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Plan Approval Overview and Applicability Tables

Air Pollution Control Requirements for Construction, Substantial Reconstruction or Alteration of Facilities that Emit Air Contaminants

March 2018

This guidance document is intended for general reference only and does not represent a full and complete statement of the technical or legal requirements associated with applicable regulations.

This information is available in alternate format. Contact Michelle Waters-Ekanem, Director of Diversity/Civil Rights at 617-292-5751.

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Plan Approval Overview

This guidance document provides a broad overview of the requirements for obtaining a written Plan Approval from the Massachusetts Department of Environmental Protection (MassDEP) as contained in the agency's air pollution control regulations at [310 CMR 7.02\(1\) through \(8\)](#). For more in-depth information, follow the provided web links.

Under the federal Clean Air Act (CAA) and U.S. Environmental Protection Agency (EPA) regulations ([40 CFR 51.160](#)), each state is required to develop procedures for determining whether construction or modification of facilities will violate applicable portions of its air pollution control strategy (including its State Implementation Plan or SIP) or will interfere with attainment and maintenance of the National Ambient Air Quality Standards (NAAQS) established by the CAA.

Who Needs to Apply

The types of facilities and equipment required to obtain Plan Approvals from MassDEP – based on their associated capacity ranges and emissions levels – can be found at [310 CMR 7.02\(4\)\(a\)](#) for Limited Plan Applications (LPAs) and [310 CMR 7.02\(5\)\(a\)](#) for Comprehensive Plan Applications (CPAs). Exemptions are listed at [310 CMR 7.02\(2\)](#). This document includes reference tables to help you determine whether your proposed emission unit or facility is subject to these requirements or exempt from them by rule or category.

Please note that MassDEP may also require a CPA for a new or existing facility in cases where emissions are lower than any threshold contained in the regulations, if the agency determines that the emissions will cause or contribute to a condition of air pollution (e.g. create a nuisance), or have the potential to do so.

Preparing the Application

If your emission unit or facility is subject to MassDEP Plan Approval requirements, you will need to submit a completed Limited Plan Application (LPA) for [Fuel Utilization](#) or [Process Emissions](#), or Comprehensive Plan Application (CPA) for [Fuel Utilization](#), [Process Emissions](#) or [Crematory](#) via the [EEA ePlace Portal](#). See the Plan Approval Applicability Tables in this document for additional information.

At a minimum, the LPA or CPA form you submit must:

- Be signed by a responsible official (an executive or other person with legal authority to make commitments on behalf of the entity that controls the equipment or facility);
- Certify that every Massachusetts facility controlled by, or under common control with, your organization is either currently in compliance with all applicable [310 CMR 7.00](#) et. seq. or on a MassDEP-approved compliance schedule; and
- Provide a description of the proposed project, including calculations of its expected emissions.

The application should propose short- and long-term emission limits based on the maximum rated capacity of the emission unit or facility, taking into account air pollution control devices, inherent limitations in operation, and enforceable restrictions on capacity or emissions.

You should contact the appropriate [MassDEP Regional Office](#) early in the process of preparing to apply for a Plan Approval. A pre-application conference can save you time by ensuring a complete application is filed, which can result in faster processing by the agency. If you submit an application without scheduling such a meeting, MassDEP may require one, anyway, before it can determine whether your application is administratively complete.

For a general overview of the application, review and approval permitting process, see: [MassDEP Permitting Assistance](#).

MassDEP Review and Approval

In reviewing your LPA or CPA, MassDEP must determine that the emission unit or facility will:

- Comply with Best Available Control Technology (BACT).
- Comply with all applicable performance standards at [310 CMR 7.00](#) et. seq.;
- Not cause a condition of air pollution (e.g., create a nuisance) or contribute to violations of Massachusetts or National Ambient Air Quality Standards; and
- Maintain documentation of monitoring, testing and reporting to demonstrate compliance with MassDEP regulations and the Plan Approval.

The Plan Approval must require compliance with BACT or the more stringent Lowest Achievable Emission Rate (LAER) when the project is subject to [310 CMR 7.00](#) Appendix A (Nonattainment New Source Review).

BACT may not be less stringent than any other applicable performance standard(s) either in MassDEP regulations (e.g. [310 CMR 7.05](#) sulfur limit in fuel or [310 CMR 7.18](#) Reasonably Available Control Technology (RACT) for volatile organic compound (VOC) emissions), [310 CMR 7.19](#) RACT for Sources of Oxides of Nitrogen (NO_x), or federal regulations (e.g., 40 CFR 60 New Source Performance Standards, 40 CFR 63 Maximum Achievable Control Technology (MACT) for Hazardous Air Pollutants (HAPs)).

Also as part of our review of your plan application, MassDEP may require you to conduct a modeling analysis to demonstrate that your emission unit or facility will not violate National Ambient Air Quality Standards (NAAQS) for carbon monoxide, sulfur dioxide, particulate matter (PM₁₀), fine particulates (PM_{2.5}), nitrogen dioxide, ozone and lead. In addition, acoustic modeling may be required to demonstrate that sound emissions from your proposed project, after control, will not cause noise. Consult with your [MassDEP Regional Office](#) to determine if air quality or acoustic modeling will be required.

Plan Approvals usually include short-term (e.g., hourly) and long-term (e.g., annual or rolling 12-consecutive-month) emission limits that must be complied with and tracked or documented through monitoring, record keeping, reporting or testing. You should propose limits as part of your application. These limits are necessary to make the MassDEP approval enforceable as a practical matter, as required by EPA.

MassDEP may impose more stringent emission limits than proposed in your application if it determines that they are necessary to prevent emissions from violating a NAAQS or from causing or contributing to a condition of air pollution (e.g., creating a nuisance).

Term of Plan Approval

MassDEP's written approval of your LPA or CPA is valid for the life of the emission unit or facility, even if there is a change of ownership, unless:

- You modify equipment in such a way as to require a new Plan Approval (see [310 CMR 7.02\(4\)\(a\)3.](#) or [7.02\(5\)\(a\)8.](#)), or
- You are reactivating an emission unit that has been inactive for two years or longer (see [310 CMR 7.02 \(3\)\(m\)](#)).

MassDEP may revoke a Plan Approval if you do not start construction within two years of the issuance date or you suspend construction, once underway, for one year or longer (see [310 CMR 7.02\(3\)\(k\)](#)).

Other Approvals

Obtaining a written Plan Approval from MassDEP does not negate the need for you to obtain other approvals and/or permits that might be required on the local, state or federal levels.

In addition to the state Plan Approval requirement, a proposed source of air pollution with greater magnitude of emissions must comply with EPA [New Source Review \(NSR\) regulations](#), which are two distinct programs that may apply simultaneously to a project:

- [Prevention of Significant Deterioration](#) (PSD) applies to a project that will emit pollutants or their precursors for which EPA has adopted [National Ambient Air Quality Standards](#) (NAAQS) and is located in an “attainment” or “unclassified” area, or will emit certain other pollutants regulated under the federal Clean Air Act, including greenhouse gases. MassDEP administers the federal PSD program under [40 CFR 52.21](#) via a [delegation agreement](#) with EPA.
- [Nonattainment New Source Review](#) (NNSR) applies to a project that will emit criteria pollutants or their precursors at “major” levels and will be located in an area classified as “nonattainment.” MassDEP administers the NNSR program under [310 CMR 7.00 Appendix A](#).

Facilities in certain air emissions source categories (e.g., electric utility plants subject to the acid rain program) or with potential emissions at or above listed thresholds – are subject to [310 CMR 7.00 Appendix C](#) (the MassDEP [“Title V” Operating Permit Program](#)). See [310 CMR 7.00 Appendix C\(2\)](#)

If your emission unit or facility is subject to the Operating Permit Program, you must submit an [application](#) within one year of commencing operations of the facility or portion thereof that triggered Operating Permit requirements. MassDEP recommends, however, that you submit the Operating Permit application concurrently with your LPA or CPA within the required one year timeline.

Plan Approval Applicability Tables

The types of facilities and equipment for which owners or operators must obtain a Plan Approval from MassDEP can be found at [310 CMR 7.02\(4\)\(a\)](#) for Limited Plan Applications (LPAs) and [310 CMR 7.02\(5\)\(a\)](#) for Comprehensive Plan Applications (CPAs). The specific application form you need to use may depend on the associated capacity ranges and emissions levels of your proposal.

For some categories of emission units and facilities, there is an available alternative to or exemption from Plan Approval requirements:

- For some common types of equipment, MassDEP has established performance standards at [310 CMR 7.03](#) (Permit-By-Rule) that a facility operator may comply with as an alternative to obtaining a Plan Approval. See Page 5 for a table of Permit-by-Rule emission units and facilities.
- Owners or operators of other specific types of emission units must comply with the requirements established at [310 CMR 7.26](#) (part of the [Environmental Results Program \(ERP\)](#)), which include filing an annual or one-time certification documenting compliance with MassDEP performance standards in lieu of obtaining a Plan Approval. See Page 7 for a table of ERP emission units and facilities.

Other exemptions from Limited Plan Application are listed at [310 CMR 7.02\(2\)](#).

Please note that under some circumstances, these exemptions are not available. For example:

- Projects that would otherwise qualify for Permit-By-Rule or ERP might still trigger PSD or NANSR, or cause the facility to become subject to [310 CMR 7.00 Appendix C](#), any of which unconditionally triggers MassDEP Plan Approval requirements.
- Installation of a boiler that meets ERP applicability criteria but occurs at a facility subject to a MassDEP Air Quality Operating Permit under [310 CMR 7.00 Appendix C](#) is not eligible for ERP and requires a Plan Approval.

Refer to the actual regulation for a definitive applicability determination for a particular project.

Permits-By-Rule

For specific types of equipment or operations with potential emissions that would otherwise trigger Plan Approval requirements, MassDEP provides an alternative compliance pathway. The regulation at [310 CMR 7.03](#) establishes performance standards and requirements for record keeping, testing and monitoring, as well as emissions caps or usage limitations for specific types of equipment.

If a facility owner or operator chooses to comply with these so-called “permit-by-rule” standards in lieu of submitting a plan application, they must maintain sufficient records to demonstrate compliance, and report the installation of equipment in accordance with 310 CMR 7.03, in the facility’s next required [Source Registration](#) ([310 CMR 7.12](#)) filing.

Construction, substantial reconstruction or alteration, and operation, of equipment or facilities in the following categories is allowed under permit-by-rule, provided you comply with specified emissions and operating limits, and record keeping requirements:

| Permits-By-Rule | |
|--|--|
| Type of Facility/Project | Operating Parameters/Requirements |
| Ancillary Printing Operation at a Manufacturing Facility 310 CMR 7.03(15), (19) | Emissions or product usage within parameters established at 310 CMR 7.03(15) for non-heatset offset lithography and 310 CMR 7.03(19) for flexographic, gravure, letterpress or screen printing |
| <p>Biotechnology Surface Disinfection Processes used in making any of the following medical device, drug, or biologic products:</p> <ol style="list-style-type: none"> a product derived in whole or in part from biotechnology (defined as the use of cellular and molecular processes from living systems to make or assist in making product), and one of the following applications or notices has been filed with U.S. Food and Drug Administration (FDA) for such product: <ol style="list-style-type: none"> Investigational New Drug Application, Investigational Device Exemption Notice, New Drug Application, a premarket approval application, or premarket notification pursuant to section 510(k) of the federal Food, Drug and Cosmetic Act (510(k)) (including an FDA approved exemption from the 510(k) premarket notification requirement). <p>310 CMR 7.03(25)</p> | <p>Facility-wide emissions (rolling 12-month/calendar month) less than:</p> <p>VOC* - 15 tons/2.5 tons</p> <p>Total HAPs - 15 tons/3 tons</p> <p>Individual HAP - 9 tons/2 tons</p> <p><i>*or limit organic material usage to less than 10 tons per 12-month period</i></p> <p>and conform to 310 CMR 7.03(25)(b)5 work practice standards</p> |
| Boiler (Temporary) 310 CMR 7.03(23) | Where boiler is no longer available due to circumstances beyond owner/operator control, provided: heat input capacity and fuel sulfur content ≤ boiler replaced, temporary installation ≤ 120 days (extension available), compliance with all other requirements that applied to boiler being replaced |
| Contaminated Groundwater Treatment or Soil Venting Systems 310 CMR 7.03(17) | Continuous VOC reduction in effluent air stream ≥ 95% by carbon adsorption, incineration or equivalent, with specified instrumentation |
| Corona Surface Treatment Device 310 CMR 7.03(21) | Bare-roll or covered-roll with catalytic ozone decomposer designed for 99.9% ozone reduction or 0.1 ppm emission limit |
| Degreaser 310 CMR 7.03(8) | Solvent consumption rate less than 100 gallons per month, in compliance with 310 CMR 7.18(8) equipment, operating & work practice requirements |
| Dry Material Conveyors & Storage (Except Silos) 310 CMR 7.03(22) | Fabric filter or equivalent device particulate control efficiency > 99.5%, no visible emissions, in compliance with noise prevention requirements of 310 CMR 7.10. Not available for SIC Major Groups 1400 (Mining), 2900 (Petroleum & Coal Products) or 3200 (Stone, Clay & Glass Products). |

| Permits-By-Rule | |
|---|---|
| Type of Facility/Project | Operating Parameters/Requirements |
| Dry Material Storage Silo 310 CMR 7.03(12) | Fabric filter particulate control efficiency > 99.5% |
| Fuel Cell 310 CMR 7.03(18) | Emissions not to exceed: NOx - 0.03 lb/MWh CO - 0.05 lb/MWh Non-methane organic compounds - 0.008 lb/MWh |
| Lead Melt Pot 310 CMR 7.03(11) | Fabric filter particulate control efficiency > 99.5% |
| Motor Vehicle Fuel Dispensing 310 CMR 7.03(13) | Stage I vapor collection and control system in compliance with 310 CMR 7.24(3), notification to MassDEP |
| Paint Spray Booth 310 CMR 7.03(16) | Painting products in specified VOC RACT categories (310 CMR 7.18) with compliant coatings provided: Facility-wide VOC-containing coating usage < 670 gallons/month or VOC emissions < 2.5 tons/ month, or facility-wide organic material (including VOC)-containing coating usage < 2000 gallons/12-months or organic material (including VOC) emissions < 10 tons/12-months. Must meet detailed emission control and work-practice standards |
| Rock Crushing or Processing Equipment Replacement 310 CMR 7.03(26) | Existing facility operating with written Plan Approval under 310 CMR 7.02 specifying no increase in capacity or emissions, compliance with conditions of Plan Approval for original equipment and opacity < 10% at all times |
| Wave Solder Operation 310 CMR 7.03(9) | Oil-less or flux consumption rate < 200 gallons per month including thinner and electrostatic precipitator with particulate control efficiency > 90% or no visible emissions |
| Welding Equipment 310 CMR 7.03(24) | Rod usage ≤ 10 tons per year and welding station vent system with particulate collection device ≥ 90 % efficiency |

Environmental Results Program (ERP)

The MassDEP Environmental Results Program (ERP, found at [310 CMR 7.26](#)) – which replaces project- or facility-specific Plan Approval with sector-wide environmental performance standards and one-time or annual certifications of compliance – applies to specific types of equipment and processes. ERP's annual certification program is mandatory for covered sectors. ERP's one-time certification program is mandatory for those sources that elect to install covered equipment.

How ERP performance standards apply depends on the particular source category:

- For dry cleaners using perchloroethylene and commercial printers – annual certification is required regardless of whether the equipment is new or existing.
- For fuel combustion categories – boilers, engines and turbines – one-time certification is required before installation, or within 60 days after installation for emergency engines and turbines. The certification covers equipment emissions guarantees, exhaust stack configuration, and operation.

| Environmental Results Program (ERP) | | | |
|--|-------------------------------|--|---------------------|
| Equipment/ Facility Type | Fuel Type (if applicable) | Emissions/ Parameters | Approval Needed |
| Dry Cleaning (Dry-to-Dry Perchloroethylene) | N/A | Any | ERP |
| Commercial Printing (Heatset) | N/A | ≤ 10 Tons VOC Facility-Wide per Rolling 12-Month Period, except Very Small Printers exempt (see below) | ERP |
| Commercial Printing (Non-Heatset) | N/A | <p>< 50 Tons VOC or NO_x , < 10 Tons any HAP, < 25 Tons Combined HAPs, or < 100 Tons any Regulated Air Pollutant</p> <p>per Rolling 12-Month Period, except Very Small Printers* that are exempt:</p> <p>*(a) connected to municipal sewer; (b) uses ≤ 55 gallons cleanup solution plus inks/coatings/ adhesives with VOC content > 10% by weight as applied per rolling 12 month period (excluding Incidental material, ink used in non-heatset offset lithographic printing, water- based ink/coating/adhesive, plastisol and ultraviolet ink); (c) uses ≤ 55 gallons alcohol per rolling 12 month period; and (d) generates ≤ 55 gallons hazardous waste per rolling 12 month period.</p> | ERP |
| Boiler (New) (Except under 310 CMR 7.00, Appendix C) | Natural Gas/ ULSD Fuel Oil | ≥ 10 Million to < 40 Million Btu/hr | ERP |

| Environmental Results Program (ERP) | | | |
|-------------------------------------|-------------------------------|--|---------------------|
| Equipment/ Facility Type | Fuel Type (if applicable) | Emissions/ Parameters | Approval Needed |
| Engine, Emergency | Natural Gas/ ULSD Fuel Oil | ≥ 37 Kilowatts (Rated Mechanical Power Output) | ERP |
| Engine, Non-Emergency | Natural Gas/ ULSD Fuel Oil | ≥ 50 Kilowatts (Rated Mechanical Power Output) | ERP |
| Turbine, Emergency | Natural Gas/ ULSD Fuel Oil | < 1 Megawatt | ERP |
| Turbine, Non-Emergency | Natural Gas/ ULSD Fuel Oil | < 10 Megawatts | ERP |

Facilities Subject to Plan Approval Requirements

The tables below specify some of the more common types of emission units and facilities for which a written MassDEP Plan Approval is required.

| Fuel Utilization Facilities | | | |
|---------------------------------------|---|--|--|
| Equipment/Facility Type | Fuel Type | Parameters | Approval Needed* |
| Boiler (Operating Permit Facility) | Distillate Fuel Oil | ≥ 10 Million to < 40 Million Btu/Hour | LPA-FUEL ¹ |
| Boiler | Distillate Fuel Oil | ≥ 40 Million Btu/Hour | CPA-FUEL ² |
| Boiler (Operating Permit Facility) | Natural Gas/Propane | ≥ 10 Million to < 40 Million Btu/Hour | LPA-FUEL ¹ |
| Boiler | Natural Gas/Propane | ≥ 40 Million Btu/Hour | CPA-FUEL ² |
| Boiler | Residual Fuel Oil (≤ 0.5% Sulfur) | ≥ 20 Million Btu/Hour | CPA-FUEL ² |
| Boiler | Residual Fuel Oil (≤ 1% Sulfur) | ≥ 10 Million Btu/Hour | CPA-FUEL ² |
| Boiler | Used Oil | ≥ 3 Million to < 10 Million Btu/Hour | LPA-FUEL ¹ |
| Crematory | Natural Gas | Any | CPA-CREMATORY ³ |
| Engine | Any diesel, natural gas, propane, or biofuel (including landfill or digester gas or liquid biofuel) | ≥ 50 Kilowatts (Rated Mechanical Power Output) if not certifying under ERP | CPA-FUEL ² |
| Turbine | Any diesel, natural gas, propane, or biofuel (including landfill or digester gas or liquid biofuel) | <10 Megawatts (if not certifying under ERP) ≥ 10 Megawatts | CPA-FUEL ² |
| Boiler | Residual fuel oil (> 1% sulfur), hazardous waste fuel, landfill gas, digester gas, automatic feed solid fuel (Including Biomass) | ≥ 3 Million Btu/Hour | CPA-FUEL ² |
| Boiler | Hand-Fired Solid Fuel (Including Biomass) | ≥ 1 Million Btu/Hour | CPA-FUEL ² |
| Incinerator (Except Crematory) | Any | Any | CPA-FUEL ² |
| Turbine, Emergency | Any | >1 Megawatt | CPA-FUEL ² |

| Fuel Utilization Facilities | | | |
|-----------------------------|-----------|---------------|---------------------------------------|
| Equipment/Facility Type | Fuel Type | Parameters | Approval Needed* |
| Turbine, Non-Emergency | Fuel Oil | < 1 Megawatt | CPA-FUEL ² |
| Turbine, Non-Emergency | Any | >10 Megawatts | CPA-FUEL ² |

1. LPA-FUEL (AQ 01): Limited Plan Application for Fuel Utilization Emission Units*

2. CPA-FUEL (AQ 02 Non-Major, AQ 03 Major): Comprehensive Plan Application for Fuel Utilization Emission Units*

3. CPA-CREMATORY (AQ 02 Non-Major, AQ 03 Major): Comprehensive Plan Application for a Crematory

| Process Emission Units | | |
|------------------------|--|--|
| Equipment Type | Emissions | Approval Needed* |
| Any Non-Combustion | ≥ 1 Ton to <10 tons of an Air Contaminant in any Consecutive 12-Month Period | LPA-PROCESS ¹ |
| Any Non-Combustion | ≥ 10 Tons of an Air Contaminant in any Consecutive 12-Month Period | CPA-PROCESS ² |

1. LPA-PROCESS (AQ 01): Limited Plan Application for Process Emission Units*

2. CPA-PROCESS (AQ 02 Non-Major, AQ 03 Major): Comprehensive Plan Application for Process Emission Units