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Plan Approval Overview & Applicability Tables

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

June 2011

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.

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.

EPA has found that the MassDEP Plan Approval and Emissions Limitations Regulation ([310 CMR 7.02](#)) meets CAA requirements and also ensures that emissions will not cause a condition of air pollution (i.e. create a nuisance).

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 the facility's, equipment's or operation's 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.

For additional information, see the Plan Approval Applicability Tables beginning on Page 4 of this document.

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 \(LPA\)](#) or [Comprehensive Plan Application \(CPA\)](#) to the agency, and any supplemental or pollution control device forms that may apply. See the Plan Approval Applicability Tables beginning on Page 4 of 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, spare you frustration, and often results 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: Getting Started](#)

MassDEP Review & 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, noise modeling may be required to demonstrate that sound emissions from your proposed project, after control, will not exceed MassDEP noise guidelines. Consult with your [MassDEP Regional Office](#) to determine if modeling will be required.

When we approve your plan application, MassDEP will delineate specific short- and 12-month rolling period 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 we determine 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](#), two distinct programs, which 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 Part 52, section 52.21, under a delegation agreement with EPA.
- Nonattainment New Source Review (NA NSR) 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 NA NSR 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.

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Plan Approval Applicability Tables

As indicated earlier in this document, 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 are listed at [310 CMR 7.02\(2\)](#). Please note that under some circumstances, these exemptions are not available. For example:

- Emission increases that would otherwise qualify for Permit-By-Rule or ERP might still be subject to federal Prevention of Significant Deterioration (PSD) or Nonattainment New Source Review (NA NSR), either 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.

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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/operator chooses to comply with these so-called “permit-by-rule” standards in lieu of submitting a plan application, s/he 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 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 (Non-Commercial) Printing Operation at Non-Printing 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
Biotechnology Surface Disinfection Processes (as Defined) 310 CMR 7.03 (25)	Facility-wide emissions (rolling 12-month/calendar month) less than: VOC* - 15 tons/2.5 tons Total HAPs - 15 tons/3 tons Individual HAP - 9 tons/2 tons <i>*or limit organic material usage to less than 10 tons per 12-month period & conforming to 310 CMR 7.03(25)(b)5 work practice standards</i>
Boiler (Temporary) 310 CMR 7.03 (23)	Where boiler is no longer available due to circumstances beyond owner/operator control, provided: heat input capacity & 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

Table Continued on Page 6 ►

Permits-By-Rule	
Type of Facility/Project	Operating Parameters/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).
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 or Stage II vapor collection & control system in compliance with 310 CMR 7.24(2) & (6), 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 & 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 & 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 & electrostatic precipitator with particulate control efficiency > 90% or no visible emissions
Welding Equipment 310 CMR 7.03 (24)	Rod usage ≤ 10 tons per year & welding station vent system with particulate collection device ≥ 90 % efficiency

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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. Participation in ERP is mandatory.

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

- For some – commercial printers and dry cleaners using perchloroethylene, in particular – both existing and new equipment is subject to the same requirements.
- For other categories – boilers, engines, turbines and outdoor hydronic heaters – ERP standards apply to newly installed equipment and its subsequent operation.

Construction/installation, substantial reconstruction or alteration of the equipment and facilities categories summarized in the table below are authorized and may proceed under ERP without Plan Approvals:

Environmental Results Program (ERP)			
Equipment/ Facility Type	Fuel Type (if applicable)	Emissions/ Parameters	Approval Needed
Boiler (New) (Not 310 CMR 7.00, Appendix C)	Natural Gas/ ULSD Fuel Oil	≥ 10 Million to < 40 Million Btu/hr	ERP
Commercial Printing (Heatset)	N/A	≤ 10 Tons VOC Facility-Wide per Rolling 12-Month Period	ERP
Commercial Printing (Non-Heatset)	N/A	< 50 Tons VOC or NO _x , < 10 Tons any HAP, < 25 Tons Combined HAPs, or < 100 Tons any Regulated Air Pollutant per Rolling 12-Month Period	ERP
Dry Cleaning (Dry-to-Dry Perchloroethylene)	N/A	Any	ERP
Engine, Emergency	Any	≥ 37 Kilowatts (Rated Power Output)	ERP
Engine, Non-Emergency	Any	≥ 50 Kilowatts (Rated Power Output)	ERP
Outdoor Hydronic Heater (Wood-Fired Boiler)	Wood/Biomass	< 1 Million Btu/Hour	ERP
Turbine, Emergency	Any	< 1 Megawatt	ERP
Turbine, Non-Emergency	Any	<10 Megawatts	ERP

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Facilities Subject to Plan Approval Requirements

The tables below and on Page 9 specify some of the more common types of emission units and facilities for which a written MassDEP Plan Approval is required. Please note that some plan applications may need to be accompanied by supplemental and/or pollution control device forms. See Page 10 for additional information.

Fuel Utilization Facilities			
Equipment/Facility Type	Fuel Type	Parameters	Approval Needed*
Boiler (Operating Permit Facility)	Distillate Fuel Oil	≥ 10 Million to < 30 Million Btu/Hour	LPA-FUEL ¹
Boiler (Operating Permit Facility)	Distillate Fuel Oil	≥ 30 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, Non-Emergency (Before 3/23/2006)	Any	≥ 3 Million Btu/Hour	CPA-FUEL ²
Engine/Turbine	Landfill/Digester/ Biogas/Biofuel	Any	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
Turbine, Non-Emergency	Fuel Oil	< 1 Megawatt	CPA-FUEL ²
Turbine, Non-Emergency	Any	>10 Megawatts	CPA-FUEL ²

Plan Approval Overview & Applicability Tables

1. LPA-FUEL (BWP AQ 01): Limited Plan Application for Fuel Utilization Emission Unit(s)*
2. CPA-FUEL (BWP AQ 02 Non-Major, BWP AQ 03 Major): Comprehensive Plan Application for Fuel Utilization Emission Unit(s)*
3. CPA-CREMATORY (BWP AQ 02 Non-Major, BWP AQ 03 Major): Comprehensive Plan Application for a Crematory

*Note: You may also need to submit one or more supplemental and/or pollution control device forms. See Page 10.

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

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

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

*Note: You may also need to submit one or more supplemental and/or pollution control device forms. See Page 10.

Continue to Page 10 for Supplemental & Pollution Control Device Forms ►

Supplemental & Pollution Control Device Forms

Depending on the emission unit or facility, its associated equipment and various regulatory requirements, it is also likely that you will need to submit one or more supplemental and/or pollution control device forms along with your LPA or CPA:

Supplemental Forms	
If Your Project Includes or Requires:	You Must File Form(s):
A spray painting, surface coating and/or printing operation	BWP AQ - Coatings & Inks
Stationary equipment having the potential to cause noise	BWP AQ - Sound
A top-down, case-by-case Best Available Control Technology (BACT) analysis	BWP AQ - BACT

Pollution Control Devices	
If Your Project Includes:	You Must File Form(s):
Wet or Dry Scrubbers	BWP AQ Scrubber
Cyclone or Inertial Separators	BWP AQ Cyclone
Fabric Filter	BWP AQ Baghouse/Filter
Adsorbers	BWP AQ Adsorption Equipment
Afterburners or Oxidizers	BWP AQ Afterburner/Oxidizer
Electrostatic Precipitators	BWP AQ Electrostatic Precipitator
Selective Catalytic Reduction	BWP AQ Selective Catalytic Reduction
Sorbent/Reactant Injection	BWP AQ Sorbent/Reactant Injection