Allocations (NO <sub>x</sub> tons) <sup>2</sup>	MassNO <sub>x</sub> Unit (Y/N)
NRG Canal Station 1	1599	5,083	There is a restriction not to exceed 1.5 lb/MWH over 12 month rolling period. There is also a restriction not exceed 3.0 lb/MWH over any individual calendar month. There are no startup/ shut down provisions in the permit. Emission restriction is 0.28 lb/MMBtu. Calculations for ozone season operation are: (permitted lb/MMBtu x max firing rate x 3,672 hours/ozone season / 2000 lb/ton conversion) = 3,084 tons NO <sub>x</sub> /ozone season.	3,084	112	Y
NRG Canal Station 2	1599	5,973 (NG); 5,682 (ULSD)			31	Y
Peabody Municipal Light Plant Waters River 1	1678	224 (at ISO conditions); 321.9 (max firing rate)	There are no specific startup or shutdown emission restrictions for these units. Both units have a restriction of less than 4,519 lb/day NO <sub>x</sub> ; EU2 has a restriction of 2,500 hours/ 12 month rolling period and a 12 month rolling period restriction of 59.6 tons NO <sub>x</sub> - this is approx. 26 days in the ozone season. Calculations for ozone season operation are: 59.6 tons in ozone season emissions for EU2. Calculations for ozone season operations for EU1 are: (direct permitted lb/day x max firing rate x (153days/ ozone season -26 days/year restriction) / 2000 lb/ton conversion) = 287 tons NO <sub>x</sub> /ozone season.	287	1	Y
Peabody Municipal Light Plant Waters River 2	1678	412 (at ISO conditions); 485.9 (max firing rate)			60	2

Unit	ORISPL Code <sup>1</sup>	Heat Input Rating from Facility's Operating Permit (MMBtu/hr)	Emissions Restrictions from Facility's Operating Permit	Permitted Ozone Season Emissions from Operating Permit (NO <sub>x</sub> tons)	2015 CAIR Allocations (NO <sub>x</sub> tons) <sup>2</sup>	MassNO <sub>x</sub> Unit (Y/N)
Pittsfield Generating Company LP 1	50002	430.25	There is an annual 1,325 hr restriction for Oil. Emission restrictions for startups are 244/hr (NG) and 342/hr (Oil). Emission restrictions for regular operations are 0.038 lb/MMBtu (NG) and 0.053 lb/MMBtu (Oil). Calculations for ozone season operation are: (startup permitted oil lb/hr x 3 hours/startup x 153 days/ozone season/ 2000 lb/ton conversion)+ (shut down permitted oil lb/hr x 3hours/shutdown x 153 days/ozone season/ 2000 lb/ton conversion) + (regular operation permitted oil lb/MMBtu x maximum firing rate x 407 hours/ozone season/ 2000 lb/ton conversion ) + (regular operation permitted gas lb/MMBtu x 2347 hours/ozone season/ 2000 lb/ton conversion) = 158 tons NO <sub>x</sub> /ozone season.	158		Y
Pittsfield Generating Company LP 2	50002	430.25	There is an annual 1,325 hr restriction for Oil. Emission restrictions for startups are 244/hr (NG) and 342/hr (Oil). Emission restrictions for regular operations are 0.038 lb/MMBtu (NG) and 0.053 lb/MMBtu (Oil). Calculations for ozone season operation are: (startup permitted oil lb/hr x 3 hours/startup x 153 days/ozone season/ 2000 lb/ton conversion)+ (shut down permitted oil lb/hr x 3hours/shutdown x 153 days/ozone season/ 2000 lb/ton conversion) + (regular operation permitted oil lb/MMBtu x maximum firing rate x 407 hours/ozone season/ 2000 lb/ton conversion ) + (regular operation permitted gas lb/MMBtu x 2347 hours/ozone season/ 2000 lb/ton conversion) = 158 tons NO <sub>x</sub> /ozone season.	158	29	Y

Unit	ORISPL Code <sup>1</sup>	Heat Input Rating from Facility's Operating Permit (MMBtu/hr)	Emissions Restrictions from Facility's Operating Permit	Permitted Ozone Season Emissions from Operating Permit (NO <sub>x</sub> tons)	2015 CAIR Allocations (NO <sub>x</sub> tons) <sup>2</sup>	MassNO <sub>x</sub> Unit (Y/N)
Pittsfield Generating Company LP 3	50002	430.25	There is an annual 1,325 hr restriction for Oil. Emission restrictions for startups are 244/hr (NG) and 342/hr (Oil). Emission restrictions for regular operations are 0.038 lb/MMBtu (NG) and 0.053 lb/MMBtu (Oil). Calculations for ozone season operation are: (startup permitted oil lb/hr x 3 hours/startup x 153 days/ozone season/ 2000 lb/ton conversion)+ (shut down permitted oil lb/hr x 3hours/shutdown x 153 days/ozone season/ 2000 lb/ton conversion) + (regular operation permitted oil lb/MMBtu x maximum firing rate x 407 hours/ozone season/ 2000 lb/ton conversion ) + (regular operation permitted gas lb/MMBtu x 2347 hours/ozone season/ 2000 lb/ton conversion) = 158 tons NO <sub>x</sub> /ozone season.	158		Y
Stony Brook Energy Center 1A (1)	6081	952	Calculations for ozone season operation are: (AP-42 emission factor oil lb/MMBtu x maximum firing rate x hrs of operation/ 2000 lb/ton conversion) = 1,538 tons NO <sub>x</sub> /ozone season.	1,538	22	Y
Stony Brook Energy Center 1B (2)	6081	952	Calculations for ozone season operation are: (AP-42 emission factor oil lb/MMBtu x maximum firing rate x hrs of operation/ 2000 lb/ton conversion) = 1,538 tons NO <sub>x</sub> /ozone season.	1,538	22	Y
Stony Brook Energy Center 1C (3)	6081	952	Calculations for ozone season operation are: (AP-42 emission factor oil lb/MMBtu x maximum firing rate x hrs of operation/ 2000 lb/ton conversion) = 1,538 tons NO <sub>x</sub> /ozone season.	1,538	14	Y

Unit	ORISPL Code <sup>1</sup>	Heat Input Rating from Facility's Operating Permit (MMBtu/hr)	Emissions Restrictions from Facility's Operating Permit	Permitted Ozone Season Emissions from Operating Permit (NO <sub>x</sub> tons)	2015 CAIR Allocations (NO <sub>x</sub> tons) <sup>2</sup>	MassNO <sub>x</sub> Unit (Y/N)
Stony Brook Energy Center 2A (4)	6081	952	Calculations for ozone season operation are: (AP-42 emission factor oil lb/MMBtu x maximum firing rate x hrs of operation/ 2000 lb/ton conversion) = 1,538 tons NO <sub>x</sub> /ozone season.	1,538	1	Y
Stony Brook Energy Center 2B (5)	6081	952	Calculations for ozone season operation are: (AP-42 emission factor oil lb/MMBtu x maximum firing rate x hrs of operation/ 2000 lb/ton conversion) = 1,538 tons NO <sub>x</sub> /ozone season.	1,538	1	Y
Taunton Municipal Light Plant Cleary Flood 8	1682	398	Emission restriction for startup and shut down are 111.4 lb/hr (Oil). Emission restriction for regular operation is 0.28 lb/MMBtu (Oil). Calculations for ozone season operation are: (startup emissions factor lb/hr x 3 hours/startup x 153 days/ozone season/ 2000 lb/ton conversion) + (shut down emissions factor lb/hr x 2 hours/shut down x 153 days/ozone season/ 2000 lb/ton conversion) + (AP-42 emission factor oil lb/MMBtu x maximum firing rate x 19 regular hours/ regular operation x 153 days/ozone season/ 2000 lb/ton conversion) = 205 tons NO <sub>x</sub> /ozone season.	205	1	Y

Unit	ORISPL Code <sup>1</sup>	Heat Input Rating from Facility's Operating Permit (MMBtu/hr)	Emissions Restrictions from Facility's Operating Permit	Permitted Ozone Season Emissions from Operating Permit (NO <sub>x</sub> tons)	2015 CAIR Allocations (NO <sub>x</sub> tons) <sup>2</sup>	MassNO <sub>x</sub> Unit (Y/N)
Taunton Municipal Light Plant Cleary Flood 9	1682	1,034	<p>There is an annual restriction of 1,636 tpy NO<sub>x</sub>. Emission restrictions for startup and shut down are 289.5 lb/hr (oil). Emission restriction for regular operation is 0.28 lb/MMBtu (oil). Calculations for ozone season operation are: (startup emissions factor lb/hr x 3 hours/startup x 153 days/ozone season/ 2000 lb/ton conversion) + (shut down emissions factor lb/hr x 2 hours/shut down x 153 days/ozone season/ 2000 lb/ton conversion) + (AP-42 emission factor oil lb/MMBtu x maximum firing rate x 19 regular hours/ regular operation x 153 days/ozone season/ 2000 lb/ton conversion) = 532 tons NO<sub>x</sub>/ozone season.</p>	532	14	Y