



BWP AQ 14 Operating Permit Application Instructions and Supporting Materials

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Introduction

MassDEP *Permit Applications*, as well as *Instructions & Support Materials*, are available for download from the MassDEP Web site at mass.gov/dep in two file formats: Microsoft Word™ and Adobe Acrobat PDF™. Either format allows documents to be printed.

Instructions & Support Materials files in Microsoft Word™ format contain a series of documents that provide guidance on how to prepare a permit application. Although we recommend that you print out the entire package, you may choose to print specific documents by selecting the appropriate page numbers for printing.

Permit Applications in Microsoft Word™ format must be downloaded separately. Users with Microsoft Word™ 97 or later may complete these forms electronically.

Permitting packages in Adobe Acrobat PDF™ format combine *Permit Applications* and *Instructions & Support Materials* in a single document. Adobe Acrobat PDF™ files may only be viewed and printed without alteration. *Permit Applications* in this format may not be completed electronically.



BWP AQ 14

Permit Fact Sheet

1. What is the purpose of this permit?

The purpose of an Operating Permit is to compile all approvals, permits and requirements relating to air pollution for a facility in one enforceable permit.

Operating Permits were mandated for major sources of air pollution by the Clean Air Act Amendments of 1990. Massachusetts implements this program in 310 CMR 7.00: Appendix C of its Air Pollution Control Regulations.

2. Who must apply?

The owner or operator of a facility which is a major source of air pollution or any new proposed major source of air pollution must apply. The definition of major can be found in the regulations. In general, a major source as defined in Appendix C includes:

Facilities with the Potential to Emit one or more of the following:

- 50 ton per year of VOC
- 50 ton per year of NO_x
- 10 ton per year of a single Hazardous Air Pollutant
- 25 ton per year of all Hazardous Air Pollutants combined
- 100 ton per year of any other pollutant

3. What other requirements should be considered when applying for this permit?

None.

4. What is the application fee?

The application fee for an operating permit is based on a formula that takes into account actual emissions, emission units and control equipment.

The formula is $(AA \times \$9) + (EC \times \$549) + (EU \times \$405)$ but not less than \$2,312; where AA is the Adjusted Actual Emission tons per year of criteria pollutants, excluding carbon monoxide, capped at 4,000 tons/year per pollutant; and EC is an Emission Unit with Air Pollution Control Equipment; and EU is an Emissions Unit with no Air Pollution Control Equipment. Further definitions are found in 310 CMR 7.00. A fee calculation page (Section M) is included in the application form.

Only Emission Units subject to the Operating Permit program are included in the fee calculations (i.e. fee calculations using EC or EU should not include exempt activities). Several Emission units connected to one control device are counted as multiple ECs. Emissions from units not in the operating permit program are not included in the fee calculation.

For AA, use emissions from the previous year, as reported on the facilities Emission Statement - less any emissions from units not subject to the Operating Permit Program.

5. What is the Primary Permit Location? What is the Reserve Copy Location?

Primary Permit Location:
Dep't. of Environmental Protection
_____* Regional Office
Air Quality Control

Reserve Copy Location:
Dep't. of Environmental Protection
_____* Regional Office
Air Quality Control



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Permit Fact Sheet

*Find your region: <http://mass.gov/dep/about/region/findyour.htm>

As evident above, all completed application packages should be submitted in duplicate (one primary copy, one reserve copy) to the appropriate regional office for review and approval. You are also required to submit a copy of the application to EPA Region I.

Upon approval of the application, MassDEP stamps the photocopy and returns it to you for your records. In this manner, MassDEP and the applicant have identical copies of the approved submittal.

You must use Form BWP AQ 14 - Operating Permit when filing.

6. Where can I get a copy of the timelines?

The timelines are available on the MassDEP Website: www.mass.gov/dep/service/online/fees.htm

7. What is the annual compliance fee?

The amount of the annual compliance assurance fee is calculated using the formulas found at 310 CMR 4.03(2) Fee Amounts by Permit Category. If you fail to pay the annual compliance assurance fee, your facility's operating permit could be suspended or revoked.

8. How long is this permit in effect?

The permit is in effect for five years unless:

- otherwise stated in the permit; or
- if modifications to the facility require that a new or modified permit be issued.

9. How can I avoid the most common mistakes made in applying for these permits?

- Answer all questions on the application form and indicate "N/A" (not applicable) where appropriate.
- Submit all supplementary information requested in the application.
- Submit two copies of the application to the regional office for review. Find your region: <http://mass.gov/dep/about/region/findyour.htm>
- Submit fee and one copy of the MassDEP Transmittal Form <http://mass.gov/dep/service/online/trasmfrm.shtml> to: Department of Environmental Protection, P. O. Box 4062, Boston, MA 02211.

10. What are the regulations that apply to these permits? Where can I get copies?

These regulations include, but are not limited to:

- Air Pollution Control Regulations, 310 CMR 6.00 - 8.00
- Timely Action and Fee Provisions, 310 CMR 4.00.

These may be purchased at:

State Bookstore (in State House)
Room 116
Boston, MA 02133
617-727-2834
617-727-2835

State Bookstore
436 Dwight Street
Springfield, MA 01103
413-784-1376



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Instructions

Operating Permit Application

Instructions and guidance for completing an operating permit application are provided in this document, and its Appendices A – D.

General Instructions

The Operating Permit (OP) application is, essentially, a compilation of information about all Emission Units, existing approvals and requirements for those units at the facility.

As such, the OP application will resemble, in part, the information submitted by the facility in the existing Department inventory forms (Emission Statement forms AP-SR, AP-1, AP-2, AP-3, AP-4, etc). Any discrepancies reported between your Emission Statement filing and this OP application will result in delays and possible disapproval of your application. You are advised to compare the two submittals and address any inconsistencies and/or omissions.

An Operating Permit, in itself, will not impose any additional restrictions or limitations on operations at the facility. A facility may choose to propose alternative limits for purposes of flexible operations or to restrict allowable emissions. Flexible operational limits or a new restriction on emissions is not mandatory.

However, existing limits on a facility may be found unenforceable due to the nature of the limit, the method of limitation or the monitoring of the limit. In such cases, the existing limit may have to be modified to remedy such a deficiency. Such modifications, however, will be done to achieve an equivalent, but federally enforceable, limit.

Refer to instructions for Sections E through I for details on alternative, new and federally enforceable limits.

New equipment or unapproved equipment cannot be approved in the Operating Permit alone. Refer to new construction approvals (310 CMR 7.02) and permit categories for more information.

Not all questions asked in the operating permit application will be relevant to all facilities. For example, an emission unit may not have any operating restrictions. However, do not leave any spaces blank. In those cases where the question is not relevant, enter "Not Applicable" in the space provided.



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Application Completeness Checklist

- The MassDEP Transmittal Form is completed: <http://mass.gov/dep/service/online/trasmfrm.shtml>
- All applicable questions have been completed or “Not Applicable” has been inserted where appropriate.
- A signature of the appropriate responsible official has been included even if an agent has been hired to complete the application. See definitions in 310 CMR 7.00.
- The Operating Permit application has been completed. This includes all of the following sections, according to the type of equipment present:

| | Section: | | | | | | | | | | | | |
|---|----------|---|---|---|---|---|---|---|---|---|---|---|---|
| Type of Equipment: | A | B | C | D | E | F | G | H | I | J | K | L | M |
| All facilities | X | X | X | X | | | | | | X | X | X | X |
| Each boiler | | | | | X | | | | | | | | |
| Each process equipment | | | | | | X | | | | | | | |
| Each incinerator | | | | | | | X | | | | | | |
| Each organic liquid storage tank | | | | | | | | X | | | | | |
| Each miscellaneous (other) storage unit | | | | | | | | | X | | | | |

- You have attached all relevant calculations used to complete this application.

If applicable:

- An enhanced monitoring protocol for each affected unit(s) if required by 40 CFR 64 to be submitted at the time of this Operating Permit application.
- A compliance schedule for units that will be in noncompliance at permit issuance.
- Any relevant supplemental information.

Note: Facilities subject to Title IV of the Clean Air Act Amendments (Acid Rain) must include completed nationally-standardized forms for permit application and compliance plans as well as a complete Operating Permit application. These forms are available from EPA, Region I located in Boston.



Massachusetts Department of Environmental Protection
Bureau of Waste Prevention – Air Quality Control – Operating Permits

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Application Completeness Checklist

To submit the application package:

- Send two copies of the application package along with two copies of the MassDEP Transmittal Form to:

Department of Environmental Protection

_____ * Regional Office

Air Quality Control

*Find your region: <http://mass.gov/dep/about/region/findyour.htm>

- Send fee (calculated in accordance with Section M and the appropriate regulations) in the form of check or money order made payable to *Commonwealth of Massachusetts*, along with one copy of the MassDEP Transmittal Form to:

Department of Environmental Protection

P.O. Box 4062

Boston, MA 02211

Operating Permit Instructions

Appendix A

Operating Permit Application Form Line by Line Instructions

Instructions for Section A Facility Information

1. Facility

Facility Name: The actual facility name, not the corporate or other name.

Street Address: The physical location of the facility.

City, State, Zip Code: City name, State and nine digit zip code (if known) of the facility location.

Mailing Address: Mailing address for the facility, if different from physical location.

City, State, Zip Code: City name, State and nine digit zip code (if known) of the mailing address.

2. Facility Contact Person

Name: Person located within the facility who is completing the application or a person at the facility familiar with the application and plant operations.

Title: Title/position of contact person.

Telephone Number: Area code, number and any extension of the person named as contact.

3. Facility Owner

Name: Name of individual or corporation that owns facility.

Telephone Number: Area code, number and extension of owner.

4. Standard Industrial Classification Code(s) (SIC): List any and all four (4) digit SIC codes that apply to the facility. SIC codes may be found, among other places, on Federal Tax Returns.

5. Facility Description: Provide a brief description, in the space provided, of the operations conducted at the facility, especially as they relate to air pollution. Describe products made at the facility and major sources of air pollution.

Instructions for Section B Plant Overview

Provide a summary of all Emission Units excluding exempt activities listed in Section C of the application and insignificant activities outlined at 310 CMR 7.00: Appendix C(5)(i).

List Emission Unit number, stack number and Emission Unit description. Use sequential numbering, do not repeat numbers. You may use in-house identification labels. For Emission Units without stacks, use g.v. (general ventilation) for stack number. In general, list Emission Units separately; do not combine units in one entry.

The definition of an Emission Unit is:

Emissions unit means any part or activity of a stationary source that emits or has the potential to emit any regulated air pollutant or any pollutant listed under 42 U.S.C. 7401, § 112(b). This term is not meant to alter or affect the definition of the term "unit" for purposes of 42 U.S.C. 7401, Title IV (the acid rain provisions).

(42 U.S.C. 7401, § 112(b) refers to the list of 189 Hazardous Air Pollutants in the Clean Air Act.)

Instructions for Section C Exempt Activities

List Emission Unit and stack number for activities proposed to be exempt from the requirements of 310 CMR 7.00: Appendix C(5)(b). Also include description and reason the unit is considered "exempt" (i.e. less than one ton per year emissions).

Exempt activities are those Emission Units that have no requirements and are less than certain thresholds for preconstruction review (regardless of installation date). *Please note that it may be possible to use the pollution prevention techniques described in Appendix D of these instructions to reduce emissions below these thresholds.*

The thresholds are:

1. Fuel utilization facility, excluding internal combustion engines such as a combustion turbine or a reciprocating engine with an energy input capacity less than:
 - a. 10,000,000 Btu per hour utilizing natural gas or propane.
 - b. 10,000,000 Btu per hour utilizing distillate fuel oil.
 - c. 10,000,000 Btu per hour utilizing residual fuel oil (also see 310 CMR 7.05(1) and 7.05(2)) having a sulfur content not in excess of 0.28 pounds per million Btu heat release potential (approximately equal to 0.5% sulfur by weight content fuel oil).
 - d. 5,000,000 Btu per hour utilizing residual fuel oil (also see 310 CMR 7.05(1) and 7.05(2)) having a sulfur content not in excess of 0.55 pounds per million Btu heat release (approximately equal to 1% sulfur by weight content fuel oil).
 - e. 3,000,000 Btu per hour utilizing solid fuel (with an automatic feed for the fuel) or digester gas.
 - f. 1,000,000 Btu per hour utilizing hand fired solid fuel.
2. Emission Units with potential emissions of less than one ton per year (after controls) of any criteria air contaminant, calculated over any consecutive 12 month time period. Products of combustion from any fuel utilization facility(ies) are not included when calculating potential emissions under this section

3. Internal combustion engine such as a combustion turbine or a reciprocating engine having an energy input capacity of less than 3,000,000 Btu per hour.
4. Emission Units with potential emissions of less than one ton per year (after controls) of the sum of all non-criteria air contaminants, calculated over any consecutive twelve month time period. Products of combustion from any fuel utilization facility(ies) are not included when calculating potential emissions under this section

Other activities may be proposed as "exempt" and will be evaluated on a case by case basis. A specific example is multiple small space heaters that individually are less than review thresholds but in the aggregate are greater than the threshold (i.e. 10,000,000 Btu per hour for gas fired units). Other exempts may also be proposed.

N.B. All engines at the facility subject to 40 CFR part 63 subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines) must be listed as an emission unit or grouped as an emission unit depending on the size, fuel and applicable requirements.

Instructions for Section D General Applicable Requirements

The Operating Permit regulations require, among other things, that the responsible official of a subject facility certify compliance with **all** state air pollution control regulations and requirements. Many of the state air pollution regulations are generic or do not relate to specific Emission Units. Therefore, part of this section is designed to certify facility compliance with these regulations. Other questions relate to future applicability to rules. There may not be any specific requirements at the time of filing this application.

For further information on each individual requirement, refer to the guidance on Applicable Requirements (Appendices B and C).

If you indicate "In Compliance" for one of these requirements, you must have on site, documentation to prove compliance. You need not submit such documentation in the Operating Permit application.

If one of these requirements is relevant to your facility and you are not in compliance, be sure to include, in Section K, a description of the noncompliance and measures to come into compliance.

1. **Open Burning:** Indicate whether or not the facility is in compliance with the open burning regulations or if there are no applicable activities conducted at the facility.
2. **Inspection Certificate, Recordkeeping and Reporting:** Indicate whether or not the facility files an annual Emission Statement, previously named Source Registration (all major facilities are required to file Emission Statements on an annual basis). If not, indicate the reason for not filing.
3. **Asbestos:** Indicate whether or not the facility is in compliance with the regulations concerning demolition and/or construction involving asbestos containing material or if there are no applicable activities conducted at the facility.
4. **Reduction of Single Occupant Commuter Vehicle Use:** Indicate whether or not the facility is in compliance with the regulation (and indicate date the facility last filed a Ridesharing Update Report if in compliance) or if the regulations are not applicable to the facility

5. **Hazardous Air Pollutants:** Indicate if the facility, as a whole, has the potential to emit 10 tons of a single HAPs (listed in Appendix C) or 25 tons of all HAPS combined. If so, list the HAPs and source (Emission Unit) of emissions. If there is a final rule to which an Emission Unit is subject, it must also be included in parts II and III of the individual Emission Unit information.
6. **Prevention of Accidental Release:** Indicate if the facility, as a whole, produces, processes, handles or stores any of these compounds (listed in Appendix C) in sufficient quantities to exceed thresholds.
7. **Consumer Products:** Indicate whether or not the facility in compliance with the consumer and commercial products rule (as a manufacturer or distributor of such products) or if there are no applicable activities conducted at the facility.
8. **Stratospheric Ozone:** Indicate whether or not the facility is in compliance with the regulation concerning use of the Class I or Class II compounds (listed in Appendix C) and maintenance, repair, servicing of equipment that utilizes a Class I or Class II compound or if there are no such applicable activities conducted at the facility.
9. **General Provisions:** Other MassDEP regulations may be applicable to the facility. Some are listed in this section. The certification in Section K also certifies compliance with these regulations.

Instructions for Section E Emission Unit - Fuel Utilization Equipment

Section E asks for information that describes the Emission Unit and requirements/limits on the unit. This information is used to determine the applicability of the unit to regulations and also becomes the description of the approved unit (both application material and approval letters are considered part of any approval).

Section E is divided into three (3) parts:

- | | |
|-----|--------------------------------|
| I | Description |
| II | Applicable Requirements/Limits |
| III | Compliance Demonstration |

If you have an approval for the unit, much of this information is in the approval or the application you submitted for approval. Much of this information is also the same as that requested in the annual Emission Statement forms.

Except as described in instructions for parts II and III, none of these questions is intended to impose additional requirements on the Emission Unit; they are merely descriptions of the type and size of the Emission Unit and existing requirements. If a question is not relevant enter "not applicable" in the space provided.

One of these sections (comprised of three parts) must be completed for *each* individual Emission Unit listed in the Plant Overview (Section B). Make as many copies of the appropriate sections as necessary. Use a separate copy of the section for each Emission Unit.

Do not use Section E for fuel burning equipment integral to a process, such as a drying oven on a fabric coater, unless you wish it to be a separate Emission Unit. Instead complete the section for Process Equipment (Section F) and fill out the bottom half of that section, "Associated Fuel Burning Equipment".

Section E - I Description

Emission Unit Number: Indicate the Emission Unit number described by this section. Emission Unit number must correspond to the numbers listed in Section B - Plant Overview.

1. **Type of Equipment:** Describe the type of combustion equipment, i.e. boiler, diesel engine, etc.
2. **Manufacturer:** Manufacturer of the unit.
3. **Model Number:** The manufacturer's model number for the unit. Do not use the serial number.
4. **Maximum Input Rating:** Indicate the maximum design input rating for the unit in Btu per hour.
5. **Burner Manufacturer:** Manufacturer of the burner.
6. **Model Number:** The manufacturer's model number for the burner. Do not use the serial number.
7. **Number of Burners in Combustion Unit:** Indicate how many burners are present in the unit.
8. **Fuels:** For the primary and any secondary fuels used in the Emission Unit, provide:
 - A. **Type and Grade:** Indicate if oil, natural gas, propane, coke, wood, anthracite coal, waste oil, waste solvent, etc. Also indicate grade of oil, #2, #4, #6, etc. Information may be obtained from supplier.
 - B. **Sulfur Content:** Maximum percentage of sulfur (by weight) in the fuel used for this unit. Maximum fuel sulfur content limits can be found in the MassDEP regulations 310 CMR 7.05. Do not indicate the average sulfur content of fuel supplied in this question. For example, No 6 fuel oil can have up to 1.0 % sulfur in some cases, though the average percent sulfur of the fuel supplied to the facility may be under 0.9%.
 - C. **Maximum Fuel Firing Rate:** The maximum fuel firing rate for all burners in this unit combined (per hour). Be sure to include units (gal./hr, cubic feet/hr, ton/hr, etc).
9. **Air Pollution Control Equipment:** For any air pollution control equipment associated with this Emission Unit, provide:
 - A. **Type:** For example: electrostatic precipitator, baghouse, cyclone, scrubber, afterburner, adsorber, etc.
 - B. **Manufacturer/Model:** Manufacturer and model of the control equipment.
 - C. **Pollutant Controlled:** The pollutant(s) that are controlled, for example, Particulate Matter (PM), VOC, Oxides of Nitrogen (NO_x), etc.
 - D. **Efficiency:**

Capture Efficiency: From 0 to 100%, indicate the minimum percent of total emissions from the Emission Unit that must be captured by the ventilation/duct system and conveyed to the control equipment, as required by permit, design or other requirement.

Control Efficiency: From 0 to 100%, indicate the minimum percent of emissions conveyed to the control equipment that must be reduced by the control equipment, as required by permit, design or other requirement.
10. **Date of Installation:** Date or dates when the Emission Unit and/or control equipment was installed.

11. **MassDEP Air Quality Approvals (if applicable):** List Approval Number and Date of approval for all approvals issued regarding this unit.
12. **Stack Data:** For the stack (if any) discharging to the ambient air provide;
- A. **Dimensions.**
- Height (in feet):** Height of top of stack above ground level.
- Diameter (in inches):** Give the inside diameter (ID) of the stack at its exit point in inches. If the stack is not circular give the inside length and width of stack at the exit point.
- B. **Range of Gas Exit Velocity:** The range of exhaust exit velocity from the stack in feet per second (fps).
- C. **Range of Exit Temperature:** The range of temperature of the exhaust from the stack (Degrees Fahrenheit)
- D. **Stack Material of Construction:** Material of construction for the stack (steel, refractory lined brick, etc).

Section E - II Applicable Requirements/Limits

In this section, provide information related to regulations and limitations affecting the Emission Unit. In addition to limits in any approval for the unit, limits may be found in a regulation or other requirements.

None of these questions is intended to impose additional requirements on the Emission Unit except as provided for under **Operation Flexibility, New Restrictions or Federally Enforceable Limits**. If a question is not relevant enter "not applicable" in the space provided. If there is no limit imposed on the Emission Unit, do not enter one here unless you wish to propose one.

Operational Flexibility

To allow for flexible operations, the facility may propose alternative limits in this section, that is, limits that are different from those contained in an approval or requirement. MassDEP will review these alternative limits on a case by case basis for approval. At a minimum, the alternative limits must be equivalent to the existing requirements in terms of resulting emissions and degree of monitoring. Any alternative or flexible limit should be identified as such in the application to distinguish them from current requirements. Some examples of flexible limits are:

Change in allowable hours of operation from daily limits to an equivalent weekly total;

Change of an approval condition that requires the use of a named coating (Brand xyx) to a generic condition that allows use of any coating with the same or less VOC content as Brand xyz.

MassDEP reserves the right to deny any such alternative limitations.

Federally Enforceable Limits

Current limits on an Emission Unit or facility may be found unenforceable due to the nature of the limit, the method of limitation or the monitoring of the limit. Common examples include:

Too long an averaging time; for example, a limit expressed on a yearly instead of 12 month rolling average;

A limit with no monitoring or recordkeeping requirement;

A limit on emissions that cannot be easily verified.

In such cases, the existing limit may have to be modified to remedy such a deficiency. Such modifications, however, will be done to achieve an equivalent, but federally enforceable, limit.

You may propose revised limits for purposes of federal enforceability. Otherwise the Department, as part of its review of your operating permit, will identify those limits that need revision and can then be addressed by the facility in a revision to the application under review.

Refer to EPA's June 13, 1989 guidance entitled "Guidance on Limiting Potential to Emit in New Source Permitting" and the definition of Federal Potential to Emit in MassDEP regulations for further information on acceptable limitations.

New Restrictions

Facilities are allowed to propose new limitations/restrictions that would establish lower allowable emissions. Such restrictions may be desired to avoid applicability to some regulations or other reasons.

MassDEP reserves the right to deny any such new restriction and to take appropriate enforcement action against the facility if the restriction was required before the submittal of the Operating Permit in order to comply with other air pollution control requirements.

In no cases will a relaxation of a restriction be considered in an Operating Permit application.

1. **Alternative/flexible limits:** Indicate whether or not any alternative limits are being proposed in this section for purposes of operational flexibility. If so, identify these alternative limits and if necessary, provide additional supplemental documentation which demonstrates their equivalence to existing limits.
2. **New limits:** Indicate whether or not any new limits are being proposed in this section for purposes of Federal Enforceability or restriction of emissions. If so, identify these new limits.
3. **List applicable regulations:** List all regulations that apply to this Emission Unit. Refer to the supplemental documents, Appendices B and C, for more detailed information on what must be considered.
4. **Allowable usage limitations:** List all limitations on the Emission Unit's operation that are required by a regulation or in an approval (permit). Do not list limitations reflective of "normal" or "average" operation.
 - A. **Hours of operation:** Indicate any limits on hours of operation. If no limitations exist, enter "Not Applicable".
 - B. **Fuels used:** Indicate any limits on fuel use. Provide

Type: Type of fuel limited (#2 oil, natural gas, etc).

Amount: The amount of the limit, such as 10,000 gallons per year, etc.

Sulfur: The maximum sulfur content, if any, allowed in the fuel under this limit (weight percent).

C. Raw materials: Indicate any limits on raw material use. Provide

Type: Type of Raw Material (also should be listed in the Emission Unit description)

Amount: The amount of the limit, such as 10,000 gallons per year, etc.

VOC: The maximum VOC content, if any, allowed in the Raw Material under this limit (weight percent).

5. Other allowable restrictions: List all other limitations on the Emission Unit's operation that are required by a regulation or in an approval (permit). Do not list or limitations reflective of "normal" or "average" operation.

A. Work practices: List all limits/requirements such as clean up procedures, start up and shut down procedures, etc.

B. Process parameters: List all limitations or restrictions such as process temperatures and other parameters, opacity limits, etc.

C. Control equipment parameters: List all control equipment limits such as operating parameters (temperature, pressure drop, etc).

6. Total allowable emissions: List allowable emission rates and total emissions from the Emission Unit. List only for those pollutants which have a limit specifically stated in an approval or requirement (i.e. the table need not necessarily be completed for all pollutants). If more than one Emission Unit is included in this allowable rate, note in the margins of the application which units are included.

A. Rate: For each pollutant, list any limit on emission rate such as, lbs per million btu, or formulation (lbs. of VOC per gallon coating, lbs. of VOC per gallon of solids, etc.), etc. Be specific in type and limit amount.

B. Short term: For each pollutant list any limit on emissions less than 12 month, such as a lbs per hour, day or month limit. Be specific in type and limit amount.

C. Long term: For each pollutant list any limit on emissions for a 12 month period. Indicate if this is an annual, rolling 12 month, or other limit. Be specific in type and limit amount.

Section E - III Compliance Demonstration

In this section, provide information related to monitoring and recordkeeping requirements affecting the Emission Unit. In addition to requirements in any approval for the unit, requirements may be found in a regulation or other requirements.

None of these questions is intended to impose additional requirements on the Emission Unit except as provided for under **Operational Flexibility, New Restrictions or Federally Enforceable Limits**. If a question is not relevant enter "not applicable" in the space provided. If there is no monitoring or recordkeeping imposed on the Emission Unit, do not enter one here unless you wish to propose one.

Operational Flexibility:

To allow for flexible operations, the facility may propose an alternative compliance demonstration in this section, that is, monitoring that is different from that contained in an approval or requirement. MassDEP will

review these alternative compliance demonstrations on a case by case basis for approval. At a minimum, the alternative demonstration must be equivalent to the existing requirements in terms of degree of monitoring. Any alternative or flexible monitoring should be identified as such in the application to distinguish them from current requirements. Some examples of flexible monitoring are:

Installation of a fuel meter in place of fuel delivery logs and tank records;
Central recordkeeping of paint usage for painting operations instead of records by individual paint spray operators.

MassDEP reserves the right to deny any such alternative proposal.

Federally Enforceable Limits:

Current monitoring on an Emission Unit or facility may be found unenforceable due to the nature of the limit, the method of limitation or the monitoring of the limit. Common examples include:

Too long an averaging time; for example, a recordkeeping requirement expressed on a yearly instead of 12 month rolling average;

A limit with no monitoring or recordkeeping requirement;

An unverifiable monitoring parameter.

In such cases, the existing requirement may have to be modified to remedy such a deficiency. Such modifications, however, will be done to achieve an equivalent, but federally enforceable, monitoring requirement and limit.

You may propose revised requirement(s) for purposes of federal enforceability. Otherwise the Department, as part of its review of your operating permit, will identify the compliance demonstration element(s) that need revision and can then be addressed by the owner/operator in a revision to the application under review.

Refer to EPA's June 13, 1989 guidance entitled "Guidance on Limiting Potential to Emit in New Source Permitting" and the definition of Federal Potential to Emit in MassDEP regulations for further information on acceptable recordkeeping, monitoring and limitations.

New Restrictions

Facilities are allowed to propose new limitations/restrictions that would establish lower allowable emissions. Such restrictions may be desired to avoid applicability to some regulations or other reasons. Along with such new proposed limits, appropriate monitoring and recordkeeping must be included.

MassDEP reserves the right to deny any such new restriction and to take appropriate enforcement action against the facility if the restriction was required before the submittal of the Operating Permit in order to comply with air pollution control requirements.

In no cases will a relaxation of a restriction be considered in an Operating Permit application.

- 1. Alternative/flexible limits:** Indicate whether or not any alternative compliance demonstration is being proposed in this section for purposes of operational flexibility. If so, identify these alternatives and if necessary, provide additional supplemental documentation which demonstrates their equivalence to existing requirements.
- 2. New limits:** Indicate whether or not any new compliance demonstration elements are being proposed in this section for purposes of Federally Enforceability or restriction emissions. If so, identify these new limits.

3. **Monitoring:** List any physical instrumentation required by regulations or approval, such as fuel meters, opacity meters and recorders, temperature chart recorders, etc. For each instrument, there must be a corresponding limit or range listed under Part II Applicable Requirements/Limits.
4. **Recordkeeping:** List all required recordkeeping and attach examples to this application.
5. **Reporting:** List all reporting requirements for the Emission Unit including routine reporting (such as monthly, yearly) and (non-routine such as notification of process upset, control equipment failure, etc.)
6. **Testing:** List all testing requirements including methods and frequency. Include emission (stack) testing requirements as well as routine testing for items such as combustion efficiency, etc.
7. **Enhanced monitoring:** Indicate if the enhanced monitoring provisions of 40 CFR 64 are applicable to the Emission Unit and attach a protocol, if applicable.

Instructions for Section F Process Equipment

Section F asks for information that describes the Emission Unit and requirements/limits on the unit. This information is used to determine the applicability of the unit to regulations and also becomes the description of the approved unit (both application material and approval letters are considered part of any approval).

Section F is divided into three (3) parts:

- | | |
|-----|--------------------------------|
| I | Description |
| II | Applicable Requirements/Limits |
| III | Compliance Demonstration |

If you have an approval for the unit, much of this information is in the approval or the application you submitted for approval. Much of this information is also the same as that requested in the annual Emission Statement forms.

Except as described in instructions for parts II and III, none of these questions is intended to impose additional requirements on the Emission Unit; they are merely descriptions of the type and size of the Emission Unit and existing requirements. If a question is not relevant enter "not applicable" in the space provided.

One of these sections (comprised of three parts) must be completed for EACH individual Emission Unit listed in the Plant Overview (Section B). Make as many copies of the appropriate sections as necessary. Use a separate copy of the section for each Emission Unit.

For process Emission Units that also have a fuel component (drying oven, process heater, etc) also complete the bottom half of the section. Do not use this bottom half for fuel burning equipment not integral to a process, such as a boiler, engine, etc or for air pollution control equipment. Instead complete the section for Fuel Utilization Equipment (Section E).

Section F - I Description

Emission Unit Number: Indicate the Emission Unit number described by this section. Emission Unit number must correspond to the numbers listed in Section B - Plant Overview.

1. **Type of Equipment:** Describe the type of process equipment, i.e. paper coater, degreaser, etc.

2. **Manufacturer:** Manufacturer of the unit.

3. **Model number:** The manufacturer's model number for the unit. Do not use the serial number.

4. **Maximum Process Rate:** Indicate the maximum design rating for the unit in terms of Raw Materials and Finished Materials.

A. **Raw Materials** - identify raw materials especially any chemicals or coatings and provide:

Name of Raw Material - identify the raw material by type, such as paper, rolled steel, organic coating, etc.

Rate - indicate the maximum design rate of the equipment in using this material. For example, 1.2 gallons per hour of coating, 1,000 feet per minute of paper, etc.

B. **Finished Materials** - Identify finished materials and provide:

Name of Finished Material - identify the finished material.

Rate - indicate the maximum design rate of the equipment in producing this material. For example, 1,000 feet per minute of printed paper, 100 lbs per hour of chemical xyz, etc.

5. **Air pollution control equipment:** For any air pollution control equipment associated with this Emission Unit, provide:

A. **Type:** For example: electrostatic precipitator, baghouse, cyclone, scrubber, afterburner, adsorber, etc.

B. **Manufacturer/model:** Manufacturer and model of the control equipment.

C. **Pollutant Controlled:** The pollutant(s) that are controlled, for example, Particulate Matter (PM), VOC, Oxides of Nitrogen (NO_x), etc.

D. **Efficiency:**

Capture Efficiency: From 0 to 100%, indicate the minimum percent of total emissions from the Emission Unit that must be captured by the ventilation/duct system and conveyed to the control equipment, as required by permit, design or other requirement.

Control Efficiency: From 0 to 100%, indicate the minimum percent of emissions conveyed to the control equipment that must be reduced by the control equipment, as required by permit, design or other requirement.

6. **Date of installation:** Date or dates when the Emission Unit and/or control equipment was installed.
7. **MassDEP Air Quality Approvals (if applicable):** List approval number and date of approval for all approvals issued regarding this unit.
8. **Stack data:** For the stack (if any) discharging to the ambient air provide;

A. Dimensions.

Height (feet): height of top of stack above ground level.

Diameter (inches): Give the inside diameter (id) of the stack at its exit point in inches. If the stack is not circular give the inside length and width of stack at the exit point.

B. Range of gas exit velocity: The range of exhaust exit velocity from the stack in feet per second (fps).

C. Range of exit temperature: The range of temperature of the exhaust from the stack (Degrees Fahrenheit)

D. Stack material of construction: Material of construction for the stack (steel, refractory lined brick, etc).

Associated Fuel Burning Equipment

9. **Type of equipment:** Describe the type of combustion equipment, i.e. boiler, diesel engine, etc.
10. **Manufacturer:** Manufacturer of the unit.
11. **Model number:** The manufacturer's model number for the unit. Do not use the serial number.
12. **Maximum input rating:** Indicate the maximum design input rating for the unit in btu per hour.
13. **Burner manufacturer:** Manufacturer of the burner.
14. **Model number:** The manufacturer's model number for the burner. Do not use the serial number.
15. **Number of burners in combustion unit:** Indicate how many burners are present in the unit.
16. **Fuels:** For the primary and any secondary fuels used in the Emission Unit, provide:
 - A. **Type and grade:** Indicate if oil, natural gas, propane, coke, wood, anthracite coal, waste oil, waste solvent, etc. Also indicate grade of oil, #2, #4, #6, etc. Information may be obtained from supplier.

- B. Sulfur content:** Maximum percentage of sulfur (by weight) possible in the fuel used for this unit. Maximum fuel sulfur content limits can be found in the MassDEP regulations 310 CMR 7.05. Do not indicate the average sulfur content of fuel supplied in this question. For example, No. 6 fuel oil can have up to 1.0% sulfur in some cases, though the average percent sulfur of the fuel supplied to the facility may be under 0.9%.
- C. Maximum fuel firing rate:** The maximum fuel firing rate for all burners in this unit combined (per hour). Be sure to include units (gal./hr, cubic feet/hr, ton/hr, etc).

Section F - II Applicable Requirements/Limits

In this section, provide information related to regulations and limitations affecting the Emission Unit. In addition to limits in any approval for the unit, limits may be found in a regulation or other requirements.

None of these questions is intended to impose additional requirements on the Emission Unit except as provided for under **Operational Flexibility, New Restrictions or Federally Enforceable Limits**. If a question is not relevant enter "not applicable" in the space provided. If there is no limit imposed on the Emission Unit, do not enter one here unless you wish to propose one.

Operational Flexibility:

To allow for flexible operations, the facility may propose alternative limits in this section, that is, limits that are different from those contained in an approval or requirement. MassDEP will review these alternative limits on a case by case basis for approval. At a minimum, the alternative limits must be equivalent to the existing requirements in terms of resulting emissions and degree of monitoring. Any alternative or flexible limit should be identified as such in the application to distinguish them from current requirements. Some examples of flexible limits are:

Change in allowable hours of operation from daily limits to an equivalent weekly total;

Change of an approval condition that requires the use of a named coating (Brand xyz) to a generic condition that allows use of any coating with the same or less VOC content as Brand xyz.

MassDEP reserves the right to deny any such alternative limitations.

Federally Enforceable Limits:

Current limits on an Emission Unit or facility may be found unenforceable due to the nature of the limit, the method of limitation or the monitoring of the limit. Common examples include:

Too long of an averaging time; for example, a limit expressed on a yearly instead of 12 month rolling average

A limit with no monitoring or recordkeeping requirement

A limit on emissions that cannot be easily verified

In such cases, the existing limit may have to be modified to remedy such a deficiency. Such modifications, however, will be done to achieve an equivalent, but federally enforceable, limit.

You may propose revised limits for purposes of federally enforceability. Otherwise the Department, as part of its review of your operating permit, will identify those limits that need revision and can then be addressed by the facility in a revision to the application under review.

Refer to EPA's June 13, 1989 guidance entitled "Guidance on Limiting Potential to Emit in New Source Permitting" and the definition of Federal Potential to Emit in MassDEP regulations for further information on acceptable limitations.

New Restrictions:

Facilities are allowed to propose new limitations/restrictions that would establish lower allowable emissions. Such restrictions may be desired to avoid applicability to some regulations or other reasons.

MassDEP reserves the right to deny any such new restriction and to take appropriate enforcement action against the facility if the restriction was required before the submittal of the Operating Permit in order to comply with other air pollution control requirements.

In no cases will a relaxation of a restriction be considered in an Operating Permit application.

1. **Alternative/flexible limits:** Indicate whether or not any alternative limits are being proposed in this section for purposes of operational flexibility. If so, identify these alternative limits and if necessary, provide additional supplemental documentation which demonstrates their equivalence to existing limits.
2. **New limits:** Indicate whether or not any new limits are being proposed in this section for purposes of Federally Enforceability or restriction of emissions. If so, identify these new limits.
3. **List applicable regulations:** List all regulations that apply to this Emission Unit. Refer to the supplemental documents, Appendices B and C, for more detailed information on what must be considered.
4. **Allowable usage limitations:** List all limitations on the Emission Unit's operation that are required by a regulation or in an approval (permit). Do not list limitations reflective of "normal" or "average" operation.
 - A. **Hours of operation:** Indicate any limits on hours of operation. If no limitations exists, enter "Not Applicable".
 - B. **Fuels Used:** Indicate any limits on fuel use. Provide:
 - Type:** Type of fuel limited (#2 oil, natural gas, etc).
 - Amount:** The amount of the limit, such as 10,000 gallons per year, etc.
 - Sulfur:** The maximum sulfur content, if any, allowed in the fuel under this limit (weight percent).
 - C. **Raw Materials:** Indicate any limits on raw material use. Provide

Type: Type of Raw Material (also should be listed in the Emission Unit description).

Amount: The amount of the limit, such as 10,000 gallons per year, etc.

VOC: The maximum VOC content, if any, allowed in the Raw Material under this limit (weight percent).

5. Other allowable restrictions: List all other limitations on the Emission Unit's operation that are required by a regulation or in an approval (permit). Do not list limitations reflective of "normal" or "average" operation.

- A. **Work practices:** List all limits/requirements such as clean up procedures, start up and shut down procedures, etc.
- B. **Process parameters:** List all limitations or restrictions such as process temperatures and other parameters, opacity limits, etc.
- C. **Control equipment parameters:** list all control equipment limits such as operating parameters (temperature, pressure drop, etc).

6. Total allowable emissions: List allowable emission rates and total emissions from the Emission Unit. List only for those pollutants which have a limit specifically stated in an approval or requirement (i.e. the table need not necessarily be completed for all pollutants). If more than one Emission Unit is included in this allowable rate, note in the margins of the application which units are included.

- A. **Rate:** For each pollutant, list any limit on emission rate such as, lbs per million btu, or formulation (lbs VOC per gallon coating, lbs VOC per gallon of solids, etc), etc. Be specific in type and limit amount.
- B. **Short term:** For each pollutant list any limit on emissions less than 12 month, such as a lbs per hour, day or month limit. Be specific in type and limit amount.
- C. **Long term:** For each pollutant list any limit on emissions for a 12 month period. Indicate if this is an annual, rolling 12 month or other limit. Be specific in type and limit amount.

Section F - III Compliance Demonstration

In this section, provide information related to monitoring and recordkeeping requirements affecting the Emission Unit. In addition to requirements in any approval for the unit, requirements may be found in a regulation or other requirements.

None of these questions is intended to impose additional requirements on the Emission Unit except as provided for under **Operational Flexibility, New Restrictions or Federally Enforceable Limits**. If a question is not relevant enter "not applicable" in the space provided. If there is no monitoring or recordkeeping imposed on the Emission Unit, do not enter one here unless you wish to propose one.

Operational Flexibility:

To allow for flexible operations, the facility may propose an alternative compliance demonstration in this section, that is, monitoring that is different from that contained in an approval or requirement. MassDEP will review these alternative compliance demonstrations on a case by case basis for approval. At a minimum, the alternative demonstration must be equivalent to the existing requirements in terms of degree of monitoring. Any alternative or flexible monitoring should be identified as such in the application to distinguish them from current requirements. Some examples of flexible monitoring are:

Installation of a fuel meter in place of fuel delivery logs and tank records;

Central recordkeeping of paint usage for painting operations instead of records by individual paint spray operators.

MassDEP reserves the right to deny any such alternative proposal.

Federally Enforceable Limits:

Current monitoring on an Emission Unit or facility may be found unenforceable due to the nature of the limit, the method of limitation or the monitoring of the limit. Common examples include:

Too long an averaging time; for example, a recordkeeping requirement expressed on a yearly instead of 12 month rolling average

A limit with no monitoring or recordkeeping requirement

An unverifiable monitoring parameter

In such cases, the existing requirement may have to be modified to remedy such a deficiency. Such modifications, however, will be done to achieve an equivalent, but federally enforceable, monitoring requirement and limit.

You may propose revised requirements for purposes of federal enforceability. Otherwise the Department, as part of its review of your operating permit, will identify those compliance demonstration elements that need revision and can then be addressed by the facility in a revision to the application under review.

Refer to EPA's June 13, 1989 guidance entitled "Guidance on Limiting Potential to Emit in New Source Permitting" and the definition of Federal Potential to Emit in MassDEP regulations for further information on acceptable recordkeeping, monitoring and limitations.

New Restrictions:

Facilities are allowed to propose new limitations/restrictions that would establish lower allowable emissions. Such restrictions may be desired to avoid applicability to some regulations or other reasons. Along with such new proposed limits, appropriate monitoring and recordkeeping must be included.

MassDEP reserves the right to deny any such new restriction and to take appropriate enforcement action against the facility if the restriction was required before the submittal of the Operating Permit in order to comply with other air pollution control requirements.

In no cases will a relaxation of a restriction be considered in an Operating Permit application.

1. **Alternative/flexible limits:** Indicate whether or not any alternative compliance demonstration is being proposed in this section for purposes of operational flexibility. If so, identify these alternatives and if necessary, provide additional supplemental documentation which demonstrates their equivalence to existing requirements.
2. **New limits:** Indicate whether or not any new compliance demonstration elements are being proposed in this section for purposes of Federally Enforceability or restriction emissions. If so, identify these new limits.
3. **Monitoring:** List any physical instrumentation required by regulations or approval, such as fuel meters, opacity meters and recorders, temperature chart recorders, etc. For each instrument, there must be a corresponding limit or range listed under Part II - Applicable Requirements/Limits.
4. **Recordkeeping:** List all required recordkeeping and attach examples to this application.
5. **Reporting:** List all reporting requirements for the Emission Unit including routine reporting (such as monthly, yearly) and non-routine (such as notification of process upset, control equipment failure, etc.)
6. **Testing:** List all testing requirements including methods and frequency. Include emission (stack) testing requirements as well as routine testing for items such as combustion efficiency, etc.
7. **Enhanced monitoring:** Indicate if the enhanced monitoring provisions of 40 CFR 64 are applicable to the Emission Unit and attach a protocol, if applicable.

Instructions for Section G Incinerators

Section G asks for information that describes the Emission Unit and requirements/limits on the unit. This information is used to determine the applicability of the unit to regulations and also becomes the description of the approved unit (both application material and approval letters are considered part of any approval).

Section G is divided into three (3) parts:

| | |
|-----|--------------------------------|
| I | Description |
| II | Applicable Requirements/Limits |
| III | Compliance Demonstration |

If you have an approval for the unit, much of this information is in the approval or the application you submitted for approval. Much of this information is also the same as that requested in the annual Emission Statement forms.

Except as described in instructions for parts II and III, none of these questions is intended to impose additional requirements on the Emission Unit; they are merely descriptions of the type and size of the

Emission Unit and existing requirements. If a question is not relevant enter "not applicable" in the space provided.

One of these sections (comprised of three parts) must be completed for EACH individual Emission Unit listed in the Plant Overview (Section B). Make as many copies of the appropriate sections as necessary. Use a separate copy of the section for each Emission Unit.

Do not use this section for the add-on air pollution control equipment often referred to as an afterburner.

Section G - I Description

Emission Unit number: Indicate the Emission Unit number described by this section. Emission Unit number must correspond to the numbers listed in Section B - Plant Overview.

1. **Incinerator type:** Describe the type of incinerator, i.e. medical waste, municipal solid waste, sewage sludge, etc.
2. **Manufacturer:** Manufacturer of the incinerator.
3. **Model number:** The manufacturer's model number for the incinerator. Do not use the serial number.
4. **Maximum operating capacity:** Indicate the maximum design input rating for the unit in tons or pounds of waste charged per hour.
5. **Waste type:** Type of waste burned in unit. Identify any specific chemicals/materials and generic description such as pathological, infectious, municipal solid waste, sewage sludge, etc.
6. **Charging rate:** For units that are not continuous feed, indicate the maximum frequency (batches per hour) of charges and maximum size (in tons or pounds per batch).
7. **Heat recovery:** Indicate if the incinerator is equipped with a heat recovery unit of any type, internal or external.
8. **Number of hearths:** Provide the number of hearths in the incinerator.
9. **Total hearth area:** Provide the total area (square feet) of all hearths combined.
10. **Automatic feeder:** Indicate if the unit has an automatic or manual feed system.
11. **Temperature range:** Indicate the temperature operating range for the primary and Secondary chambers (Degrees Fahrenheit).
12. **Auxiliary burners:** For any auxiliary burners in the primary or secondary chamber provide the following:
 - A. **Manufacturer:** Manufacturer of the unit.
 - B. **Model number:** The manufacturer's model number for the unit. Do not use the serial number.

- C. **Type of fuel:** The fuel burned (natural gas, #2 fuel, etc).
- D. **Maximum rating:** The maximum rating of each burner in btu per hour

13. **Air pollution control equipment:** For any air pollution control equipment associated with this Emission Unit, provide:

- A. **Type:** For example: electrostatic precipitator, baghouse, cyclone, scrubber, afterburner, adsorber, etc.
- B. **Manufacturer/model:** Manufacturer and model of the control equipment.
- C. **Pollutant controlled:** The pollutant(s) that are controlled, for example, Particulate Matter (PM), VOC, Oxides of Nitrogen (NO_x), etc.
- D. **Efficiency:**

Capture Efficiency: From 0 to 100%, indicate the minimum percent of total emissions from the Emission Unit that must be captured by the ventilation/duct system and conveyed to the control equipment, as required by permit, design or other requirement.

Control Efficiency: From 0 to 100%, indicate the minimum percent of emissions conveyed to the control equipment that must be reduced by the control equipment, as required by permit, design or other requirement.

14. **Date of installation:** Date or dates when the Emission Unit and/or control equipment was installed.

15. **MassDEP Air Quality Approvals (if applicable):** List approval number and date of approval for all approvals issued regarding this unit.

16. **Stack data:** For the stack (if any) discharging to the ambient air provide;

A. Dimensions.

Height (feet): Height of top of stack above ground level.

Diameter (inches): Give the inside diameter (id) of the stack at its exit point in inches. If the stack is not circular give the inside length and width of stack at the exit point.

B. Range of gas exit velocity: The range of exhaust exit velocity from the stack in feet per second (fps).

C. Range of exit temperature: The range of temperature of the exhaust from the stack (Degrees Fahrenheit).

D. Stack material of construction: Material of construction for the stack (steel, refractory lined brick, etc).

Section G - II Applicable requirements/limits

In this section, provide information related to regulations and limitations affecting the Emission Unit. In addition to limits in any approval for the unit, limits may be found in a regulation or other requirements.

None of these questions is intended to impose additional requirements on the Emission Unit except as provided for under Operational Flexibility, New Restrictions or Federally Enforceable Limits. If a question is not relevant enter "not applicable" in the space provided. If there is no limit imposed on the Emission Unit, do not enter one here unless you wish to propose one.

Operational Flexibility:

To allow for flexible operations, the facility may propose alternative limits in this section, that is, limits that are different from those contained in an approval or requirement. MassDEP will review these alternative limits on a case by case basis for approval. At a minimum, the alternative limits must be equivalent to the existing requirements in terms of resulting emissions and degree of monitoring. Any alternative or flexible limit should be identified as such in the application to distinguish them from current requirements. Some examples of flexible limits are:

Change in allowable hours of operation from daily limits to an equivalent weekly total

Change of an approval condition that requires the use of a named coating (Brand xyx) to a generic condition that allows use of any coating with the same or less VOC content as Brand xyz

MassDEP reserves the right to deny any such alternative limitations.

Federally Enforceable Limits:

Current limits on an Emission Unit or facility may be found unenforceable due to the nature of the limit, the method of limitation or the monitoring of the limit. Common examples include:

Too long an averaging time; for example, a limit expressed on a yearly instead of 12 month rolling average

A limit with no monitoring or recordkeeping requirement

A limit on emissions that cannot be easily verified

In such cases, the existing limit may have to be modified to remedy such a deficiency. Such modifications, however, will be done to achieve an equivalent, but federally enforceable, limit.

You may propose revised limits for purposes of federal enforceability. Otherwise the Department, as part of its review of your operating permit, will identify those limits that need revision and can then be addressed by the facility in a revision to the application under review.

Refer to EPA's June 13, 1989 guidance entitled "Guidance on Limiting Potential to Emit in New Source Permitting" and the definition of Federal Potential to Emit in MassDEP regulations for further information on acceptable limitations.

New Restrictions:

Facilities are allowed to propose new limitations/restrictions that would establish lower allowable emissions. Such restrictions may be desired to avoid applicability to some regulations or other reasons.

MassDEP reserves the right to deny any such new restriction and to take appropriate enforcement action against the facility if the restriction was required before the submittal of the Operating Permit in order to comply with other air pollution control requirements.

In no cases will a relaxation of a restriction be considered in an Operating Permit application.

1. **Alternative/flexible limits:** Indicate whether or not any alternative limits are being proposed in this section for purposes of operational flexibility. If so, identify these alternative limits and if necessary, provide additional supplemental documentation which demonstrates their equivalence to existing limits.
2. **New limits:** Indicate whether or not any new limits are being proposed in this section for purposes of Federally Enforceability or restriction of emissions. If so, identify these new limits.
3. **List applicable regulations:** List all regulations that apply to this Emission Unit. Refer to the supplemental documents, Appendices B and C, for more detailed information on what must be considered.
4. **Allowable usage limitations:** List all limitations on the Emission Unit's operation that are required by a regulation or in an approval (permit). Do not list limitations reflective of "normal" or "average" operation.
 - A. **Hours of operation:** Indicate any limits on hours of operation. If no limitations exists, enter "Not Applicable".
 - B. **Fuels used:** Indicate any limits on fuel use. Provide:
 - Type:** Type of fuel limited (#2 oil, natural gas, etc)
 - Amount:** The amount of the limit, such as 10,000 gallons per year, etc.
 - Sulfur:** The maximum sulfur content, if any, allowed in the fuel under this limit (weight percent).
 - C. **Raw materials:** Indicate any limits on raw material use. Provide
 - Type:** Type of Raw Material (also should be listed in the Emission Unit description)
 - Amount:** The amount of the limit, such as 10,000 gallons per year, etc.
 - VOC:** The maximum VOC content, if any, allowed in the Raw Material under this limit (weight percent).

5. Other allowable restrictions: List all other limitations on the Emission Unit's operation that are required by a regulation or in an approval (permit). Do not list limitations reflective of "normal" or "average" operation.

- A. Work practices:** List all limits/requirements such as clean up procedures, start up and shut down procedures, etc.
- B. Process parameters:** List all limitations or restrictions such as process temperatures and other parameters, opacity limits, etc.
- C. Control equipment parameters:** List all control equipment limits such as operating parameters (temperature, pressure drop, etc).

6. Total allowable emissions: List allowable emission rates and total emissions from the Emission Unit. List only for those pollutants which have a limit specifically stated in an approval or requirement (i.e. the table need not necessarily be completed for all pollutants). If more than one Emission Unit is included in this allowable rate, note in the margins of the application which units are included.

- A. Rate:** For each pollutant, list any limit on emission rate such as, lbs per million btu, or formulation (lbs VOC per gallon coating, lbs VOC per gallon of solids, etc), etc. Be specific in type and limit amount.
- B. Short term:** For each pollutant list any limit on emissions less than 12 month, such as a lbs per hour, day or month limit. Be specific in type and limit amount.
- C. Long term:** For each pollutant list any limit on emissions for a 12 month period. Indicate if this is an annual, rolling 12 month, or other limit. Specify type and limit amount.

Section G - III Compliance Demonstration

In this section, provide information related to monitoring and recordkeeping requirements affecting the Emission Unit. In addition to requirements in any approval for the unit, requirements may be found in a regulation or other requirements.

None of these questions is intended to impose additional requirements on the Emission Unit except as provided for under **Operational Flexibility, New Restrictions or Federally Enforceable Limits**. If a question is not relevant enter "not applicable" in the space provided. If there is no monitoring or recordkeeping imposed on the Emission Unit, do not enter one here unless you wish to propose one.

Operational Flexibility:

To allow for flexible operations, the facility may propose an alternative compliance demonstration in this section, that is, monitoring that is different from that contained in an approval or requirement. MassDEP will review these alternative compliance demonstrations on a case by case basis for approval. At a minimum, the alternative demonstration must be equivalent to the existing requirements in terms of degree of monitoring. Any alternative or flexible monitoring should be identified as such in the application to distinguish them from current requirements. Some examples of flexible monitoring are:

Installation of a fuel meter in place of fuel delivery logs and tank records;

Central recordkeeping of paint usage for painting operations instead of records by individual paint spray operators.

MassDEP reserves the right to deny any such alternative proposal.

Federally Enforceable Limits:

Current monitoring on an Emission Unit or facility may be found unenforceable due to the nature of the limit, the method of limitation or the monitoring of the limit. Common examples include:

Too long an averaging time; for example, a recordkeeping requirement expressed on a yearly instead of 12 month rolling average

A limit with no monitoring or recordkeeping requirement

An unverifiable monitoring parameter

In such cases, the existing requirement may have to be modified to remedy such a deficiency. Such modifications, however, will be done to achieve an equivalent, but federally enforceable, monitoring requirement and limit.

You may propose revised requirements for purposes of federal enforceability. Otherwise the Department, as part of its review of your operating permit, will identify those compliance demonstration elements that need revision and can then be addressed by the facility in a revision to the application under review.

Refer to EPA's June 13, 1989 guidance entitled "Guidance on Limiting Potential to Emit in New Source Permitting" and the definition of Federal Potential to Emit in MassDEP regulations for further information on acceptable recordkeeping, monitoring and limitations.

New Restrictions:

An owner or operator is allowed to propose new limitations/restrictions that would establish lower allowable emissions. Such restrictions may be desired to avoid applicability to some regulations or other reasons. Along with such new proposed limits, appropriate monitoring and recordkeeping must be included.

MassDEP reserves the right to deny any such new restriction and to take appropriate enforcement action against the facility if the restriction was required before the submittal of the Operating Permit in order to comply with other air pollution control requirements.

In no cases will a relaxation of a restriction be considered in an Operating Permit application.

- 1. Alternative/flexible limits:** Indicate whether or not any alternative compliance demonstration is being proposed in this section for purposes of operational flexibility. If so, identify these alternatives and if necessary, provide additional supplemental documentation which demonstrates their equivalence to existing requirements.
- 2. New limits:** Indicate whether or not any new compliance demonstration elements are being proposed in this section for purposes of Federally Enforceability or restriction emissions. If so, identify these new limits.

3. **Monitoring:** List any physical instrumentation required by regulations or approval, such as fuel meters, opacity meters and recorders, temperature chart recorders, etc. For each instrument, there must be a corresponding limit or range listed under Part II - Applicable Requirements/Limits.
4. **Recordkeeping:** List all required recordkeeping and attach examples to this application.
5. **Reporting:** List all reporting requirements for the Emission Unit including routine reporting (such as monthly, yearly) and non-routine (such as notification of process upset, control equipment failure, etc.)
6. **Testing:** List all testing requirements including methods and frequency. Include emission (stack) testing requirements as well as routine testing for items such as combustion efficiency, etc.
7. **Enhanced monitoring:** Indicate if the enhanced monitoring provisions of 40 cfr 64 are applicable to the Emission Unit and attach a protocol, if applicable.

Instructions for Section H Liquid Organic Material Storage

Section H asks for information that describes the Emission Unit and requirements/limits on the unit. This information is used to determine the applicability of the unit to regulations and also becomes the description of the approved unit (both application material and approval letters are considered part of any approval).

Section H is divided into three (3) parts:

| | |
|-----|--------------------------------|
| I | Description |
| II | Applicable Requirements/Limits |
| III | Compliance Demonstration |

If you have an approval for the unit, much of this information is in the approval or the application you submitted for approval. Much of this information is also the same as that requested in the annual Emission Statement forms.

Except as described in instructions for parts II and III, none of these questions is intended to impose additional requirements on the Emission Unit; they are merely descriptions of the type and size of the Emission Unit and existing requirements. If a question is not relevant enter "not applicable" in the space provided.

One of these sections (comprised of three parts) must be completed for EACH individual Emission Unit listed in the Plant Overview (Section B). Make as many copies of the appropriate sections as necessary. Use a separate copy of the section for each Emission Unit.

Section H - I Description

Emission Unit number: Indicate the Emission Unit number described by this section. Emission Unit number must correspond to the numbers listed in Section B - Plant Overview.

1. Identify if **Above Ground** or **Below Ground** storage.
2. **Type:** Identify the type of tank design.
3. **Physical description:** Provide
 - Age:** Number of years the tank has existed.
 - Color:** Self explanatory.
4. **Dimensions:** Give the dimensions of the tank, specifically
 - Height:** Give height in feet.
 - Diameter:** Give diameter in feet.
5. **Capacity:** Identify the maximum amount of liquid capable of being stored in tank. Units are in gallons.
6. **Construction type:** Material tank is constructed of (ex: steel, fiberglass, etc.).
7. **Material stored:** Identify all materials that are ever stored in the tank. Provide:
 - A. Name:** The specific type of organic material(s) being stored, (i.e., alcohol is not a sufficient description - methanol, isopropanol, ethanol, etc. is required). If the material is a combination of organics, identify components as much as possible; for example, fuels can be specified by type and grade.
 - B. Vapor pressure and temperature:** The vapor pressure (psia) of the material being stored at the storage temperature. Also indicate storage temperature.
 - C. RVP:** For gasoline only, specify the RVP of the material.
 - D. Total oxygen content:** For oxygenated gasoline, specify the total oxygen content (percent by weight) in the fuel.
 - E. Oxygenate name:** For oxygenated gasoline, specify the oxygenate(s) name in the fuel.
 - F. Annual throughput:** Give the highest yearly throughput, in gallons, for the material.
8. **Loading/transferring:** Indicate if organic material is transferred to or from the tank by any of the methods listed.
9. **Air pollution control equipment:** For any air pollution control equipment associated with this Emission Unit, provide

- A. **Type:** For example: electrostatic precipitator, baghouse, cyclone, scrubber, afterburner, adsorber, etc.
- B. **Manufacturer/model:** Manufacturer and model of the control equipment.
- C. **Pollutant controlled:** The pollutant(s) that are controlled, for example, Particulate Matter (PM), VOC, Oxides of Nitrogen (NO_x), etc.
- D. **Efficiency:**

Capture efficiency: From 0 to 100%, indicate the minimum percent of total emissions from the Emission Unit that must be captured by the ventilation/duct system and conveyed to the control equipment, as required by permit, design or other requirement.

Control efficiency: From 0 to 100%, indicate the minimum percent of emissions conveyed to the control equipment that must be reduced by the control equipment, as required by permit, design or other requirement.

- 10. **Date of installation:** Date or dates when the Emission Unit and/or control equipment was installed.
- 11. **MassDEP air quality approvals (if applicable):** List approval number and date of approval for all approvals issued regarding this unit.
- 12. **Stack data:** For the stack (if any) discharging to the ambient air provide;

A. Dimensions.

Height (feet): Height of top of stack above ground level.

Diameter (inches): Give the inside diameter (id) of the stack at its exit point in inches. If the stack is not circular give the inside length and width of stack at the exit point.

B. Range of gas exit velocity: The range of exhaust exit velocity from the stack in feet per second (fps).

C. Range of exit temperature: The range of temperature of the exhaust from the stack (Degrees Fahrenheit)

D. Stack material of construction: Material of construction for the stack (steel, refractory lined brick, etc).

Section H - II Applicable requirements/limits

In this section, provide information related to regulations and limitations affecting the Emission Unit. In addition to limits in any approval for the unit, limits may be found in a regulation or other requirements.

None of these questions is intended to impose additional requirements on the Emission Unit except as provided for under Operational Flexibility, New Restrictions or Federally Enforceable Limits. If a question

is not relevant enter "not applicable" in the space provided. If there is no limit imposed on the Emission Unit, do not enter one here unless you wish to propose one.

Operational Flexibility:

To allow for flexible operations, the facility may propose alternative limits in this section, that is, limits that are different from those contained in an approval or requirement. MassDEP will review these alternative limits on a case by case basis for approval. At a minimum, the alternative limits must be equivalent to the existing requirements in terms of resulting emissions and degree of monitoring. Any alternative or flexible limit should be identified as such in the application to distinguish them from current requirements. Some examples of flexible limits are:

Change in allowable hours of operation from daily limits to an equivalent weekly total;

Change of an approval condition that requires the use of a named coating (brand xyx) to a generic condition that allows use of any coating with the same or less VOC content as Brand xyz.

MassDEP reserves the right to deny any such alternative limitations.

Federally Enforceable Limits:

Current limits on an Emission Unit or facility may be found unenforceable due to the nature of the limit, the method of limitation or the monitoring of the limit. Common examples include:

Too long an averaging time; for example, a limit expressed on a yearly instead of 12 month rolling average

A limit with no monitoring or recordkeeping requirement

A limit on emissions that cannot be easily verified

In such cases, the existing limit may have to be modified to remedy such a deficiency. Such modifications, however, will be done to achieve an equivalent, but federally enforceable, limit.

You may propose revised limits for purposes of federally enforceability. Otherwise the Department, as part of its review of your operating permit, will identify those limits that need revision and can then be addressed by the facility in a revision to the application under review.

Refer to EPA's June 13, 1989 guidance entitled "Guidance on Limiting Potential to Emit in New Source Permitting" and the definition of Federal Potential to Emit in MassDEP regulations for further information on acceptable limitations.

New Restrictions:

Facilities are allowed to propose new limitations/restrictions that would establish lower allowable emissions. Such restrictions may be desired to avoid applicability to some regulations or other reasons.

MassDEP reserves the right to deny any such new restriction and to take appropriate enforcement action against the facility if the restriction was required before the submittal of the Operating Permit in order to comply with other air pollution control requirements.

In no cases will a relaxation of a restriction be considered in an Operating Permit application.

1. **Alternative/flexible limits:** Indicate whether or not any alternative limits are being proposed in this section for purposes of operational flexibility. If so, identify these alternative limits and if necessary, provide additional supplemental documentation which demonstrates their equivalence to existing limits.
2. **New limits:** Indicate whether or not any new limits are being proposed in this section for purposes of Federally Enforceability or restriction of emissions. If so, identify these new limits.
3. **List applicable regulations:** List all regulations that apply to this Emission Unit. Refer to the supplemental documents, Appendices B and C, for more detailed information on what must be considered.
4. **Allowable usage limitations:** List all limitations on the Emission Unit's operation that are required by a regulation or in an approval (permit). Do not list limitations reflective of "normal" or "average" operation.
 - A. **Hours of operation:** Indicate any limits on hours of operation. If no limitations exists, enter "Not Applicable".
 - B. **Fuels used:** Indicate any limits on fuel use. Provide
 - Type:** Type of fuel limited (#2 oil, natural gas, etc)
 - Amount:** The amount of the limit, such as 10,000 gallons per year, etc.
 - Sulfur:** The maximum sulfur content, if any, allowed in the fuel under this limit (weight percent).
 - C. **Raw materials:** Indicate any limits on raw material use. Provide
 - Type:** Type of Raw Material (also should be listed in the Emission Unit description)
 - Amount:** The amount of the limit, such as 10,000 gallons per year, etc.
 - VOC:** The maximum VOC content, if any, allowed in the Raw Material under this limit (weight percent).
5. **Other allowable restrictions:** List all other limitations on the Emission Unit's operation that are required by a regulation or in an approval (permit). Do not list limitations reflective of "normal" or "average" operation.
 - A. **Work practices:** List all limits/requirements such as clean up procedures, start up and shut down procedures, etc.
 - B. **Process parameters:** List all limitations or restrictions such as process temperatures and other parameters, opacity limits, etc.

- C. **Control equipment parameters:** List all control equipment limits such as operating parameters (temperature, pressure drop, etc).
6. **Total allowable emissions:** List allowable emission rates and total emissions from the Emission Unit. List only for those pollutants which have a limit specifically stated in an approval or requirement (i.e. the table need not necessarily be completed for all pollutants). If more than one Emission Unit is included in this allowable rate, note in the margins of the application which units are included.
- A. **Rate:** For each pollutant, list any limit on emission rate such as, lbs per million BTU, or formulation (lbs VOC per gallon coating, lbs VOC per gallon of solids, etc), etc. Be specific in type and limit amount.
 - B. **Short term:** For each pollutant list any limit on emissions less than 12 month, such as a lbs per hour, day or month limit. Be specific in type and limit amount.
 - C. **Long term:** For each pollutant list any limit on emissions for a 12 month period. Indicate if this is an annual, rolling 12 month or other limit. Be specific in type and limit amount.

Section H - III Compliance Demonstration

In this section, provide information related to monitoring and recordkeeping requirements affecting the Emission Unit. In addition to requirements in any approval for the unit, requirements may be found in a regulation or other requirements.

None of these questions is intended to impose additional requirements on the Emission Unit except as provided for under **Operational Flexibility, New Restrictions or Federally Enforceable Limits**. If a question is not relevant enter "not applicable" in the space provided. If there is no monitoring or recordkeeping imposed on the Emission Unit, do not enter one here unless you wish to propose one.

Operational Flexibility:

To allow for flexible operations, the facility may propose an alternative compliance demonstration in this section, that is, monitoring that is different from that contained in an approval or requirement. MassDEP will review these alternative compliance demonstrations on a case by case basis for approval. At a minimum, the alternative demonstration must be equivalent to the existing requirements in terms of degree of monitoring. Any alternative or flexible monitoring should be identified as such in the application to distinguish them from current requirements. Some examples of flexible monitoring are:

Installation of a fuel meter in place of fuel delivery logs and tank records

Central recordkeeping of paint usage for painting operations instead of records by individual paint spray operators

MassDEP reserves the right to deny any such alternative proposal.

Federally Enforceable Limits:

Current monitoring on an Emission Unit or facility may be found unenforceable due to the nature of the limit, the method of limitation or the monitoring of the limit. Common examples include:

Too long an averaging time; for example, a recordkeeping requirement expressed on a yearly instead of 12 month rolling average

A limit with no monitoring or recordkeeping requirement

An unverifiable monitoring parameter

In such cases, the existing requirement may have to be modified to remedy such a deficiency. Such modifications, however, will be done to achieve an equivalent, but federally enforceable, monitoring requirement and limit.

You may propose revised requirements for purposes of federal enforceability. Otherwise the Department, as part of its review of your operating permit, will identify those compliance demonstration elements that need revision and can then be addressed by the facility in a revision to the application under review.

Refer to EPA's June 13, 1989 guidance entitled "Guidance on Limiting Potential to Emit in New Source Permitting" and the definition of Federal Potential to Emit in MassDEP regulations for further information on acceptable recordkeeping, monitoring and limitations.

New Restrictions:

Facilities are allowed to propose new limitations/restrictions that would establish lower allowable emissions. Such restrictions may be desired to avoid applicability to some regulations or other reasons. Along with such new proposed limits, appropriate monitoring and recordkeeping must be included.

MassDEP reserves the right to deny any such new restriction and to take appropriate enforcement action against the facility if the restriction was required before the submittal of the Operating Permit in order to comply with other air pollution control requirements.

In no cases will a relaxation of a restriction be considered in an Operating Permit application.

- 1. Alternative/flexible limits:** Indicate whether or not any alternative compliance demonstration is being proposed in this section for purposes of operational flexibility. If so, identify these alternatives and if necessary, provide additional supplemental documentation which demonstrates their equivalence to existing requirements.
- 2. New limits:** Indicate whether or not any new compliance demonstration elements are being proposed in this section for purposes of Federal Enforceability or restriction emissions. If so, identify these new limits.
- 3. Monitoring:** List any physical instrumentation required by regulations or approval, such as fuel meters, opacity meters and recorders, temperature chart recorders, etc. For each instrument, there must be a corresponding limit or range listed under Part II - Applicable Requirements/Limitations.
- 4. Recordkeeping:** List all required recordkeeping and attach examples to this application.

5. **Reporting:** List all reporting requirements for the Emission Unit including routine reporting (such as monthly, yearly) and non-routine (such as notification of process upset, control equipment failure, etc.)
6. **Testing:** List all testing requirements including methods and frequency. Include emission (stack) testing requirements as well as routine testing for items such as combustion efficiency, etc.
7. **Enhanced monitoring:** Indicate if the enhanced monitoring provisions of 40 cfr 64 are applicable to the Emission Unit and attach a protocol, if applicable.

Instructions for Section I Miscellaneous (other) Emission Units

Section I asks for information that describes the Emission Unit and requirements/limits on the unit. This information is used to determine the applicability of the unit to regulations and also becomes the description of the approved unit (both application material and approval letters are considered part of any approval).

Section I is divided into three (3) parts:

- | | |
|-----|--------------------------------|
| I | Description |
| II | Applicable Requirements/Limits |
| III | Compliance Demonstration |

If you have an approval for the unit, much of this information is in the approval or the application you submitted for approval. Much of this information is also the same as that requested in the annual Emission Statement forms.

Except as described in instructions for parts II and III, none of these questions is intended to impose additional requirements on the Emission Unit; they are merely descriptions of the type and size of the Emission Unit and existing requirements. If a question is not relevant enter "not applicable" in the space provided.

One of these sections (comprised of three parts) must be completed for EACH individual Emission Unit listed in the Plant Overview (Section B). Make as many copies of the appropriate sections as necessary. Use a separate copy of the section for each Emission Unit.

Section H - I Description

Emission Unit number: Indicate the Emission Unit number described by this section. Emission Unit number must correspond to the numbers listed in Section B - Plant Overview.

1. **Type of Emission Unit:** What is the type of source, such as a landfill, treatment plant or other type of unit not relevant to Sections E through H of this application.
2. **Description of emissions unit:** Describe the eu in terms of size, capacity, operating parameters.

3. **Type of emissions:** List the emissions that result from the Emission Unit, such as VOC, specific chemicals, etc.
4. **Nature of emissions:** Describe how the emissions are generated or associated with the Emission Unit.
5. **Air pollution control equipment:** For any air pollution control equipment associated with this Emission Unit, provide
 - A. **Type:** For example, electrostatic precipitator, baghouse, cyclone, scrubber, afterburner, adsorber, etc.
 - B. **Manufacturer/model:** Manufacturer and model of the control equipment.
 - C. **Pollutant controlled:** The pollutant(s) that are controlled, for example, Particulate Matter (PM), VOC, Oxides of Nitrogen (NO_x), etc.
 - D. **Efficiency:**

Capture efficiency: From 0 to 100%, indicate the minimum percent of total emissions from the Emission Unit that must be captured by the ventilation/duct system and conveyed to the control equipment, as required by permit, design or other requirement.

Control efficiency: From 0 to 100%, indicate the minimum percent of emissions conveyed to the control equipment that must be reduced by the control equipment, as required by permit, design or other requirement.
6. **Date of installation:** Date or dates when the Emission Unit and/or control equipment was installed.
7. **MassDEP Air quality approvals (if applicable):** List approval number and date of approval for all approvals issued regarding this unit.
8. **Stack data:** For the stack (if any) discharging to the ambient air provide;
 - A. **Dimensions.**

Height (feet): Height of top of stack above ground level.

Diameter (inches): Give the inside diameter (ID) of the stack at its exit point in inches. If the stack is not circular give the inside length and width of stack at the exit point.
 - B. **Range of gas exit velocity:** The range of exhaust exit velocity from the stack in feet per second (fps).
 - C. **Range of exit temperature:** The range of temperature of the exhaust from the stack (Degrees Fahrenheit)
 - D. **Stack material of construction:** Material of construction for the stack (steel, refractory lined brick, etc).

Section I - II Applicable requirements/limits

In this section, provide information related to regulations and limitations affecting the Emission Unit. In addition to limits in any approval for the unit, limits may be found in a regulation or other requirements.

None of these questions is intended to impose additional requirements on the Emission Unit except as provided for under **Operational Flexibility, New Restrictions or Federally Enforceable Limits**. If a question is not relevant enter "not applicable" in the space provided. If there is no limit imposed on the Emission Unit, do not enter one here unless you wish to propose one.

Operational Flexibility:

To allow for flexible operations, the facility may propose alternative limits in this section, that is, limits that are different from those contained in an approval or requirement. MassDEP will review these alternative limits on a case by case basis for approval. At a minimum, the alternative limits must be equivalent to the existing requirements in terms of resulting emissions and degree of monitoring. Any alternative or flexible limit should be identified as such in the application to distinguish them from current requirements. Some examples of flexible limits are:

Change in allowable hours of operation from daily limits to an equivalent weekly total;

Change of an approval condition that requires the use of a named coating (Brand xyx) to a generic condition that allows use of any coating with the same or less VOC content as Brand xyz.

MassDEP reserves the right to deny any such alternative limitations.

Federally Enforceable Limits:

Current limits on an Emission Unit or facility may be found unenforceable due to the nature of the limit, the method of limitation or the monitoring of the limit. Common examples include:

Too long an averaging time; for example, a limit expressed on a yearly instead of 12 month rolling average

A limit with no monitoring or recordkeeping requirement

A limit on emissions that cannot be easily verified

In such cases, the existing limit may have to be modified to remedy such a deficiency. Such modifications, however, will be done to achieve an equivalent, but federally enforceable, limit.

You may propose revised limits for purposes of federally enforceability. Otherwise the Department, as part of its review of your operating permit, will identify those limits that need revision and can then be addressed by the facility in a revision to the application under review.

Refer to EPA's June 13, 1989 guidance entitled "Guidance on Limiting Potential to Emit in New Source Permitting" and the definition of Federal Potential to Emit in MassDEP regulations for further information on acceptable limitations.

New Restrictions:

Facilities are allowed to propose new limitations/restrictions that would establish lower allowable emissions. Such restrictions may be desired to avoid applicability to some regulations or other reasons.

MassDEP reserves the right to deny any such new restriction and to take appropriate enforcement action against the facility if the restriction was required before the submittal of the Operating Permit in order to comply with other air pollution control requirements.

In no cases will a relaxation of a restriction be considered in an Operating Permit application.

1. **Alternative/flexible limits:** Indicate whether or not any alternative limits are being proposed in this section for purposes of operational flexibility. If so, identify these alternative limits and if necessary, provide additional supplemental documentation which demonstrates their equivalence to existing limits.
2. **New limits:** Indicate whether or not any new limits are being proposed in this section for purposes of Federally Enforceability or restriction of emissions. If so, identify these new limits.
3. **List applicable regulations:** List all regulations that apply to this Emission Unit. Refer to the supplemental documents, Appendices B and C, for more detailed information on what must be considered.
4. **Allowable usage limitations:** List all limitations on the Emission Unit's operation that are required by a regulation or in an approval (permit). Do not list limitations reflective of "normal" or "average" operation.
 - A. **Hours of operation:** Indicate any limits on hours of operation. If no limitations exists, enter "Not Applicable".
 - B. **Fuels used:** Indicate any limits on fuel use. Provide
 - Type:** Type of fuel limited (#2 oil, natural gas, etc).
 - Amount:** The amount of the limit, such as 10,000 gallons per year, etc.
 - Sulfur:** The maximum sulfur content, if any, allowed in the fuel under this limit (weight percent).
 - C. **Raw materials:** Indicate any limits on raw material use. Provide
 - Type:** Type of Raw Material (also should be listed in the Emission Unit description).
 - Amount:** The amount of the limit, such as 10,000 gallons per year, etc.
 - VOC:** The maximum VOC content, if any, allowed in the Raw Material under this limit (weight percent).

5. Other allowable restrictions: List all other limitations on the Emission Unit's operation that are required by a regulation or in an approval (permit). Do not list limitations reflective of "normal" or "average" operation.

- A. Work practices:** List all limits/requirements such as clean up procedures, start up and shut down procedures, etc.
- B. Process parameters:** List all limitations or restrictions such as process temperatures and other parameters, opacity limits, etc.
- C. Control equipment parameters:** List all control equipment limits such as operating parameters (temperature, pressure drop, etc).

6. Total allowable emissions: List allowable emission rates and total emissions from the Emission Unit. List only for those pollutants which have a limit specifically stated in an approval or requirement (i.e. the table need not necessarily be completed for all pollutants). If more than one Emission Unit is included in this allowable rate, note in the margins of the application which units are included.

- A. Rate:** For each pollutant, list any limit on emission rate such as, lbs per million BTU, or formulation (lbs VOC per gallon coating, lbs VOC per gallon of solids, etc), etc. Be specific in type and limit amount.
- B. Short Term:** For each pollutant list any limit on emissions less than 12 month, such as a lbs per hour, day or month limit. Be specific in type and limit amount.
- C. Long term:** For each pollutant list any limit on emissions for a 12 month period. Indicate if this is an annual, rolling 12 month or other limit. Be specific in type and limit amount.

Section I - III Compliance Demonstration.

In this section, provide information related to monitoring and recordkeeping requirements affecting the Emission Unit. In addition to requirements in any approval for the unit, requirements may be found in a regulation or other requirements.

None of these questions is intended to impose additional requirements on the Emission Unit except as provided for under **Operational Flexibility, New Restrictions or Federally Enforceable Limits**. If a question is not relevant enter "not applicable" in the space provided. If there is no monitoring or recordkeeping imposed on the Emission Unit, do not enter one here unless you wish to propose one.

Operational Flexibility:

To allow for flexible operations, the facility may propose an alternative compliance demonstration in this section, that is, monitoring that is different from that contained in an approval or requirement. MassDEP will review these alternative compliance demonstrations on a case by case basis for approval. At a minimum, the alternative demonstration must be equivalent to the existing requirements in terms of degree of monitoring. Any alternative or flexible monitoring should be identified as such in the application to distinguish them from current requirements. Some examples of flexible monitoring are:

Installation of a fuel meter in place of fuel delivery logs and tank records

Central recordkeeping of paint usage for painting operations instead of records by individual paint spray operators

MassDEP reserves the right to deny any such alternative proposal.

Federally Enforceable Limits:

Current monitoring on an Emission Unit or facility may be found unenforceable due to the nature of the limit, the method of limitation or the monitoring of the limit. Common examples include:

Too long an averaging time; for example, a recordkeeping requirement expressed on a yearly instead of 12 month rolling average

A limit with no monitoring or recordkeeping requirement

An unverifiable monitoring parameter

In such cases, the existing requirement may have to be modified to remedy such a deficiency. Such modifications, however, will be done to achieve an equivalent, but federally enforceable, monitoring requirement and limit.

You may propose revised requirements for purposes of federal enforceability. Otherwise the Department, as part of its review of your operating permit, will identify those compliance demonstration elements that need revision and can then be addressed by the facility in a revision to the application under review.

Refer to EPA's June 13, 1989 guidance entitled "Guidance on Limiting Potential to Emit in New Source Permitting" and the definition of Federal Potential to Emit in MassDEP regulations for further information on acceptable recordkeeping, monitoring and limitations.

New Restrictions:

Facilities are allowed to propose new limitations/restrictions that would establish lower allowable emissions. Such restrictions may be desired to avoid applicability to some regulations or other reasons. Along with such new proposed limits, appropriate monitoring and recordkeeping must be included.

MassDEP reserves the right to deny any such new restriction and to take appropriate enforcement action against the facility if the restriction was required before the submittal of the Operating Permit in order to comply with other air pollution control requirements.

In no cases will a relaxation of a restriction be considered in an Operating Permit application.

- 1. Alternative/flexible limits:** Indicate whether or not any alternative compliance demonstration is being proposed in this section for purposes of operational flexibility. If so, identify these alternatives and if necessary, provide additional supplemental documentation which demonstrates their equivalence to existing requirements.
- 2. New limits:** Indicate whether or not any new compliance demonstration elements are being proposed in this section for purposes of Federal Enforceability or restriction emissions. If so, identify these new limits.

3. **Monitoring:** List any physical instrumentation required by regulations or approval, such as fuel meters, opacity meters and recorders, temperature chart recorders, etc. For each instrument, there must be a corresponding limit or range listed under Part II - Applicable Requirements/Limits.
4. **Recordkeeping:** List all required recordkeeping and attach examples to this application.
5. **Reporting:** List all reporting requirements for the Emission Unit including routine reporting (such as monthly, yearly) and non-routine (such as notification of process upset, control equipment failure, etc.)
6. **Testing:** List all testing requirements including methods and frequency. Include emission (stack) testing requirements as well as routine testing for items such as combustion efficiency, etc.
7. **Enhanced monitoring:** Indicate if the enhanced monitoring provisions of 40 CFR 64 are applicable to the Emission Unit and attach a protocol, if applicable.

Instructions for Section J Total Facility Limits

In this section describe any limits that pertain to the facility as a whole and cannot be attributed to any single or group of Emission Units.

1. **Limitations:** List any facility limitations or requirements such as all tanks covered at all times, etc.
2. **Compliance demonstration:** List any facility monitoring or recordkeeping requirements such as annual leak detection and repair program, facility audits, etc.
3. **Total facility emissions:** For each pollutant emitted at the facility, provide the allowable emissions in tons per year. This should be either (1) the sum of all 12 month emission rates for each Emission Unit as well as emissions from activities listed under "Exempt Activities" or (2) an allowable facility limit established in an approval.

Note: Generally, Exempt Activities can be assumed to have allowable emissions of less than one ton per year for process Emission Units. Combustion Emission Units need to have allowable emissions calculated based on 100% rated capacity operating 8760 hours per year.

Instructions for Section K Compliance Certification

Complete this section as indicated and attach any additional information as necessary.

For Emission Units indicated as not in compliance, MassDEP suggests you investigate the possibility of Pollution Prevention (as described in Appendix D) to return the unit to compliance.

Instructions for Section L Certification

Any application form, report, or compliance certification submitted pursuant to 310 CMR 7.00: *Appendix C* shall contain certification by a responsible official of truth, accuracy, and completeness in accordance with 310 CMR 7.01(2).

Information required to be updated including, but not limited to any statements regarding compliance status in the compliance plan and the certification of truth and accuracy must reflect a current evaluation at the time of application and cannot be referenced from other documents.

Instructions for Section M Fee Calculation

Complete this section to calculate the appropriate fee for the Operating Permit submittal. Refer to the fee regulation or the general instructions in this application for the exact fee language. The minimum Operating Permit fee is \$2,312.

Part A: Emission Units: Use this to calculate the part of the fee that is Emission Unit based. Emission Units are listed in Section B of your application. Do not include anything listed in Section C as an exempt activity in this fee calculation.

- (i) **Uncontrolled Emission Units:** Enter the number of Emission Units that *do not have* add-on air pollution control equipment and multiply that number by \$405.
- (ii) **Controlled Emission Units:** Enter the number of Emission Units that *have* add-on air pollution control equipment and multiply that number by \$549.
- (iii) **Total:** Add the calculated dollar amounts for items (i) and (ii) and enter that total.

Part B: Actual Emissions: Use this to calculate the part of the fee that is emission based. Use actual emission from the facility for the previous calendar year. These emissions should be based on that reported in the Emission Statement for the previous calendar year. Any discrepancies must be addressed or processing of your application will be affected.

(i) Actual Adjusted Emissions

First Column - Actual Emissions (Total Facility): Enter the actual emissions (in tons per year) for the previous calendar year for the total facility in this column. List only for those pollutants indicated.

Second Column - Actual Emissions (Exempt Activities): Enter those actual emissions (in tons per year), for the previous calendar year, the emissions associated with "Exempt Activities" (listed in Section C of the application) or other activities exempted from the operating permit program that have been included in the total facility actual emissions. List only for those pollutants indicated.

Third Column - Actual Adjusted: Enter the Actual Adjusted emission for each pollutant. Actual Adjusted emission for a pollutant is the actual emissions from all Emission Units subject to the Operating Permit program (i.e. the difference of the first column minus the second column) or 4,000 tons per year, whichever is less.

(ii) Fee For Emissions

First Column - Actual Adjusted: Enter the Actual Adjusted emissions from the third column in Part B (i).

Third Column - Fee: Multiple each Actual Adjusted emission by \$9 and enter the amount in the third column. Total all elements of this column in the "Total \$" space provided.

Part C: Fee: Total the two dollar amounts Part A (Total Emission Unit Fee) and Part B (Total Emission Fee) for the total operating permit fee amount due. If this amount is less than \$2,312, enter \$2,312 as the total fee amount.

Operating Permit Instructions
Appendix B
Applicable Requirements Guidance

Applicable Requirements

The Operating Permit must list all regulations and requirements to which the facility is subject and to which it must comply. The following is a summary of possible applicable regulations and requirements. This is only a summary and is not intended to be a substitute for referencing the actual regulation, where necessary.

Massachusetts regulations (310 CMR 6.00 - 8.00) may be obtained at the State House Bookstore (locations listed in the general application submittal information); Federal regulations (40 CFR 60, 61, etc.) may be obtained at US Government Bookstores.

You are advised to monitor the status of any requirement not yet final that may be applicable to your facility in the future. Rules are continually proposed and finalized and this document may not reflect all current requirements.

Generally, applicable requirements can be separated into:

1. Those that must be evaluated for each emission unit;
2. Those that are generic to all emission units or applicable to the facility as a whole.

In Sections E - I of the Operating Permit application (one of each must be completed for each emission unit) all requirements that relate to a specific emission units must be addressed.

In Section D of the Operating Permit application all requirements that are generic or facility-wide must be addressed.

The rest of this document contains detail on possible requirements:

| Page | Section |
|-------------|--|
| | MassDEP Regulations |
| 3 | Regulations for each emission unit. |
| 10 | Regulations that are generic |
| 14 | Regulations that are not applicable. |
| 15 | Approvals |
| 16 | NSPS |
| 17 | NESHAPs and Accidental Release |
| 18 | Standards adopted under the NESHAPS before the CAAA of 1990 |
| 19 | Standards developed under Title III of the CAAA of 1990 (commonly referred to as MACT) |
| 19 | Standards developed under Title III of the CAAA of 1990 for Prevention of Accidental Release |
| 19 | Federal Acid Rain |
| 20 | Enhanced Monitoring |
| 20 | Solid Waste Combusters |
| 21 | Consumer Products |
| 21 | Tank Vessels |
| 22 | Outer Continental Shelf |
| 22 | Stratospheric Ozone |
| 23 | Temporary Sources |
| 24 | Applicable Requirement Definition |

MassDEP Regulations - 310 CMR 7.00

Listed are **MassDEP** Air Pollution Control Regulations and a brief summary of their content. All applicable **MassDEP** Air Pollution Regulations are found in 310 CMR 7.00.

I. Regulations that must be evaluated for each emission unit.

1. 310 CMR 7.02: *Plans Approval and Emission Limitations List, for Each Air Pollution Control District, of Cities and Towns in Critical Areas of Concern*

Summary:

310 CMR 7.02 is MassDEP regulation that requires written approval before the construction or modification of any source of air pollution. Generally, the only exemptions from this requirement are:

1. Fuel utilization facility, excluding internal combustion engines such as a combustion turbine or a reciprocating engine with an energy input capacity less than:
 - a. 10,000,000 Btu per hour utilizing natural gas or propane.
 - b. 10,000,000 Btu per hour utilizing distillate fuel oil.
 - c. 10,000,000 Btu per hour utilizing residual fuel oil (also see 310 CMR 7.05(1) and 7.05(2)) having a sulfur content not in excess of 0.28 pounds per million Btu heat release potential (approximately equal to 0.5% sulfur by weight content fuel oil).
 - d. 5,000,000 Btu per hour utilizing residual fuel oil (also see 310 CMR 7.05(1) and 7.05(2)) having a sulfur content not in excess of 0.55 pounds per million Btu heat release (approximately equal to 1% sulfur by weight content fuel oil).
 - e. 3,000,000 Btu per hour utilizing solid fuel (with an automatic feed for the fuel) or digester gas.
 - f. 1,000,000 Btu per hour utilizing hand fired solid fuel.
2. Emission Units with potential emissions of less than one ton per year (after controls) of any criteria air contaminant, calculated over any consecutive 12 month time period. Products of combustion from any fuel utilization facility(ies) are not included when calculating potential emissions under this section.
3. Internal combustion engine such as a combustion turbine or a reciprocating engine having an energy input capacity of less than 3,000,000 Btu per hour.
4. Emission Units with potential emissions of less than one ton per year (after controls) of the sum of all non-criteria air contaminants, calculated over any consecutive twelve month time period. Products of combustion from any fuel utilization facility(ies) are not included when calculating potential emissions under this section.

In addition, emission limits are established for a select number of sources new and/or existing by this regulation. These include:

- a. incinerators,
- b. asphalt batching plants,
- c. fossil and wood fuel utilization facilities, and
- d. foundries.

Operating Permit Requirement:

For emission units that have or require an approval, this regulation must be listed as an applicable requirement in Part II of Sections E - I (Item 3).

All specific requirements/limits contained in the approval must be listed in the other items of Parts II and III.

Also, for emission units that are subject to a specific limit, this must be listed as an applicable requirement, unless the approval contains a stricter limit.

2. 310 CMR 7.03: *Plan Application Exemption Construction Requirements*

Summary:

310 CMR 7.03 is MassDEP regulation that allows construction or modification of a source of air pollution without the written approval required under 310 CMR 7.02. The exemption is from the need for an approval, not from all requirements.

The exemptions are based on the type of emission unit, emissions and certain design/operating requirements. A list of Emission Unit types and summary of requirements is attached as Table I in Appendix C (pages 2 - 3).

Operating Permit Requirement:

For emission units that were constructed or modified and did not require written approval under this exemption, this regulation must be listed as an applicable requirement in Part II of Sections E - I (Item 3) (i.e. the emission unit is operating without an approval because it meets all the requirements in the exemption).

All specific requirements/limits/standards contained in the regulation must be listed in the other items of Parts II and III.

3. 310 CMR 7.04: Fossil Fuel Utilization Facilities

Summary:

310 CMR 7.04 is MassDEP regulation that, in part:

- a. requires smoke density indicators on facilities greater than or equal to 40,000,000 Btu/hr using oil or solid fuel;
- b. inspection, maintenance and testing of all facilities greater than or equal to 3,000,000 Btu/hr;
- c. automatic oil viscosity controllers on facilities greater than or equal to 250,000,000 Btu/hr using oil;
- d. prohibition of unapproved burners or natural draft in facilities greater than or equal to 3,000,000 Btu/hr in the city of Worcester, and;
- e. requirements for the combustion of used fuel oil in any size facility

Operating Permit Requirement:

For a facility that meets or exceeds the thresholds contained in this regulation, this regulation must be listed as an applicable requirement in Part II of Sections E - I (Item 3) for each combustion Emission Unit.

All specific requirements/limits contained in the regulation must be listed in the other items of Parts II and III.

4. 310 CMR 7.05: Fuels All Districts

Summary:

310 CMR 7.05 is MassDEP regulation that regulates, in part:

- a. sulfur content of fuels
- b. ash content of fuels
- c. components used fuel oil
- d. fuel additives
- e. prohibition of residual fuel, landfill gas or hazardous waste fuel use in facilities less than 3,000,000 Btu/hr.

Operating Permit Requirement:

For any emission units that burn fuels, this regulation must be listed as an applicable requirement in Part II of Sections E - I (Item 3). Also there are some requirements in this regulation that pertain to those who sell or distribute fuels.

All specific requirements/limits contained in this regulation must be listed in the other items of Parts II and III.

Almost all sources are affected by this regulation.

5. 310 CMR 7.06: Visible Emissions

Summary:

310 CMR 7.06 is MassDEP regulation that regulates visible emissions for emission units and other sources. The regulation sets limits on amount and duration of visible emissions for:

- a. stationary sources other than incinerators
- b. incinerators
- c. marine vessels
- d. aircraft
- e. spark ignited internal combustion engines
- f. diesel engines

Operating Permit Requirement:

For any emission unit, this regulation must be listed as an applicable requirement in Part II of Sections E - I (Item 3).

The specific limits contained in the regulation must be listed in the other items of Section I unless the emission unit has an approval with a stricter visible emission limit.

6. 310 CMR 7.08: Incinerators

Summary:

310 CMR 7.08 is MassDEP regulation that sets forth requirements for incinerators, especially hazardous waste incinerators. It relates to:

- a. approvals for all incinerators;
- b. design requirements for hazardous waste incinerators.

Operating Permit Requirement:

For hazardous waste incinerators, this regulation must be listed as an applicable requirement in Part II of Section H (Item 3). For all other incinerators, this is not an applicable requirement.

All specific requirements/limits contained in the regulation for hazardous waste incinerators must be listed in the other items of Parts II and III unless the unit has an approval with stricter limits.

Note: All incinerators require an approval under 310 CMR 7.02.

7. 310 CMR 7.14: Monitoring Devices and Reports

Summary:

310 CMR 7.14 is the MassDEP regulation that requires monitoring, recording and reporting requirements certain combustion emission units greater than 250,000,000 Btu/hr. The regulation references 40 CFR 51 Appendix P for details on applicability and requirements.

Operating Permit Requirement:

For emission units greater than 250,000,000 Btu/hr that meet the applicability requirements this regulation must be listed as an applicable requirement in Part II of Sections E - I (Item 3).

All specific requirements/limits contained in the regulation and 40 CFR Appendix P must be listed in the other items of Parts II and III.

8. 310 CMR 7.17: Conversions to Coal

Summary:

310 CMR 7.17 is the MassDEP regulation that establishes requirements for facilities converting to coal use. It is only applicable to Brayton Point Station, Units 1,2 and 3, and Mt. Tom Power Plant.

Operating Permit Requirement:

For the emission units listed, this regulation must be listed as an applicable requirement in Part II of Sections E - I (Item 3).

The specific requirements/limits contained in the regulation must be listed in the other items of Parts II and III.

9. 310 CMR 7.18: Volatile Organic Compounds

Summary:

310 CMR 7.18 is the MassDEP regulation that sets emission limits and the need for written MassDEP approvals for certain emission units and facilities that emit Volatile Organic Compounds (VOC)

This regulation is regardless of construction/modification approvals or date of installation. Some new sources may, however, have a 310 CMR 7.02 approval which also satisfies the conditions of this regulation.

A table of source types and applicability is attached as Table II in Appendix C (pages 4 - 5).

Operating Permit Requirement:

For emission units subject to a limit and/or approval requirements, this regulation must be listed as an applicable requirement in Part II of Sections E - I (Item 3).

All specific requirements/limits contained in the regulation and/or approval must be listed in the other items of Parts II and III.

10. 310 CMR 7.19: Reasonably Available Control Technology (RACT) for Sources of Oxides of Nitrogen (NO_x)

Summary:

310 CMR 7.19 is the MassDEP regulation that sets emission limits and the need for written MassDEP approvals for certain emission units and facilities that emit Oxides of Nitrogen (NO_x). The regulation applies to any facility with the potential to emit 50 tons per year or more of oxides of nitrogen.

This regulation is for all sources regardless of construction/modification approvals or date of installation. Some new sources may, however, have a 310 CMR 7.02 approval which also satisfies the conditions of this regulation.

Operating Permit Requirement:

For emission units subject to a limit and/or approval requirements, this regulation must be listed as an applicable requirement in Part II of Sections E - I (Item 3).

All specific requirements/limits contained in the regulation and/or approval must be listed in the other items of Parts II and III.

11. 310 CMR 7.22: Sulfur Dioxide Emissions Reductions for the Purpose of Reducing Acid Rain

Summary:

310 CMR 7.19 is the MassDEP regulation that regulates sulfur dioxide (SO_x) emission limits from individual emission units greater than 100,000,000 Btu/hr. Emission limits and plan requirements are listed in the regulation.

Operating Permit Requirement:

For emission units subject to a limit and plan requirements, this regulation must be listed as an applicable requirement in Part II of Sections E - I (Item 3).

All specific requirements/limits contained in the regulation and/or plan must be listed in the other items of Parts II and III, unless the unit has an approval which contains a stricter limit.

12. 310 CMR 7.24: Organic Material Storage and Distribution

Summary:

310 CMR 7.24 is the MassDEP regulation that sets requirements for the storage and distribution of organic materials and motor vehicle fuels with a vapor pressure greater than 1.5 psia under actual storage conditions. Requirements exist for:

- a. Organic Material Storage Tanks greater than or equal to 40,000 gallons capacity.
- b. Bulk Terminals and Bulk Plants.
- c. Motor Vehicle Fuel Storage tanks greater than 250 gallons.
- d. Motor Vehicle Fuel Tank Trucks.
- e. Gasoline Vapor Pressure.
- f. Motor Vehicle Fuel Dispensing.
- g. Oxygenated Gasoline Composition and Use.

Operating Permit Requirement:

For emission units that meet the applicability requirements, this regulation must be listed as an applicable requirement in Part II of Sections E - I (Item 3).

All specific requirements/limits contained in the regulation must be listed in the other items of Parts II and III, unless the unit has an approval which contains a stricter limit.

13. Appendix A Emission Offsets and Nonattainment Review

Summary:

These regulations deal with the approval of major sources of air pollution and are implemented through approvals issued under 310 CMR 7.02.

Operating Permit Requirement:

For emission units that have or require an approval under 7.02 and Appendix A, this regulation must be listed as an applicable requirement in Part II of Sections E - I (Item 3).

All specific requirements/limits contained in the approval must be listed in the other items of Parts II and III.

14. Appendix B Emission Banking, Trading and Averaging

Summary:

These regulations deal with the generation and use of emission credits as well as emission averaging and are implemented through approvals issued under 310 CMR 7.02.

Operating Permit Requirements:

For emission units that have or require an approval under 7.02 and Appendix B, this regulation must be listed as an applicable requirement in Part II of Sections E - I (Item 3).

All specific requirements/limits contained in the approval must be listed in the other items of Parts II and III.

II. MassDEP Regulations that are generic to all emission units or applicable to the facility as a whole.

1. 310 CMR 7.01: General Regulations

Summary:

This regulation generally prohibits any person from causing or contributing to a condition of air pollution. It also contains language on accurate submittals, records and certifications.

Operating Permit Requirements:

By signing the certification in Section K, the facility is certifying compliance with this regulation.

2. 310 CMR 7.07: Open Burning

Summary:

This regulation contains general prohibitions and requirements for various open burning situations. It is not related to emission units, though a facility may be subject to the rule because of open burning conducted for fire training or other allowed circumstances.

Operating Permit Requirement:

By signing the certification in Section K, the facility is certifying compliance with this regulation.

3. 310 CMR 7.09: Dust, Odor, Construction and Demolition

Summary:

This regulation is a general prohibition of nuisance dust and odor from emission units and other activities (construction, demolition, etc).

Operating Permit Requirements:

By signing the certification in Section K, the facility is certifying compliance with this regulation.

4. 310 CMR 7.10: Noise

Summary:

This regulation is a general prohibition of nuisance noise from emission units and other activities.

Operating Permit Requirements:

By signing the certification in Section K, the facility is certifying compliance with this regulation.

5. 310 CMR 7.11: *Transportation Media*

Summary:

This regulations deals with excessive emissions from operation of motor vehicles, trains, aircraft and marine vessels.

Operating Permit Requirements:

By signing the certification in Section K, the facility is certifying compliance with this regulation.

6. 310 CMR 7.12: *Inspection Certificate, Record Keeping and Reporting*

Summary:

This regulation deals with the filing of Emission Statements. Emission Statements are forms on which facilities provide information on emissions for the previous year.

Operating Permit Requirement:

The facility is required to indicate, in Section D, the date of submittal of last Emission Statement.

Note: Any facility which needs to file for an Operating Permit also needs to complete Emission Statements on an annual basis.

7. 310 CMR 7.13: *Stack Testing*

Summary:

This regulation sets forth the **MassDEP** authority to require emission testing and the responsibility of facilities to provide adequate resources and equipment to accommodate such testing.

Operating Permit Requirements:

By signing the certification in Section K, the facility is certifying compliance with this regulation.

8. 310 CMR 7.15: Asbestos

Summary:

This regulation sets forth standards for demolition/renovation that involves asbestos or asbestos containing materials.

Operating Permit Requirement:

The facility is required to indicate, in Section D, compliance with the regulation.

9. 310 CMR 7.16: Reduction of Single Occupant Commuter Vehicle Use

Summary:

This regulation sets forth requirements for facilities employing 250 or more applicable employees to help encourage carpooling, mass transit and other alternatives to driving alone in a single occupant commuter vehicle.

Operating Permit Requirement:

The facility is required to indicate, in Section D, compliance with the regulation (and indicate date of last Update submittal) or that the regulation is not applicable.

10. 310 CMR 7.25 Best Available Controls for Consumer and Commercial Products.

Summary:

310 CMR 7.25 is the **MassDEP** regulation that sets maximum VOC content for certain consumer and commercial products (architectural and industrial coatings). Regulations affect manufacturers and sellers of such products.

Operating Permit Requirement:

The facility is required to indicate, in Section D, compliance with the regulation or that no such operations are conducted at the facility.

III. Regulations that are not applicable to facilities in the Operating Permit Program.

- 310 CMR 7.20: Motor Vehicle Inspection and Maintenance: Emission Analyzer Approval Process and Inspection Requirements and Procedures
- 310 CMR 7.21: Sulfur Dioxide Emissions Limitations
- 310 CMR 7.30: MB Massport/Logan Airport Parking Freeze
- 310 CMR 7.31: MB City of Boston/East Boston Parking Freeze
- 310 CMR 7.33: MB City of Boston/South Boston Parking Freeze
- 310 CMR 7.36: Transit System Improvements
- 310 CMR 7.37: MB High Occupancy Vehicle Lanes
- 310 CMR 7.38: Certification of Tunnel Ventilation Systems in the Metropolitan Boston Air Pollution Control District
- 310 CMR 7.40: Low Emission Vehicles Program
- 310 CMR 7.50: Variances
- 310 CMR 7.51: Hearings Relative to Orders and Approvals
- 310 CMR 7.52: Enforcement Provisions
- 310 CMR 7.60: Severability

Approvals

Summary:

Approvals are issued under the Departments regulations of 310 CMR 7.02, 310 CMR 7.18 or 310 CMR 7.19 as described in **MassDEP** regulations. The conditions and/or requirements contained in these approvals are considered Applicable Requirements. Note that many of the requirements in an approval are derived from other regulations. Approvals and requirements are emission unit specific.

The following are possible names of approvals that may have been issued to your facility:

Plan Approval
Conditional Plan Approval
Limited Plan Approval
Comprehensive Plan Approval (CPA)
Non-major Comprehensive Plan Approval (NMCPA)
Major Comprehensive Plan Approval (MCPA)
Restricted Emission Status (RES)
Emission Control Plan (ECP)
Prevention of Significant Deterioration (PSD)
Appendix A Nonattainment
Forms: BWP AQ 01
 BWP AQ 02
 BWP AQ 03
 BWP AQ 08A
 BWP AQ 08B
 BWP AQ 09A
 BWP AQ 09B

The following are **NOT** approvals:

Source Registrations
Emission Statements
Any approval issued **Draft** only

Approval numbers can be found on the first page of approval letters in upper right hand corner under the RE: section. Approval numbers are either identified as an approval or transmittal number.

Operating Permit Requirement:

For emission units that have an approval, the regulation requiring the approval must be listed as an applicable requirement in Part II of Sections E - I (Item 3). Also, the approval number must be listed in the Emission Unit description (Part I).

All specific requirements/limits contained in the approval must be listed in the other items of Parts II and III.

Standards of Performance for New Stationary Sources

Summary:

Standards of performance for new stationary sources are Federal standards often delegated to Massachusetts for implementation (for purposes of operating permits, it is not relevant whether or not Massachusetts has accepted delegation).

NSPS are based on, in part, emission unit type. They have very specific thresholds and applicability dates that need to be considered.

All current source types that have an NSPS Standard are attached as Table III in Appendix C (pages 6 - 8).

Operating Permit Requirement:

For emission units that are subject to an NSPS standard, the NSPS subpart must be listed as an applicable requirement in Part II of Sections E - I (Item 3).

All specific requirements/limits contained in the NSPS standard must be listed in the other items of Parts II and III, unless the unit has an approval which requires stricter limitations.

NESHAPs and Prevention of Accidental Release

These regulations consist of three distinct programs.

1. Standards adopted under the NESHAPs before the CAAA of 1990 (emission unit specific).
2. Standards developed under Title III of the CAAA of 1990, commonly referred to as MACT (emission unit specific).
3. Standards developed under Title III of the CAAA of 1990 for Prevention of Accidental Release (applicable on facility- wide basis).

I. Standards adopted under the NESHAPS before the CAAA of 1990

Summary:

National Emission Standards for Hazardous Air Pollutants (or NESHAPS) are Federal standards often delegated to Massachusetts for implementation (for purposes of operating permits, it is not relevant whether or not Massachusetts has accepted delegation).

NESHAPs are based on, in part, the pollutant emitted and emission unit type. They have very specific thresholds and applicability that need to be considered.

All current source types that have an NESHAPs Standard are attached as Table IV in Appendix C (page 9).

Operating Permit Requirement:

For emission units that are subject to an NESHAPs standard, the NESHAPS subpart must be listed as an applicable requirement in Part II of Sections E - I (Item 3).

All specific requirements/limits contained in the NESHAPs standard must be listed in the other items of Parts II and III, unless the unit has an approval which requires stricter limitations.

II. Standards developed under Title III of the CAAA of 1990 (Commonly referred to as MACT)

Summary:

Generally, Title III (MACT) standards are for facilities that have to potential to emit 10 tons per year of any single Hazardous Air Pollutant or 25 tons per year of all HAPs combined, however, smaller sources may also be subject to these rules. For many types of sources emitting HAPs, EPA will develop standards.

A facility is subject to the Title III MACT standard if it:

- a. Has the potential to emits HAPs in excess of the 10/25 ton per year rate **or**
- b. It is a listed source type.

The HAPs list is attached as Table V of Appendix C (page 10 - 14).

The source types are attached as Table VI of Appendix C (page 15 - 21).

Operating Permit Requirement:

All facilities are required, in Section D, to indicate if the facility has the potential to emit HAPs in excess of the 10/25 ton per year rate. Additionally, the facility must indicate the source of such emissions.

For emission units that are subject to a specific MACT standard (i.e. listed source type), the Subpart must be listed as an applicable requirement in Part II of Sections E - I (Item 3), if a final rule exists.

All specific requirements/limits contained in a MACT standard or approval must be listed in the other items of Section I, unless the unit has an approval which requires stricter limitations.

Facilities subject to a draft or future MACT standard need not list the standard as an applicable requirement.

III. Standards developed under Title III of the CAAA of 1990 for Prevention of Accidental Release

Summary:

Regulations will be developed regarding prevention of Accidental releases for a list of compounds. The list of current proposed compounds is attached as Table VII and Table VIII of Appendix C (pages 22 - 27). This list is subject to revision based on final rules.

Operating Permit Requirement:

The facility is required to indicate, in Section D, whether or not the facility stores, uses or processes any of the listed compounds in quantities greater than the thresholds.

There is no other requirement at this time.

Federal Acid Rain, Title IV

Summary:

This regulation, Title IV of the CAAA, pertain to electric generating utilities. The sources subject to this regulation are those listed below and other sources that choose to be included in the program.

Brayton Point
Canal
Cannon Street
Cleary Flood
Kendall Square
Mount Tom
Mystic
New Boston
Salem Harbor
Somerset
Waters Rivers
West Springfield

Operating Permit Requirement:

For emission units listed or that have opted into the program, this regulation must be listed as an applicable requirement in Part II of Sections E - I (Item 3).

All specific requirements/limits contained in any approval issued for this regulation must be listed in the other items of Parts II and III.

Enhanced Monitoring

Summary:

Section 114(a)3 of the Clean Air Act requires the development of regulations concerning monitoring requirements. The regulations are proposed as a Federal regulation 40 CFR 64. The Enhanced Monitoring Program, in general, will apply to some emission units at major sources and other sources.

Operating Permit Requirement:

Facilities are required to submit a separate attachment with the Operating Permit Application that demonstrates compliance with the Federal rule, when and if the rule become final.

Note: This rule was has not been finalized as of the date of this document.

Solid Waste Combusters

Summary:

As part of the Clean Air Act Amendments, regulations will be developed for solid waste incineration units with the capacity to combust 250 or more tons per day. Actions will include:

- New Source Performance Standards
- Existing Units – Guidelines
- Monitoring Requirements
- Operator Training Requirements
- Permit Requirements

These regulations are not finalized.

Operating Permit Requirement:

When and if such rules are finalized:

For emission units subject, these regulation must be listed as an applicable requirement in Part II of Sections E - I (Item 3).

All specific requirements/limits contained in these requirements must be listed in the other items of Parts II and III.

Consumer and Commercial Products

Summary:

As part of the Clean Air Act Amendments, regulations may be developed for consumer and commercial products. Currently, these are not yet developed on the Federal level although on the state level, Massachusetts has adopted similar rules (310 CMR 7.25 *Best Available Controls for Consumer and Commercial Products*).

Federal regulations will potentially affect any substance, product (including paints, coatings, and solvents), or article (including any container or packaging) held by any person, the use, consumption, storage, disposal, destruction, or decomposition of which may result in the release of volatile organic compounds.

The regulation will potentially apply to:

- (i) manufacturers, processors, wholesale distributors, or importers of consumer or commercial products for sale or distribution in interstate commerce in the United States; or
- (ii) manufacturers, processors, wholesale distributors, or importers that supply the entities listed under clause (i) with such products for sale or distribution in interstate commerce in the United States.

Operating Permit Requirement:

The facility is required to indicate, in Section D, if they are in compliance with the Massachusetts regulation (see **MassDEP** regulation section). Alternatively, the facility must indicate that no such operations are conducted at the facility.

When and if Federal regulations are finalized, the facility will also include information on compliance with the federal regulation.

Tank Vessels

Summary:

As part of the Clean Air Act Amendments, regulations will be developed applicable to the emission of VOCs and any other air pollutant from loading and unloading of tank vessels. Currently, these are not yet developed on the Federal level and on the state level, Massachusetts intends to adopt similar rules (proposed 310 CMR 7.24(8) *Marine Volatile Organic Liquid Transfer Operations*).

Operating Permit Requirement:

When and if rules are finalized:

For emission units subject, this regulation must be listed as an applicable requirement in Part II of Sections E - I (Item 3).

All specific requirements/limits contained in the regulation or subsequent approval must be listed in the other items of Parts II and III.

Outer Continental Shelf Sources

Summary:

As part of the CAAA, EPA will establish requirements to control air pollution from Outer Continental Shelf sources located offshore of the States along the Pacific, Arctic and Atlantic Coasts, and along the United States Gulf Coast off the State of Florida as well as other offshore areas.

These rules are not applicable to stationary sources not located in offshore areas.

Operating Permit Requirement:

MassDEP does not envision such sources in the near future, but if such rules are finalized, facilities are required to demonstrate compliance with said rules.

Stratospheric Ozone

Summary:

Rules for the protection of stratospheric ozone and the elimination of ozone depleting chemicals affect use any the compounds listed in attached Table IX of Appendix C (page 28). If you use one of these in any way, including in refrigeration or air conditioning units, you may be subject to requirements.

Operating Permit Requirement:

The facility is required to indicate, in Section D, whether or not the facility is in compliance with the regulations or no such operations are conducted at the facility.

The facility must attach supplemental information if such use or activities do occur) or state that no such operations are conducted at the facility.

Temporary Sources

Summary:

According to 504(e) of the CAAA, the Department may

"... issue a single permit authorizing emissions from similar operations at multiple temporary locations. No such permit shall be issued unless it includes conditions that will assure compliance with all the requirements of this Act at all authorized locations, including, but not limited to, ambient standards and compliance with any applicable increment or visibility requirements under part C of title I. Any such permit shall in addition require the owner or operator to notify the permitting authority in advance of each change in location. The permitting authority may require a separate permit fee for operations at each location."

Operating Permit Requirement:

The requirements of this section would only apply to sources that are temporary and for which a permit authorizing emissions at multiple locations is issued.

The Department will handle such sources on a case by case basis.

Definition of Applicable Requirement

The following is the definition of applicable requirement found in the operating permit regulation. All the items listed (a-m) are addressed in the preceding sections of this guidance.

Applicable requirement means all of the following as they apply to Emissions Units or control equipment in a facility subject to the requirements of 310 CMR 7.00: *Appendix C*. This includes requirements that have been promulgated or approved by EPA through rule making at the time of issuance but have future-effective compliance dates:

- (a) Any standard or other requirement provided for in the applicable implementation plan, contained at 310 CMR 7.00 approved or promulgated by EPA through rulemaking under 42 U.S.C. 7401, Title I that implements the relevant requirements of 42 U.S.C. 7401, including any revisions to that plan promulgated in 40 CFR Part 52;
- (b) Any term or condition of any approval issued by the Department pursuant to any regulation under 310 CMR 7.00 which has been approved or promulgated through rulemaking under 42 U.S.C. 7401, Title I, including parts C or D (310 CMR 7.00: *Appendix A* or 40 CFR 52.21 PSD approvals), of 42 U.S.C. 7401;
- (c) Any standard or other requirement under 42 U.S.C. 7401, § 111, including § 111(d) (New Source Performance Standards (NSPS));
- (d) Any standard or other requirement under 42 U.S.C. 7401, § 112, including any requirement concerning accident prevention under 42 U.S.C. 7401, § 112(r)(7) (National Emission Standard for Hazardous Air Pollutants (NESHAPS));
- (e) Any standard or other requirement of the acid rain program under Title IV of 42 U.S.C. 7401 or the regulations promulgated thereunder, including 40 CFR Parts 72, 73, 75, or 78;
- (f) Any requirement(s) established pursuant to 42 U.S.C. 7401, § 504(b) (monitoring and analysis) or § 114(a)(3) (enhanced monitoring 40 CFR Part 64 regulations);
- (g) Any standard or other requirement governing solid waste incineration, under 42 U.S.C. 7401, § 129;
- (h) Any standard or other requirement for consumer and commercial products, under 42 U.S.C. 7401, § 183(e);
- (i) Any standard or other requirement for tank vessels under 42 U.S.C. 7401, § 183(f);
- (j) Any standard or other requirement of the program to control air pollution from outer continental shelf sources, under 42 U.S.C. 7401, § 328;
- (k) Any standard or other requirement of the regulations promulgated to protect stratospheric ozone under 42 U.S.C. 7401, Title VI, unless the EPA has determined that such requirements need not be contained in an operating permit;
- (l) Any national ambient air quality standard or increment or visibility requirement under 42 U.S.C. 7401, Title I, part C but only as it would apply to temporary sources permitted pursuant to 42 U.S.C. 7401, § 504(e); and
 - (m) Any other standard or requirement contained in 310 CMR 7.00 that has not been approved or promulgated by EPA through rulemaking under 42 U.S.C. 7401, Title I. These applicable requirements would be listed as a "state only" enforceable provision of an operating permit.

Operating Permit Instructions
Appendix C
Tables of Applicable Requirements

Note: The tables and summaries provided for in this appendix are subject to periodic changes. They reflect the status of regulations at the time of initial creation of this guidance (December 1994) unless otherwise stated.

Table I**List of 7.03 Sources****Sources Eligible for Exemption from Written Plan Approval Requirements with Conditions**

| Process | Reg. # | Summary of Requirements | Applicability |
|--|---------------|---|---|
| Degreaser (using any solvent) | 7.03(8) | •Meets design requirements of 7.18(8) | •Must use < 100 gal/month solvent |
| Wave Solder | 7.03(9) | •Must be oilless unit or •Must have ESP 90% efficient | •Must use < 200 gal/month of flux |
| Emergency Standby Engines | 7.03(10) | •Exhaust silencer •Exhaust Stack that does not impact air quality | •Must be emergency use only •Must be < 10,000,000 BTU/HR |
| Lead Melt Pots | 7.03(11) | •fabric filter capable of 99.5% particulate control efficiency | |
| Dry Material Storage Silo | 7.03(12) | •fabric filter capable of 99.5% particulate control efficiency | |
| Motor Vehicle Fuel Dispensing Facility | 7.03(13) | •must comply with 7.24 requirements | |
| Non-heatset Offset Lithographic Printing | 7.03(15) | •Alcohol in Fountain Solution limit •Cleanup compound Limit | •Facility must be less than 2.5 tons VOC emission per month (or 670 gallons of VOC containing compound usage per month) |
| Metal Furniture Coating | 7.03(16) | •Coating Formulation •HVLP or Electrostatic •Paint Overspray Filters •Stack Design | •Facility must be less than 2.5 tons VOC emission per month (or 670 gallons of VOC containing compound usage per month) |
| Metal Can Coating | 7.03(16) | •Coating Formulation •HVLP or Electrostatic •Paint Overspray Filters •Stack Design | •Facility must be less than 2.5 tons VOC emission per month (or 670 gallons of VOC containing compound usage per month) |
| Large Appliance Coating | 7.03(16) | •Coating Formulation •HVLP or Electrostatic •Paint Overspray Filters •Stack Design | •Facility must be less than 2.5 tons VOC emission per month (or 670 gallons of VOC containing compound usage per month) |
| Magnet Wire Insulation Coating | 7.03(16) | •Coating Formulation •HVLP or Electrostatic •Paint Overspray Filters •Stack Design | •Facility must be less than 2.5 tons VOC emission per month (or 670 gallons of VOC containing compound usage per month) |

| | | | |
|---|----------|--|---|
| Automobile Surface Coating | 7.03(16) | <ul style="list-style-type: none"> •Coating Formulation •HVLP or Electrostatic •Paint Overspray Filters •Stack Design | •Facility must be less than 2.5 tons VOC emission per month (or 670 gallons of VOC containing compound usage per month) |
| Metal Coil Coating | 7.03(16) | <ul style="list-style-type: none"> •Coating Formulation •HVLP or Electrostatic •Paint Overspray Filters •Stack Design | •Facility must be less than 2.5 tons VOC emission per month (or 670 gallons of VOC containing compound usage per month) |
| Surface Coating of Misc. Metal Parts and Products | 7.03(16) | <ul style="list-style-type: none"> •Coating Formulation •HVLP or Electrostatic •Paint Overspray Filters •Stack Design | •Facility must be less than 2.5 tons VOC emission per month (or 670 gallons of VOC containing compound usage per month) |
| Surface Coating of Plastic Parts | 7.03(16) | <ul style="list-style-type: none"> •Coating Formulation or •Control Equipment •HVLP or Electrostatic •Paint Overspray Filters •Stack Design | •Facility must be less than 2.5 tons VOC emission per month (or 670 gallons of VOC containing compound usage per month) |
| Leather Surface Coating | 7.03(16) | <ul style="list-style-type: none"> •Coating Formulation •HVLP or Electrostatic •Paint Overspray Filters •Stack Design | •Facility must be less than 2.5 tons VOC emission per month (or 670 gallons of VOC containing compound usage per month) |
| Wood Products Surface Coating | 7.03(16) | <ul style="list-style-type: none"> •Coating Formulation •HVLP or Electrostatic •Paint Overspray Filters •Stack Design | •Facility must be less than 2.5 tons VOC emission per month (or 670 gallons of VOC containing compound usage per month) |
| Flat Wood Paneling Coating | 7.03(16) | <ul style="list-style-type: none"> •Coating Formulation •HVLP or Electrostatic •Paint Overspray Filters •Stack Design | •Facility must be less than 2.5 tons VOC emission per month (or 670 gallons of VOC containing compound usage per month)plan approval always required if |
| Groundwater/ Soil Venting | 7.03(17) | •Air Pollution Control Equipment, 95% efficient | |

Table II

**RACT (310 CMR 7.18) Categories
Source Types Possibly Subject to RACT (7.18) Rules**

| Source Type | Applicability (TPY = Tons Per Year) | Effective Rule Date |
|---|---|---------------------------------------|
| 7.18(3) Metal Furniture Surface Coating | Actual Emissions > 15 lbs/day (Before Controls) | 1/1/80 |
| 7.18(4) Metal Can Surface Coating | Actual Emissions > 15 lbs/day (Before Controls) | 1/1/80 |
| 7.18(5) Large Appliance Surface Coating | Actual Emissions > 15 lbs/day (Before Controls) | 1/1/80 |
| 7.18(6) Magnet Wire Insulation Surface Coating | Actual Emissions > 15 lbs/day (Before Controls) | 1/1/80 |
| 7.18(7) Automobile Surface Coating | Actual Emissions > 15 lbs/day | 1/31/82* |
| 7.18(8) Solvent Metal Degreasing | All units | 12/31/80 |
| 7.18(9) Cutback Asphalt | Use from October 1 through April 30 is exempt | 5/1/82 |
| 7.18(10) Metal Coil Coating | Actual Emissions > 15 lbs/day (Before Controls) | 7/1/80 |
| 7.18(11) Surface Coating of Miscellaneous Metal Parts and Products | Actual Emissions > 25 TPY Potential Emissions > 10 TPY | 12/31/82 7/1/91 |
| 7.18(12) Graphic Arts (Packaging or Publication Rotogravure) | Potential Emissions > 100 TPY Potential Emissions > 50 TPY | 1/1/83 1/1/94 |
| 7.18(13) Dry Cleaning Systems-Perchloroethylene | All units. Certain units may be exempt from some requirements. | 12/31/82 |
| 7.18(14) Paper Surface Coating | Actual Emissions > 15 lbs/day (Before Controls) | 12/31/82 |
| 7.18(15) Fabric Surface Coating | Actual Emissions > 15 lbs/day (Before Controls) | 12/31/82 |
| 7.18(16) Vinyl Surface Coating | Actual Emissions > 15 lbs/day (Before Controls) | 12/31/82 |
| 7.18(17) Reasonable Available Control Technology (Non-source type specific) | 1. Potential Emissions > 100 TPY 2. Potential Emissions > 50 but < 100 TPY w/Actual Emissions > 50 TPY 3. Potential Emissions > 50 but < 100 TPY w/Actual Emissions < 50 TPY All Emissions are Before Controls | 12/31/86 1/1/94 5/31/95 |
| 7.18(18) Polystyrene Resin Manufacture | Actual Emissions > 15 lbs/day | 12/31/86 |

| | | |
|---|--|-----------|
| | (Before Controls) | |
| 7.18(19) Synthetic Organic Chemical Manufacture | All Facilities | Currently |
| 7.18(21) Surface Coating of Plastic Parts | Potential Emissions > 50 TPY (Before Controls) | 1/1/94 |
| 7.18(22) Leather Surface Coating | Potential Emissions > 50 TPY (Before Controls) | 1/1/94 |
| 07.18(23) Wood Products Surface Coating | Potential Emissions > 50 TPY (Before Controls) | 1/1/94 |
| 7.18(24) Flat Wood Paneling Surface Coating | Actual Emissions > 15 lbs/day (Before Controls) | 1/1/94 |
| 7.18(25) Lithographic Printing | Potential Emissions > 50 TPY (Before Controls) | 1/1/94 |
| 7.18(26) Textile Finishing | Potential Emissions > 50 TPY (Before Controls) | 1/1/94 |
| 7.18(27) Coating Mixing Tanks | Actual Emissions > 15 lbs/day (Before Controls) | 1/1/94 |
| 7.18(28) Automotive Refinishing | All facilities | 8/1/95 |

* Initial compliance date (primer application).

Table III
Standards of Performance for New Stationary Sources
CFR Title 40 Part 60 Subparts (Final Rule)
(Referred to as NSPS)

* Indicates final NSPS subparts not delegated to Massachusetts

| | Effective Date | |
|--|--------------------------------|-----|
| D) Fossil Fuel-Fired Steam Generators | Aug. 17, 1971 | |
| Da) Electric Utility Steam Generating Units for which Construction is Commenced after Sept. 18, 1978 | Sept. 19, 1978 | |
| *Db) Industrial-Comm.-Inst. Steam Gen. Units NO _x , PM, and SO ₂ , PM | June 19, 1984 June 19, 1986 | and |
| *Dc) Small Ind.-Comm.-Inst. Steam Gen. Units | June 09, 1989 | |
| E) Incinerators | Aug. 17, 1971 | |
| *Ea) Municipal Waste Combustors | Dec. 20, 1989 | |
| F) Portland Cement Plants | Aug. 17, 1971 | |
| G) Nitric Acid Plants | Aug. 17, 1971 | |
| H) Sulfuric Acid Plants | Aug. 17, 1971 | |
| I) Asphalt Concrete Plants | June 11, 1973 | |
| J) Petroleum Refineries | June 11, 1973 | |
| K) Storage Vessels for Petroleum Liquids | June 11, 1973 | |
| Ka) Storage Vessels for Petroleum Liquids Constructed after May 18, 1978 | May 19, 1978 | |
| *Kb) Volatile Organic Liquid Storage | July 23, 1984 | |
| L) Secondary Lead Smelters | June 11, 1973 | |
| M) Secondary Bronze & Brass Ingot Production Plants | June 11, 1973 | |
| N) Iron and Steel Plants | June 11, 1973 | |
| *Na) Basic Oxygen Process Steelmaking | Jan. 20, 1983 | |
| O) Sewage Treatment Plants | June 11, 1973 | |

| | | |
|-------|--|----------------|
| P) | Primary Copper Smelters | Oct. 16, 1974 |
| Q) | Primary Zinc Smelters | Oct. 16, 1974 |
| R) | Primary Lead Smelters | Oct. 16, 1974 |
| S) | Primary Aluminum Reduction Plants | Oct. 23, 1974 |
| T) | Phosphate Fertilizer Industry-Wet Process Phosphoric Acid Plants | Oct. 22, 1974 |
| U) | Phosphate Fertilizer Industry-Superphosphoric Acid Plants | Oct. 22, 1974 |
| V) | Phosphate Fertilizer Industry - Diammonium Phosphate Plants | Oct. 24, 1974 |
| W) | Phosphate Fertilizer Industry - Triple Superphosphate Plants | Oct. 22, 1974 |
| X) | Phosphate Fertilizer Industry - Granular Superphosphate Storage Facilities | Oct. 22, 1974 |
| Y) | Coal Preparation Plants | Oct. 24, 1974 |
| Z) | Ferroalloy Production Facilities | Oct. 21, 1974 |
| AA) | Steel Plants - Electric Arc Furnaces | Oct. 21, 1974 |
| *AAa) | Steel Plants & EAF & A-OD Vessels | Aug. 7, 1983 |
| BB) | Kraft Pulp Mill | Sept. 24, 1976 |
| CC) | Glass Manufacturing Plant | June 15, 1979 |
| DD) | Grain Elevators | Aug. 3, 1978 |
| EE) | Metal Furniture | Nov. 28, 1980 |
| GG) | Stationary Gas Turbine | Oct. 3, 1977 |
| HH) | Lime Manufacturing Plant | May 3, 1977 |
| KK) | Lead Acid Battery Manufacture | Jan. 14, 1980 |
| *LL) | Metallic Mineral | Aug. 24, 1982 |
| MM) | Auto & Light Duty Truck Surface Coating | Oct. 5, 1979 |
| NN) | Phosphate Rock Plants | Sept. 21, 1979 |
| PP) | Ammonium Sulfate Manufacture | Feb. 4, 1980 |
| QQ) | Rotogravure Printing | Oct. 28, 1980 |

| | | |
|-------|--|--|
| RR) | Pressure Sensitive Tape & Label Surface Coating Operations | Dec. 30, 1980 |
| SS) | Large Appliance Surface Coating | Dec. 24, 1980 |
| TT) | Metal Coil Surface Coating | Jan. 5, 1981 |
| UU) | Asphalt Processing and Asphalt Roofing | Nov. 18, 1980 |
| *VV) | SOCMI Equipment VOC Leaks | Jan. 5, 1981 |
| XX) | Bulk Gasoline Terminals | Dec. 17, 1980 |
| WW) | Beverage Can Surface Coating | Nov. 26, 1980 |
| *AAA) | Residential Wood Heaters | July 01, 1988 thru |
| *BBB) | Rubber Tire Manufacturing | Jan. 20, 1983 |
| *DDD) | VOC Emissions from Polymer Mfg. | Sept. 30, 1987 and Jan. 10, 1989 |
| FFF) | Flexible Vinyl Urethane Coating/Printing | Jan. 18, 1983 |
| *GGG) | VOC Leaks in Petroleum Refineries | Jan. 04, 1983 |
| HHH) | Synthetic Fiber Production | Nov. 23, 1982 |
| *III) | SOCMI - Air Oxidation | Oct. 21, 1983 |
| JJJ) | Petroleum Dry Cleaners | Dec. 14, 1982 |
| *KKK) | Equip. Leaks-VOC. Onshore Nat. Gas Prod. | Jan. 20, 1984 |
| *LLL) | SO ₂ Emissions-Onshore Nat. Gas. Prod. | Jan. 20, 1984 |
| *NNN) | SOCMI - Distillation | Dec. 30, 1983 |
| *OOO) | Non-Metallic Mineral Plants | Aug. 31, 1983 |
| *PPP) | Wool Fiberglass | Feb. 07, 1984 |
| *QQQ) | VOC from Petroleum Refinery Wastewater | Jan. 22, 1986 |
| *SSS) | Magnetic Tape Coating | Jan. 22, 1986 |
| *TTT) | Coating Plastic Parts for Business Machines | Jan. 08, 1986 |
| *VVV) | Polymeric Coating | Apr. 30, 1987 |

May 1, 1992, revised September 15, 1994

Table IV

**National Emission Standards for Hazardous Air Pollutants (NESHAPs)
CFR Title 40 Part 61 Subparts (Final Rule)**

* Indicates NESHAPs subparts not delegated to Massachusetts

| | Final Rule |
|--|---------------------------------|
| *B Radon - 222 Uranium Mines | December 15, 1989 |
| C Beryllium | April 6, 1973 & Nov. 7, 1985 |
| D Beryllium (Rocket Motor) | April 6, 1973 & Nov. 7, 1985 |
| E Mercury | October 14, 1975 |
| F Vinyl Chloride | October 21, 1976 |
| *H Radionuclides - DOE Facilities | February 5, 1985 |
| *I Radionuclides - NRC Licensed Facilities not subject to Subpart H | February 5, 1985 |
| *J Benzene - Fugitive Equip. Leaks | June 6, 1984 |
| *K Radionuclides - Elemental Phosphorus | February 5, 1985 |
| *L Benzene - Coke By-Product Recovery | September 14, 1989 |
| M Asbestos | April 5, 1984 |
| N Arsenic - Glass Manufacturing | August 4, 1986 |
| *O Arsenic - Primary Copper Smelters | August 4, 1986 |
| *P Arsenic Trioxide and Metallic Products | August 4, 1986 |
| *Q Radon - DOE Facilities | December 15, 1989 |
| *R Radon - Phosphogypsum Stacks | December 15, 1989 |
| *T Radon - Uranium Mill Tailings (disposal) | December 15, 1989 |
| *V Equipment Leaks - Fugitive | June 6, 1984 |
| *W Radon - Operating Mill Tailings | September 24, 1986 |
| *Y Benzene - Storage Vessels | September 14, 1989 |
| *BB Benzene - Transfer Operations | March 7, 1990 |
| *FF Benzene - Waste Operations | March 7, 1990 |

Table V
Hazardous Air Pollutants (HAPs)

| | |
|-----------------------------|-----------|
| Acetaldehyde | 75-07-0 |
| Acetamide | 60-35-5 |
| Acetonitrile | 75-05-8 |
| Acetophenone | 98-86-2 |
| 2-Acetylaminofluorene | 53-96-3 |
| Acrolein | 107-02-8 |
| Acrylamide | 79-06-1 |
| Acrylic acid | 79-10-7 |
| Acrylonitrile | 107-13-1 |
| Allyl chloride | 107-05-1 |
| 4-Aminobiphenyl | 92-67-1 |
| Aniline | 62-53-3 |
| o-Anisidine | 90-04-0 |
| Asbestos | 1332-21-4 |
| Benzene | 71-43-2 |
| Benzidine | 92-87-5 |
| Benzotrichloride | 98-07-7 |
| Benzyl chloride | 100-44-7 |
| Biphenyl | 92-52-4 |
| Bis(2-ethylhexyl)phthalate | 117-81-7 |
| Bis(chloromethyl)ether | 542-88-1 |
| Bromoform | 75-25-2 |
| 1,3-Butadiene | 106-99-0 |
| Calcium cyanamide | 156-62-7 |
| Caprolactam | 105-60-2 |
| Captan | 133-06-2 |
| Carbaryl | 63-25-2 |
| Carbon disulfide | 75-15-0 |
| Carbon tetrachloride | 56-23-5 |
| Carbonyl sulfide | 463-58-1 |
| Catechol | 120-80-9 |
| Chloramben | 133-90-4 |
| Chlordane | 57-74-9 |
| Chlorine | 7782-50-5 |
| Chloroacetic acid | 79-11-8 |
| 2-Chloroacetophenone | 532-27-4 |
| Chlorobenzene | 108-90-7 |
| Chlorobenzilate | 510-15-6 |
| Chloroform | 67-66-3 |
| Chloromethyl methyl ether | 107-30-2 |
| Chloroprene | 126-99-8 |
| Cresols (mixed isomers) | 1319-77-3 |
| m-Cresol | 108-39-4 |
| o-Cresol | 95-48-7 |
| p-Cresol | 106-44-5 |
| Cumene | 98-82-8 |
| 2,4-D | 94-75-7 |
| DDE | 3547-04-4 |
| Diazomethane | 334-88-3 |
| Dibenzofuran | 132-64-9 |
| 1,2-Dibromo-3-chloropropane | 96-12-8 |
| Dibutyl phthalate | 84-74-2 |

| | |
|--|-----------|
| 1,4-Dichlorobenzene | 106-46-7 |
| 3,3'-Dichlorobenzidine | 91-94-1 |
| Dichloroethyl ether (Bis(2-chloroethyl)ether) | 111-44-4 |
| 1,3-Dichloropropene (1,3-Dichloropropylene) | 542-75-6 |
| Dichlorvos | 62-73-7 |
| Diethanolamine | 111-42-2 |
| N,N-Diethyl aniline (N,N-Dimethylaniline) | 121-69-7 |
| Diethyl sulfate | 64-67-5 |
| 3,3-Dimethoxybenzidine | 119-90-4 |
| 4-Dimethylaminoazobenzene | 60-11-7 |
| 3,3-Dimethylbenzidine | 119-93-7 |
| Dimethylcarbamyl chloride | 79-44-7 |
| Dimethyl formamide | 68-12-2 |
| 1,1-Dimethyl hydrazine | 57-14-7 |
| Dimethyl phthalate | 131-11-3 |
| Dimethyl sulfate | 77-78-1 |
| 4,6-Dinitro-o-cresol | 534-52-1 |
| 2,4-Dinitrophenol | 51-28-5 |
| 2,4-Dinitrotoluene | 121-14-2 |
| 1,4-Dioxane (1,4-Diethyleneoxide) | 123-91-1 |
| 1,2-Diphenylhydrazine | 122-66-7 |
| Epichlorohydrin (1-Chloro-2,3-epoxypropane) | 106-89-8 |
| 1,2-Epoxybutane (1,2-Butylene oxide) | 106-88-7 |
| Ethyl acrylate | 140-88-5 |
| Ethylbenzene | 100-41-4 |
| Ethyl carbamate (Urethane) | 51-79-6 |
| Ethyl chloride (Chloroethane) | 75-00-3 |
| Ethylene dibromide (1,2-Dibromoethane) | 106-93-4 |
| Ethylene dichloride (1,2-Dichloroethane) | 107-06-2 |
| Ethylene glycol | 107-21-1 |
| Ethyleneimine (Aziridine) | 151-56-4 |
| Ethylene oxide | 75-21-8 |
| Ethylene thiourea | 96-45-7 |
| Ethylidene dichloride (1,1-Dichloroethane) | 75-34-3 |
| Formaldehyde | 50-00-0 |
| Heptachlor | 76-44-8 |
| Hexachlorobenzene | 118-74-1 |
| Hexachloro-1,3-butadiene | 87-68-3 |
| Hexachlorocyclopentadiene | 77-47-4 |
| Hexachloroethane | 67-72-1 |
| Hexamethylene-1,6-diisocyanate | 822-06-0 |
| Hexamethylphosphoramide | 680-31-9 |
| Hexane | 110-54-3 |
| Hydrazine | 302-01-2 |
| Hydrochloric acid | 7647-01-0 |
| Hydrogen fluoride | 7664-39-3 |

| | |
|---|-----------|
| Hydrogen sulfide | 7783-06-4 |
| Hydroquinone | 123-31-9 |
| Isophorone | 78-59-1 |
| Lindane | 58-89-9 |
| Maleic anhydride | 108-31-6 |
| Methanol | 67-56-1 |
| Methoxychlor | 72-43-5 |
| Methyl bromide (Bromomethane) | 74-83-9 |
| Methyl chloride (Chloromethane) | 74-87-3 |
| Methyl chloroform (1,1,1-Trichloroethane) | 71-55-6 |
| Methyl ethyl ketone | 78-93-3 |
| Methyl hydrazine | 60-34-4 |
| Methyl iodide (Iodomethane) | 74-88-4 |
| Methyl isobutyl ketone (Hexone) | 108-10-1 |
| Methyl isocyanate | 624-83-9 |
| Methyl methacrylate | 80-62-6 |
| Methyl tert-butyl ether | 1634-04-4 |
| 4,4-Methylenebis(2-chloro)aniline | 101-14-4 |
| Methylene chloride (Dichloromethane) | 75-09-2 |
| Methylene diphenyl diisocyanate (MDI) | 101-68-8 |
| 4,4'-Methylenedianiline | 101-77-9 |
| Naphthalene | 91-20-3 |
| Nitrobenzene | 98-95-3 |
| 4-Nitrobiphenyl | 92-93-3 |
| 4-Nitrophenol | 100-02-7 |
| 2-Nitropropane | 79-46-9 |
| N-Nitrosodimethylamine | 62-75-9 |
| N-Nitrosomorpholine | 59-89-2 |
| N-Nitroso-N-methylurea | 684-93-5 |
| Parathion | 56-38-2 |
| Pentachloronitrobenzene (Quintozene) | 82-68-8 |
| Pentachlorophenol | 87-86-5 |
| Phenol | 108-95-2 |
| p-Phenylenediamine | 106-50-3 |
| Phosgene | 75-44-5 |
| Phosphine | 7803-51-2 |
| Phosphorous | 7723-14-0 |
| Phthalic anhydride | 85-44-9 |
| PCBs | 1336-36-3 |
| 1,3- Propane sultone | 1120-71-4 |
| beta-Propiolactone | 57-57-8 |
| Propionaldehyde | 123-38-6 |
| Propoxur (Baygon) | 114-26-1 |
| Propylene dichloride (1,2 Dichloropropane) | 78-87-5 |
| Propylene oxide | 75-56-9 |
| Propylenimine (2-Methyl aziridine) | 75-55-8 |
| Quinoline | 91-22-5 |

| | |
|-------------------------------------|-----------|
| Quinone | 106-51-4 |
| Styrene | 100-42-5 |
| Styrene oxide | 96-09-3 |
| 2,3,7,8-Tetrachlorodibenzo-p-dioxin | 1746-01-6 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 |
| Tetrachloroethylene | |
| (Perchloroethylene) | 127-18-4 |
| Titanium tetrachloride | 7550-45-0 |
| Toluene | 108-88-3 |
| 2,4-Toluene diamine | 95-80-7 |
| Toluene-2,4-diisocyanate | 584-84-9 |
| o-Toluidene | 95-53-4 |
| Toxaphene | 8001-35-2 |
| 1,2,4-Trichlorobenzene | 120-82-1 |
| 1,1,2-Trichloroethane | 79-00-5 |
| Trichloroethylene | 79-01-6 |
| 2,4,5-Trichlorophenol | 95-95-4 |
| 2,4,6-Trichlorophenol | 88-06-2 |
| Triethylamine | 121-44-8 |
| Trifluralin | 1582-09-8 |
| 2,2,4-Trimethylpentane | 540-84-1 |
| Vinyl acetate | 108-05-4 |
| Vinyl bromide | 593-60-2 |
| Vinyl chloride | 75-01-4 |
| Vinylidene chloride | |
| (1,1-Dichloroethylene) | 75-35-4 |
| Xylene (mixed isomers) | 1330-20-7 |
| m-Xylene | 108-38-3 |
| o-Xylene | 95-47-6 |
| p-Xylene | 106-42-3 |

Antimony compounds:

| | |
|--|-----------|
| Antimony | 7440-36-0 |
| Arsenic compounds (inorganic including arsine) | |
| Arsenic | 7440-38-2 |
| Arsine | |
| Beryllium Compounds | |
| Beryllium | 7440-41-7 |
| Cadmium Compounds | |
| Cadmium | 7440-43-9 |
| Chromium compounds | |
| Chromium | 7440-47-3 |
| Cobalt compounds | |
| Cobalt | 7440-48-4 |

Coke oven emissions

Cyanide compounds (XCN where X=H or any other group where a formal dissociation may occur)

Hydrogen cyanide 74-90-8

Glycol ethers (include mono- and di- ethers of ethylene glycol, diethylene glycol, and triethylene glycol R-(OCH₂CH₂)_n-OR' where
n = 1, 2, or 3
R = alkyl or aryl groups
R' = R, H, or groups which, when removed, yield glycol ethers with the structure: R-(OCH₂CH₂)_n-OH

Polymers are excluded from the glycol category

Lead compounds

Lead 7439-92-1

Manganese compounds

Manganese 7439-96-5

Mercury compounds

Mercury 7439-97-6

Mineral fibers (includes glass microfibers, glass wool fibers, rock wool fibers and slag wool fibers, each characterized as "respirable" (fiber diameter < 3.5 micrometers) and possessing an aspect ratio (fiber length divided by fiber diameter) > 3)

Nickel compounds

Nickel 7440-02-0

POM (includes organic compounds with more than one benzene ring, and which have a boiling point greater than or equal to 100 C)

Radionuclides (a type of atom which spontaneously undergoes radioactive decay)

Selenium compounds

Selenium 7782-49-2

Table VI
Source Types
Categories of Sources of Hazardous Air Pollutants
and Regulation Promulgation Schedule by Industry Group

| Industry Group | Schedule Date |
|--|----------------------|
| Source Category ^a | |
| Fuel Combustion | |
| Engine Test Facilities | 11/15/00 |
| Industrial Boilers ^b | 11/15/00 |
| Institutional/Commercial Boilers ^b | 11/15/00 |
| Process Heaters | 11/15/00 |
| Stationary Internal Combustion Engines ^b | 11/15/00 |
| Stationary Turbines ^b | 11/15/00 |
| Non-Ferrous Metals Processing | |
| Primary Aluminum Production | 11/15/97 |
| Secondary Aluminum Production | 11/15/97 |
| Primary Copper Smelting | 11/15/97 |
| Primary Lead Smelting | 11/15/97 |
| Secondary Lead Smelting ^j | 11/15/94 |
| Lead Acid Battery Manufacturing | 11/15/00 |
| Primary Magnesium Refining | 11/15/00 |
| Ferrous Metals Processing | |
| Coke By-Product Plants | 11/15/00 |
| Coke Ovens: Charging, Top Side, and Door Leaks | 12/31/92 |
| Coke Ovens: Pushing, Quenching, and Battery Stacks | 11/15/00 |
| Ferrous Alloys Production | 11/15/97 |
| Integrated Iron and Steel Manufacturing | 11/15/00 |
| Non-Stainless Steel Manufacturing - Electric Arc Furnace (EAF) Operation | 11/15/97 |
| Stainless Steel Manufacturing - Electric Arc Furnace (EAF) Operation | 11/15/97 |
| Iron Foundries | 11/15/00 |
| Steel Foundries | 11/15/00 |
| Steel Pickling - HCl Process | 11/15/97 |

Mineral Products Processing

| | |
|--|----------|
| Alumina Processing | 11/15/00 |
| Asphalt Concrete Manufacturing | 11/15/00 |
| Asphalt Processing | 11/15/00 |
| Asphalt Roofing Manufacturing | 11/15/00 |
| Asphalt/Coal Tar Application - Metal Pipes | 11/15/00 |
| Chromium Refractories Production | 11/15/00 |
| Clay Products Manufacturing | 11/15/00 |
| Lime Manufacturing | 11/15/00 |
| Mineral Wool Production | 11/15/97 |
| Portland Cement Manufacturing | 11/15/97 |
| Taconite Iron Ore Processing | 11/15/00 |
| Wool Fiberglass Manufacturing | 11/15/97 |

Petroleum and Natural Gas Production and Refining

| | |
|--|----------|
| Oil and Natural Gas Production | 11/15/97 |
| Petroleum Refineries - Catalytic Cracking (Fluid and other) Units, Catalytic Reforming Units, and Sulfur Plant Units | 11/15/97 |
| Petroleum Refineries - Other Sources Not Distinctly Listed ^k | 11/15/94 |

Liquids Distribution

| | |
|--|----------|
| Gasoline Distribution (Stage 1) ^g | 11/15/94 |
| Organic Liquids Distribution (Non-Gasoline) | 11/15/00 |

Surface Coating Processes

| | |
|---|----------|
| Aerospace Industries ^l | 11/15/94 |
| Auto and Light Duty Truck (Surface Coating) | 11/15/00 |
| Flat Wood Paneling (Surface Coating) | 11/15/00 |
| Large Appliance (Surface Coating) | 11/15/00 |
| Magnetic Tapes (Surface Coating) ^g | 11/15/94 |
| Manufacture of Paints, Coatings, and Adhesives | 11/15/00 |
| Metal Can (Surface Coating) | 11/15/00 |
| Metal Coil (Surface Coating) | 11/15/00 |
| Metal Furniture (Surface Coating) | 11/15/00 |
| Miscellaneous Metal Parts and Products (Surface Coating) | 11/15/00 |

| | |
|---|----------|
| Paper and Other Webs (Surface Coating) | 11/15/00 |
| Plastic Parts and Products (Surface Coating) | 11/15/00 |
| Printing, Coating, and Dyeing of Fabrics | 11/15/00 |
| Printing/Publishing (Surface Coating) | 11/15/94 |
| Shipbuilding and Ship Repair (Surface Coating) | 11/15/94 |
| Wood Furniture (Surface Coating) | 11/15/94 |
| Waste Treatment and Disposal | |
| Hazardous Waste Incineration | 11/15/00 |
| Municipal Landfills | 11/15/00 |
| Publicly Owned Treatment Works (POTW) Emissions | 11/15/95 |
| Sewage Sludge Incineration | 11/15/00 |
| Site Remediation | 11/15/00 |
| Solid Waste Treatment, Storage and Disposal Facilities (TSDF) | 11/15/94 |
| Agricultural Chemicals Production | |
| 4-Chloro-2-Methylphenoxyacetic Acid Production | 11/15/97 |
| 2,4-D Salts and Esters Production | 11/15/97 |
| 4,6-Dinitro-o-Cresol Production | 11/15/97 |
| Captafol Production ^c | 11/15/97 |
| Captan Production ^c | 11/15/97 |
| Chloroneb Production | 11/15/97 |
| Chlorothalonil Production ^c | 11/15/97 |
| Dacthal (tm) Production ^c | 11/15/97 |
| Sodium Pentachlorophenate Production | 11/15/97 |
| Tordon (tm) Acid Production ^c | 11/15/97 |
| Fibers Production Processes | |
| Acrylic Fibers/Modacrylic Fibers Production | 11/15/97 |
| Rayon Production | 11/15/00 |
| Spandex Production | 11/15/00 |
| Food and Agriculture Processes | |
| Baker's Yeast Manufacturing | 11/15/00 |
| Cellulose Food Casing Manufacturing | 11/15/00 |
| Vegetable Oil Production | 11/15/00 |
| Pharmaceutical Production Processes | |

| | |
|---|----------|
| Pharmaceuticals Production ^c | 11/15/97 |
| Polymers and Resins Production | |
| Acetal Resins Production | 11/15/97 |
| Acrylonitrile-Butadiene-Styrene Production | 11/15/94 |
| Alkyd Resins Production | 11/15/00 |
| Amino Resins Production | 11/15/97 |
| Boat Manufacturing | 11/15/00 |
| Butadiene-Furfural Cotrimer (R-11) ^c | 11/15/00 |
| Butyl Rubber Production | 11/15/94 |
| Carboxymethylcellulose Production | 11/15/00 |
| Cellophane Production | 11/15/00 |
| Cellulose Ethers Production | 11/15/00 |
| Epichlorohydrin Elastomers Production | 11/15/94 |
| Epoxy Resins Production ^h | 11/15/94 |
| Ethylene-Propylene Rubber Production | 11/15/94 |
| Flexible Polyurethane Foam Production | 11/15/97 |
| Hypalon (tm) Production ^c | 11/15/94 |
| Maleic Anhydride Copolymers Production | 11/15/00 |
| Methylcellulose Production | 11/15/00 |
| Methyl Methacrylate-Acrylonitrile-Butadiene- Styrene Production ^c | 11/15/94 |
| Methyl Methacrylate-Butadiene-Styrene Terpolymers Production ^c | 11/15/94 |
| Neoprene Production | 11/15/94 |
| Nitrile Butadiene Rubber Production | 11/15/94 |
| Non-Nylon Polyamides Production ^h | 11/15/94 |
| Nylon 6 Production | 11/15/97 |
| Phenolic Resins Production | 11/15/97 |
| Polybutadiene Rubber Production ^c | 11/15/94 |
| Polycarbonates Production ^c | 11/15/97 |
| Polyester Resins Production | 11/15/00 |
| Polyethylene Terephthalate Production | 11/15/94 |
| Polymerized Vinylidene Chloride Production | 11/15/00 |

| | |
|--|----------|
| Polymethyl Methacrylate Resins Production | 11/15/00 |
| Polystyrene Production | 11/15/94 |
| Polysulfide Rubber Production ^c | 11/15/94 |
| Polyvinyl Acetate Emulsions Production | 11/15/00 |
| Polyvinyl Alcohol Production | 11/15/00 |
| Polyvinyl Butyral Production | 11/15/00 |
| Polyvinyl Chloride and Copolymers Production | 11/15/00 |
| Reinforced Plastic Composites Production | 11/15/97 |
| Styrene-Acrylonitrile Production | 11/15/94 |
| Styrene-Butadiene Rubber and Latex Production ^c | 11/15/94 |
| Production of Inorganic Chemicals | |
| Ammonium Sulfate Production - Caprolactam By-Product Plants | 11/15/00 |
| Antimony Oxides Manufacturing | 11/15/00 |
| Chlorine Production ^c | 11/15/97 |
| Chromium Chemicals Manufacturing | 11/15/97 |
| Cyanuric Chloride Production | 11/15/97 |
| Fume Silica Production | 11/15/00 |
| Hydrochloric Acid Production | 11/15/00 |
| Hydrogen Cyanide Production | 11/15/97 |
| Hydrogen Fluoride Production | 11/15/00 |
| Phosphate Fertilizers Production | 11/15/00 |
| Phosphoric Acid Manufacturing | 11/15/00 |
| Quaternary Ammonium Compounds Production | 11/15/00 |
| Sodium Cyanide Production | 11/15/97 |
| Uranium Hexafluoride Production | 11/15/00 |
| Production of Organic Chemicals | |
| Synthetic Organic Chemical Manufacturing ^e | 11/15/92 |
| Miscellaneous Processes | |
| Aerosol Can-Filling Facilities | 11/15/00 |
| Benzyltrimethylammonium Chloride Production | 11/15/00 |
| Butadiene Dimers Production | 11/15/97 |
| Carbonyl Sulfide Production | 11/15/00 |

| | |
|--|----------|
| Chelating Agents Production | 11/15/00 |
| Chlorinated Paraffins Production ^c | 11/15/00 |
| Chromic Acid Anodizing ^g | 11/15/94 |
| Commercial Dry Cleaning (Perchloroethylene) - Transfer Machines | 11/15/92 |
| Commercial Sterilization Facilities ^g | 11/15/94 |
| Decorative Chromium Electroplating ^g | 11/15/94 |
| Dodecanedioic Acid Production ^c | 11/15/00 |
| Dry Cleaning (Petroleum Solvent) | 11/15/00 |
| Ethylidene Norbornene Production ^c | 11/15/00 |
| Explosives Production | 11/15/00 |
| Halogenated Solvent Cleaners ^g | 11/15/94 |
| Hard Chromium Electroplating ^g | 11/15/94 |
| Hydrazine Production | 11/15/00 |
| Industrial Cleaning (Perchloroethylene) - Dry-to-dry machines | 11/15/92 |
| Industrial Dry Cleaning (Perchloroethylene) - Transfer Machines | 11/15/92 |
| Industrial Process Cooling Towers ^f | 11/15/94 |
| OBPA/1,3-Diisocyanate Production ^c | 11/15/00 |
| Paint Stripper Users | 11/15/00 |
| Photographic Chemicals Production | 11/15/00 |
| Phthalate Plasticizers Production | 11/15/00 |
| Plywood/Particle Board Manufacturing | 11/15/00 |
| Polyether Polyols Production | 11/15/97 |
| Pulp and Paper Production | 11/15/97 |
| Rocket Engine Test Firing | 11/15/00 |
| Rubber Chemicals Manufacturing | 11/15/00 |
| Semiconductor Manufacturing | 11/15/00 |
| Symmetrical Tetrachloropyridine Production ^c | 11/15/00 |
| Tire Production | 11/15/00 |
| Wood Treatment | 11/15/97 |

Categories of Area Sources ^d

| | |
|--|----------|
| Asbestos Processing | 11/15/94 |
| Chromic Acid Anodizing g | 11/15/94 |
| Commercial Dry Cleaning (Perchloroethylene) - Dry-to-Dry Machines | 11/15/92 |
| Commercial Dry Cleaning (Perchloroethylene) - Transfer Machines | 11/15/92 |
| Commercial Sterilization Facilities g | 11/15/94 |
| Decorative Chromium Electroplating g | 11/15/94 |
| Halogenated Solvent Cleaners g | 11/15/94 |
| Hard Chromium Electroplating g | 11/15/94 |

^a Only major sources within any category shall be subject to emission standards under Section 112 unless a finding is made of a threat of adverse effects to human health or the environment for the area sources in a category. All listed categories are exclusive of any specific operations or processes included under other categories that are listed separately.

^b Sources defined as electric utility steam generating units under Section 112(a)(8) shall not be subject to emission standards pending the findings of the study required under Section 112(n)(1).

^c Equipment handling specific chemicals for these categories or subsets of these categories are subject to a negotiated standard for equipment leaks contained in the HON, which was proposed on December 31, 1992. The HON includes a negotiated standard for equipment leaks from the SOCFMI category and 20 non-SOCMI categories (or subsets of these categories). The specific processes affected within the categories are listed in Section XX.X0(c) of the March 6, 1991 Federal Register notice (56 FR 9315).

^d A finding of threat of adverse effects to human health or the environment was made for each category of area sources listed.

*The following footnotes apply to source categories that are subject to court ordered promulgation deadlines (differing from the above listed regulatory deadlines) in accordance with a consent decree entered in **Sierra Club v. Browner, Case No. 93-0124 (and related cases) (D.C. Dist. Ct.)**.*

^e judicial deadline: 02/28/94

^f judicial deadline: 07/31/94

^g judicial deadline: 11/23/94

^h judicial deadline: 02/28/95

ⁱ judicial deadline: 04/30/95

^j judicial deadline: 05/31/95

^k judicial deadline: 06/30/95

^l judicial deadline: 07/31/95

Table VII**List of Regulated Toxic Substances and Threshold
Quantities for Accidental Release Prevention
[Alphabetical Order - 77 Substances]**

| Chemical Name | CAS No | Threshold Quantity (lbs) | Basis for Listing |
|--|---------------|---|----------------------------------|
| Acrolein [2-Propenal] | 107-02-8 | 5,000 | b |
| Acrylonitrile [2-Propenenitrile] | 107-13-1 | 20,000 | b |
| Acrylyl chloride [2-Propenoyl chloride] | 814-68-6 | 5,000 | b |
| Allyl alcohol [2-Propen-1-ol] | 107-18-6 | 15,000 | b |
| Allylamine [2-Propen-1-amine] | 107-11-9 | 10,000 | b |
| Ammonia (anhydrous) | 7664-41-7 | 10,000 | a, b |
| Ammonia (conc 20% or greater) | 7664-41-7 | 20,000 | a, b |
| Arsenous trichloride | 7784-34-1 | 15,000 | b |
| Arsine | 7784-42-1 | 1,000 | b |
| Boron trichloride [Borane, trichloro-] | 10294-34-5 | 5,000 | b |
| Boron trifluoride [Borane, trifluoro-] | 7637-07-2 | 5,000 | b |
| Boron trifluoride compound with methyl ether (1:1) [Boron, trifluoro[oxybis[metane]]-, T-4- | 353-42-4 | 15,000 | b |
| Bromine | 7726-95-6 | 10,000 | a, b |
| Carbon disulfide | 75-15-0 | 20,000 | b |
| Chlorine | 7782-50-5 | 2,500 | a, b |
| Chlorine dioxide [Chlorine oxide (ClO ₂)] | 10049-04-4 | 1,000 | c |
| Chloroform [Methane, trichloro-] | 67-66-3 | 20,000 | b |
| Chloromethyl ether [Methane, oxybis[chloro-] | 542-88-1 | 1,000 | b |
| Chloromethyl methyl ether [Methane, chloromethoxy-] | 107-30-2 | 5,000 | b |
| Crotonaldehyde [2-Butenal] | 4170-30-3 | 20,000 | b |
| Crotonaldehyde, (E)- [2-Butenal, (E)-] | 123-73-9 | 20,000 | b |
| Cyanogen chloride | 506-77-4 | 10,000 | c |
| Cyclohexylamine [Cyclohexanamine] | 108-91-8 | 15,000 | b |
| Diborane | 19287-45-7 | 2,500 | b |
| Dimethyldichlorosilane [Silane, dichlorodimethyl-] | 75-78-5 | 5,000 | b |
| 1,1-Dimethylhydrazine [Hydrazine, 1,1-dimethyl-] | 57-14-7 | 15,000 | b |
| Epichlorohydrin [Oxirane, (chloromethyl)-] | 106-89-8 | 20,000 | b |
| Ethylenediamine [1,2-Ethanediamine] | 107-15-3 | 20,000 | b |

| Chemical Name | CAS No | Threshold Quantity (lbs) | Basis for Listing |
|---|---------------|---------------------------------|--------------------------|
| Ethyleneimine [Aziridine] | 151-56-4 | 10,000 | b |
| Ethylene oxide [Oxirane] | 75-21-8 | 10,000 | a, b |
| Fluorine | 7782-41-4 | 1,000 | b |
| Formaldehyde (solution) | 50-00-0 | 15,000 | b |
| Furan | 110-00-9 | 5,000 | b |
| Hydrazine | 302-01-2 | 15,000 | b |
| Hydrochloric acid (conc 30% or greater) | 7647-01-0 | 15,000 | d |
| Hydrocyanic acid | 74-90-8 | 2,500 | a, b |
| Hydrogen chloride (anhydrous) [Hydrochloric acid] | 7647-01-0 | 5,000 | a |
| Hydrogen fluoride/Hydrofluoric acid (conc 50% or greater) [Hydrofluoric acid] | 7664-39-3 | 1,000 | a, b |
| Hydrogen selenide | 7783-07-5 | 500 | b |
| Hydrogen sulfide | 7783-06-4 | 10,000 | a, b |
| Iron, pentacarbonyl- [Iron carbonyl (Fe(CO) ₅), (TB-5-11)-] | 13463-40-6 | 2,500 | b |
| Isobutyronitrile [Propanenitrile, 2-methyl-] | 78-82-0 | 20,000 | b |
| Isopropyl chloroformate [Carbonochloridic acid, 1-methylethyl ester] | 108-23-6 | 15,000 | b |
| Methacrylonitrile [2-Propenenitrile, 2-methyl-] | 126-98-7 | 10,000 | b |
| Methyl chloride [Methane, chloro-] | 74-87-3 | 10,000 | a |
| Methyl chloroformate [Carbonochloridic acid, methylester] | 79-22-1 | 5,000 | b |
| Methyl hydrazine [Hydrazine, methyl-] | 60-34-4 | 15,000 | b |
| Methyl isocyanate [Methane, isocyanato-] | 624-83-9 | 10,000 | a, b |
| Methyl mercaptan [Methanethiol] | 74-93-1 | 10,000 | b |
| Methyl thiocyanate [Thiocyanic acid, methyl ester] | 556-64-9 | 20,000 | b |
| Methyltrichlorosilane [Silane, trichloromethyl-] | 75-79-6 | 5,000 | b |
| Nickel carbonyl | 13463-39-3 | 1,000 | b |
| Nitric acid (conc 80% or greater) | 7697-37-2 | 15,000 | b |
| Nitric oxide [Nitrogen oxide (NO)] | 10102-43-9 | 10,000 | b |
| Oleum (Fuming Sulfuric acid) [Sulfuric acid, mixture with sulfur trioxide] ¹ | 8014-95-7 | 10,000 | e |
| Peracetic acid [Ethaneperoxoic acid] | 79-21-0 | 10,000 | b |

| Chemical Name | CAS No | Threshold Quantity (lbs) | Basis for Listing |
|---|---------------|---------------------------------|--------------------------|
| Perchloromethylmercaptan [Methanesulfenyl chloride, trichloro-] | 594-42-3 | 10,000 | b |
| Phosgene [Carbonic dichloride] | 75-44-5 | 500 | a, b |
| Phosphine | 7803-51-2 | 5,000 | b |
| Phosphorus oxychloride [Phosphoryl chloride] | 10025-87-3 | 5,000 | b |
| Phosphorus trichloride [Phosphorous trichloride] | 7719-12-2 | 15,000 | b |
| Piperidine | 110-89-4 | 15,000 | b |
| Propionitrile [Propanenitrile] | 107-12-0 | 10,000 | b |
| Propyl chloroformate [Carbonochloridic acid, propylester] | 109-61-5 | 15,000 | b |
| Propyleneimine [Aziridine, 2-methyl-] | 75-55-8 | 10,000 | b |
| Propylene oxide [Oxirane, methyl-] | 75-56-9 | 10,000 | b |
| Sulfur dioxide (anhydrous) | 7446-09-5 | 5,000 | a, b |
| Sulfur tetrafluoride [Sulfur fluoride (SF ₄), (T-4)-] | 7783-60-0 | 2,500 | b |
| Sulfur trioxide | 7446-11-9 | 10,000 | a, b |
| Tetramethyllead [Plumbane, tetramethyl-] | 75-74-1 | 10,000 | b |
| Tetranitromethane [Methane, tetranitro-] | 509-14-8 | 10,000 | b |
| Titanium tetrachloride [Titanium chloride (TiCl ₄) (T-4)-] | 7550-45-0 | 2,500 | b |
| Toluene 2,4-diisocyanate [Benzene, 2,4-diisocyanato-1-methyl-] ¹ | 584-84-9 | 10,000 | a |
| Toluene 2,6-diisocyanate [Benzene, 1,3-diisocyanato-2-methyl-] ¹ | 91-08-7 | 10,000 | a |
| Toluene diisocyanate (unspecified isomer) [Benzene, 1,3-diisocyanatomethyl-] ¹ | 26471-62-5 | 10,000 | a |
| Trimethylchlorosilane [Silane, chlorotrimethyl-] | 75-77-4 | 10,000 | b |
| Vinyl acetate monomer [Acetic acid ethenyl ester] | 108-05-4 | 15,000 | b |

¹The mixture exemption in §68.115(b)(1) does not apply to the substance.

Basis for Listing:

^aMandated for listing by Congress.

^bOn EHS list, vapor pressure 10 mmHg or greater.

^cToxic gas.

^dToxicity of hydrogen chloride, potential to release hydrogen chloride, and history of accidents.

^eToxicity of sulfur trioxide and sulfuric acid, potential to release sulfur trioxide, and history of accidents.

Table VIII**List of Regulated Flammable Substances and Threshold
Quantities for Accidental Release Prevention
[Alphabetical Order - 63 Substances]**

| Chemical Name | CAS No. | Threshold Quantity (lbs) | Basis for Listing |
|--|----------------|---|----------------------------------|
| Acetaldehyde | 75-07-0 | 10,000 | g |
| Acetylene [Ethyne] | 74-86-2 | 10,000 | f |
| Bromotrifluoroethylene [Ethene, bromotrifluoro-] | 598-73-2 | 10,000 | f |
| 1,3-Butadiene | 106-99-0 | 10,000 | f |
| Butane | 106-97-8 | 10,000 | f |
| 1-Butene | 106-98-9 | 10,000 | f |
| 2-Butene | 107-01-7 | 10,000 | f |
| Butene | 25167-67-3 | 10,000 | f |
| 2-Butene-cis | 590-18-1 | 10,000 | f |
| 2-Butene-trans [2-Butene, (E)] | 624-64-6 | 10,000 | f |
| Carbon oxysulfide [Carbon oxide sulfide (COS)] | 463-58-1 | 10,000 | f |
| Chlorine monoxide [Chlorine oxide] | 7791-21-1 | 10,000 | f |
| 2-Chloropropylene [1-Propene, 2-chloro-] | 557-98-2 | 10,000 | g |
| 1-Chloropropylene [1-Propene, 1-chloro-] | 590-21-6 | 10,000 | g |
| Cyanogen [Ethanedinitrile] | 460-19-5 | 10,000 | f |
| Cyclopropane | 75-19-4 | 10,000 | f |
| Dichlorosilane [Silane, dichloro-] | 4109-96-0 | 10,000 | f |
| Difluoroethane [Ethane, 1,1-difluoro-] | 75-37-6 | 10,000 | f |
| Dimethylamine [Methanamine, N-methyl-] | 124-40-3 | 10,000 | f |
| 2,2-Dimethylpropane [Propane, 2,2-dimethyl-] | 463-82-1 | 10,000 | f |
| Ethane | 74-84-0 | 10,000 | f |
| Ethyl acetylene [1-Butyne] | 107-00-6 | 10,000 | f |
| Ethylamine [Ethanamine] | 75-04-7 | 10,000 | f |
| Ethyl chloride [Ethane, chloro-] | 75-00-3 | 10,000 | f |
| Ethylene [Ethene] | 74-85-1 | 10,000 | f |
| Ethyl ether [Ethane, 1,1'-oxybis-] | 60-29-7 | 10,000 | g |
| Ethyl mercaptan [Ethanethiol] | 75-08-1 | 10,000 | g |
| Ethyl nitrite [Nitrous acid, ethyl ester] | 109-95-5 | 10,000 | f |

| Chemical Name | CAS No. | Threshold Quantity (lbs) | Basis for Listing |
|--|----------------|---------------------------------|--------------------------|
| Hydrogen | 1333-74-0 | 10,000 | f |
| Isobutane [Propane, 2-methyl] | 75-28-5 | 10,000 | f |
| Isopentane [Butane, 2-methyl-] | 78-78-4 | 10,000 | g |
| Isoprene [1,3-Butadiene, 2-methyl-] | 78-79-5 | 10,000 | g |
| Isopropylamine [2-Propanamine] | 75-31-0 | 10,000 | g |
| Isopropyl chloride [Propane, 2-chloro-] | 75-29-6 | 10,000 | g |
| Methane | 74-82-8 | 10,000 | f |
| Methylamine [Methanamine] | 74-89-5 | 10,000 | f |
| 3-Methyl-1-butene | 563-45-1 | 10,000 | f |
| 2-Methyl-1-butene | 563-46-2 | 10,000 | g |
| Methyl ether [Methane, oxybis-] | 115-10-6 | 10,000 | f |
| Methyl formate [Formic acid, methyl ester] | 107-31-3 | 10,000 | g |
| 2-Methylpropene [1-Propene, 2-methyl-] | 115-11-7 | 10,000 | f |
| 1,3-Pentadiene | 504-60-9 | 10,000 | f |
| Pentane | 109-66-0 | 10,000 | g |
| 1-Pentene | 109-67-1 | 10,000 | g |
| 2-Pentene, (E)- | 646-04-8 | 10,000 | g |
| 2-Pentene, (Z)- | 627-20-3 | 10,000 | g |
| Propadiene [1,2-Propadiene] | 463-49-0 | 10,000 | f |
| Propane | 74-98-6 | 10,000 | f |
| Propylene [1-Propene] | 115-07-1 | 10,000 | f |
| Propyne [1-Propyne] | 74-99-7 | 10,000 | f |
| Silane | 7803-62-5 | 10,000 | f |
| Tetrafluoroethylene [Ethene, tetrafluoro-] | 116-14-3 | 10,000 | f |
| Tetramethylsilane [Silane, tetramethyl-] | 75-76-3 | 10,000 | g |
| Trichlorosilane [Silane, trichloro-] | 10025-78-2 | 10,000 | g |
| Trifluorochloroethylene [Ethene, chlorotrifluoro-] | 79-38-9 | 10,000 | f |
| Trimethylamine [Methanamine, N,N-dimethyl-] | 75-50-3 | 10,000 | f |
| Vinyl acetylene [1-Buten-3-yne] | 689-97-4 | 10,000 | f |
| Vinyl chloride [Ethene, chloro-] | 75-01-4 | 10,000 | a, f |
| Vinyl ethyl ether [Ethene, ethoxy-] | 109-92-2 | 10,000 | g |

| Chemical Name | CAS No. | Threshold Quantity (lbs) | Basis for Listing |
|---|----------------|---|----------------------------------|
| Vinyl fluoride [Ethene, fluoro-] | 75-02-5 | 10,000 | f |
| Vinylidene chloride [Ethene, 1,1-dichloro-] | 75-35-4 | 10,000 | g |
| Vinylidene fluoride [Ethene, 1,1-difluoro-] | 75-38-7 | 10,000 | f |
| Vinyl methyl ether [Ethene, methoxy-] | 107-25-5 | 10,000 | f |

Basis for Listing:

^aMandated for listing by Congress.

^fFlammable gas.

^gVolatile flammable liquid.

Table IX

Lists of Class I Substances.

Group I

chlorofluorocarbon-11 (CFC-11)
chlorofluorocarbon-12 (CFC-12)
chlorofluorocarbon-113 (CFC-113)
chlorofluorocarbon-114 (CFC-114)
chlorofluorocarbon-115 (CFC-115)

Group II

halon-1211
halon-1301
halon-2402

Group III

chlorofluorocarbon-13 (CFC-13)
chlorofluorocarbon-111 (CFC-111)
chlorofluorocarbon-112 (CFC-112)
chlorofluorocarbon-211 (CFC-211)
chlorofluorocarbon-212 (CFC-212)
chlorofluorocarbon-213 (CFC-213)
chlorofluorocarbon-214 (CFC-214)
chlorofluorocarbon-215 (CFC-215)
chlorofluorocarbon-216 (CFC-216)
chlorofluorocarbon-217 (CFC-217)

Group IV

carbon tetrachloride

Group V

methyl chloroform

The list under this subsection shall also include the isomers of the substances listed above, other than 1,1,2-trichloroethane (an isomer of methyl chloroform).

List of Class II Substances.

hydrochlorofluorocarbon-21 (HCFC-21)
hydrochlorofluorocarbon-22 (HCFC-22)
hydrochlorofluorocarbon-31 (HCFC-31)
hydrochlorofluorocarbon-121 (HCFC-121)
hydrochlorofluorocarbon-122 (HCFC-122)
hydrochlorofluorocarbon-123 (HCFC-123)
hydrochlorofluorocarbon-124 (HCFC-124)
hydrochlorofluorocarbon-131 (HCFC-131)
hydrochlorofluorocarbon-132 (HCFC-132)
hydrochlorofluorocarbon-133 (HCFC-133)
hydrochlorofluorocarbon-141 (HCFC-141)
hydrochlorofluorocarbon-142 (HCFC-142)
hydrochlorofluorocarbon-221 (HCFC-221)
hydrochlorofluorocarbon-222 (HCFC-222)
hydrochlorofluorocarbon-223 (HCFC-223)
hydrochlorofluorocarbon-224 (HCFC-224)
hydrochlorofluorocarbon-225 (HCFC-225)
hydrochlorofluorocarbon-226 (HCFC-226)
hydrochlorofluorocarbon-231 (HCFC-231)
hydrochlorofluorocarbon-232 (HCFC-232)
hydrochlorofluorocarbon-233 (HCFC-233)
hydrochlorofluorocarbon-234 (HCFC-234)
hydrochlorofluorocarbon-235 (HCFC-235)
hydrochlorofluorocarbon-241 (HCFC-241)
hydrochlorofluorocarbon-242 (HCFC-242)
hydrochlorofluorocarbon-243 (HCFC-243)
hydrochlorofluorocarbon-244 (HCFC-244)
hydrochlorofluorocarbon-251 (HCFC-251)
hydrochlorofluorocarbon-252 (HCFC-252)
hydrochlorofluorocarbon-253 (HCFC-253)
hydrochlorofluorocarbon-261 (HCFC-261)
hydrochlorofluorocarbon-262 (HCFC-262)
hydrochlorofluorocarbon-271 (HCFC-271)

The initial list under this subsection shall also include the isomers of the substances listed above.

Operating Permit Instructions

Appendix D

Pollution Prevention Worksheet

Note: This Pollution Prevention Worksheet is optional. It is not a requirement of the Operating Permit Program.

Using Pollution Prevention in the Air Operating Permit Program

Note: This Pollution Prevention Worksheet is optional. It is not a requirement of the Operating Permit Program.

Pollution prevention -- the use of materials, processes, or practices which reduce or eliminate the creation of pollutants or wastes at the source -- should be used wherever feasible to comply with environmental regulations and standards, **including the Air Operating Permit program.**

Six pollution prevention techniques are commonly used. These techniques are:

Input Substitution: using less toxic or non toxic raw materials in place of more toxic ones.

Product Reformulation: changing the design or composition of an end product such that a less toxic production process may be utilized.

Production Unit Redesign or Modification: altering the process to utilize a lesser quantity of toxic materials.

Production Unit Modernization: replacing or upgrading production equipment and technologies.

Improved Operation and Maintenance: improving housekeeping, system adjustments, control equipment, etc., to improve efficiency.

Recycling within Production Process: installing closed loop (hard piped) recycling of certain substances as part of the production process.

A pollution prevention opportunities worksheet is attached. It can be employed to assist you in determining how pollution prevention techniques can be used at your facility.

One benefit of using pollution prevention relates directly to the Air Operating Permit process. The operating permit program includes applicability thresholds. Pollution prevention techniques can be used to reduce air emissions below these applicability thresholds. In addition, it may be possible to employ these techniques to reduce emissions to levels considered insignificant for the purposes of the operating permit program. Insignificant activities are discussed in Appendix A of the instructions.

Once you have completed a pollution prevention opportunities worksheet for your facility, you should contact the Massachusetts Office of Technical Assistance at (617) 727-3260 to discuss how pollution prevention can be used to assist you in complying with the air operating permit program.



BWP AQ 14

Operating Permit Application

Transmittal Number _____

Facility ID# (if known) _____

A. Facility Information

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



1. Facility:

Facility Name _____

Street Address _____

City _____

State _____

Zip Code _____

Mailing address (if different):

Street/P.O. Box _____

City _____

State _____

Zip Code _____

2. Facility Contact Person:

Name _____

Title _____

Telephone Number (including extension) _____

3. Facility Owner:

Owner or Corporation Name _____

Telephone Number (including extension) _____

4. Standard Industrial Classification Code(s) (4 – digits):

1. _____

2. _____

5. Facility Description:



BWP AQ 14

Operating Permit Application

Transmittal Number _____

Facility ID# (if known) _____

D. General Applicable Requirements

1. 310 CMR 7.07: Open Burning

- a. Not applicable
- b. In compliance
- c. Not in compliance (see instructions)

2. 310 CMR 7.12: Inspection Certificate, Record Keeping and Reporting

Does the facility file an annual Emission Statement (previously named Source Registration)?

- Yes No If No, explain why not:

3. 310 CMR 7.15: Asbestos

- a. Not applicable
- b. In compliance
- c. Not in compliance (see instructions)

4. 310 CMR 7.16: Reduction of Single Occupant Commuter Vehicle Use

- a. Not applicable
- b. In compliance

Date of last filing of Ridesharing Update Report: _____

- c. Not in compliance (see instructions)

5. Hazardous Air Pollutants:

Does the facility have the Potential to Emit?

- a. ≥ 10 tons per year of any single Hazardous Air Pollutant
- b. ≥ 25 tons per year of all HAPs combined
- c. None of the above

If yes to a. or b. above, list HAPs emitted and associated emission unit(s):

6. Prevention of Accidental Release:

Does the facility store, use, or process any of the listed compounds in quantities greater than thresholds?

- Yes No



BWP AQ 14

Operating Permit Application

Transmittal Number

Facility ID# (if known)

D. General Applicable Requirements (cont.)

7. 310 CMR 7.25: Consumer and Commercial Products

- a. Not applicable
- b. In compliance
- c. Not in compliance (see instructions)

8. Stratospheric Ozone:

- a. Not applicable
- b. In compliance
- c. Not in compliance (see instructions)

9. General Provisions:

- 310 CMR 7.01: General Regulations
- 310 CMR 7.09: Dust, Odor, Construction and Demolition
- 310 CMR 7.10: Noise
- 310 CMR 7.11: Transportation Media
- 310 CMR 7.13: Stack Testing
- 310 CMR 7.18(1)(C): VOC Handling/Storage

Department regulations also include several other regulations, including those listed above, that are generic and/or universal in nature. By signing the certifications in section L of this application, you are also certifying compliance with these regulations.



BWP AQ 14

Operating Permit Application

Transmittal Number _____

Facility ID# (if known) _____

E. Emission Unit – Fuel Utilization Equipment

Note: Do not use this section for fuel burning equipment integral to a process, such as a drying oven on a fabric coater. Instead complete section F for Process Equipment.

Important: Complete one section E for each fuel utilization emission unit. Make additional copies of this section as necessary.

I. Equipment Description

Emission unit number: _____

1. Type of equipment (boiler, furnace, engine, etc.): _____

2. Manufacturer: _____

3. Model number: _____

4. Maximum input rating: _____
Btu/hr

5. Burner manufacturer: _____

6. Model number: _____

7. Number of burners in combustion unit: _____

8. Fuels:

| | | |
|-------------------|--------------|----------------|
| | Primary fuel | Secondary fuel |
| a. Type and grade | _____ | _____ |

| | | |
|-------------------|-------------|-------------|
| b. Sulfur content | _____ | _____ |
| | % by weight | % by weight |

c. Maximum fuel firing rate (all burners firing)
(Indicate if gal/hr, lbs/hr, cubic feet per hour, etc.) _____

9. Air pollution control equipment (if any): _____

a. Type (scrubber, fabric filter, etc.) _____

b. Model/manufacturer _____

c. Pollutants controlled (PM, VOC, NO_x, etc.) _____

d. Efficiency

| | |
|----------------|---------|
| Capture: _____ | percent |
|----------------|---------|

| | |
|----------------|---------|
| Control: _____ | percent |
|----------------|---------|

10. Date of installation: _____

11. DEP Air Quality Approvals (if applicable):

| | |
|-----------------|-------|
| Approval number | Date |
| _____ | _____ |
| _____ | _____ |



BWP AQ 14

Operating Permit Application

Transmittal Number _____

Facility ID# (if known) _____

E. Emission Unit – Fuel Utilization Equipment (cont.)

12. Stack data:

a. Dimensions

Height: _____

feet

Diameter: _____

inches

b. Range of gas exit velocity

_____ to _____ fps

c. Range of exit temperature

_____ to _____ °F

d. Stack material of construction

II. Applicable Requirements/Limitations

1. Are alternative/flexible limits being proposed? Yes No

2. Are any new limits being proposed? Yes No

3. List all applicable requirements:

i. _____

ii. _____

4. Allowable usage limitations:

a. Hours per day: _____ Days per week: _____ Weeks per year: _____

b. Fuels used:

Primary

Secondary

Type

Amount

Sulfur

_____ weight percent

_____ weight percent

c. Raw materials:

Name

Amount

VOC

_____ weight percent

_____ weight percent

_____ weight percent



BWP AQ 14

Operating Permit Application

Transmittal Number _____

Facility ID# (if known) _____

E. Emission Unit – Fuel Utilization Equipment (cont.)

5. Other allowable restrictions:

a. Work practices (cleanup, startup/shutdown, etc.)

i. _____

ii. _____

b. Process parameters (temperatures, pressures, opacity, etc.)

i. _____

ii. _____

iii. _____

c. Control equipment parameters (temperatures, pressures, etc.)

i. _____

ii. _____

iii. _____

6. Total allowable emissions:

Note: Attach additional pages as necessary.

| | Rate | Short-term | Long-term |
|-------|-------|------------|-----------|
| VOC | _____ | _____ | _____ |
| CO | _____ | _____ | _____ |
| PM10 | _____ | _____ | _____ |
| NOx | _____ | _____ | _____ |
| SO2 | _____ | _____ | _____ |
| Other | _____ | _____ | _____ |
| Other | _____ | _____ | _____ |



BWP AQ 14

Operating Permit Application

Transmittal Number _____

Facility ID# (if known) _____

E. Emission Unit – Fuel Utilization Equipment (cont.)

III. Compliance Demonstration

1. Are alternative/flexible compliance items being proposed? Yes No

2. Are any new compliance items being proposed? Yes No

3. Monitoring – physical instrumentation:

a. recorders _____

b. meters _____

c. other _____

d. other _____

4. Recordkeeping:

a. daily _____

b. monthly _____

c. other _____

d. other _____

5. Reporting:

a. monthly _____

b. annual _____

c. other _____

6. Testing:

a. test methods _____

b. frequency _____

c. other _____

d. other _____

Note: Attach additional pages as necessary.

7. Enhanced monitoring (check one):

emission unit not applicable to enhanced monitoring

protocol attached

enhanced monitoring provisions not yet required



BWP AQ 14

Operating Permit Application

Transmittal Number _____

Facility ID# (if known) _____

F. Emission Unit – Process Equipment

Important:

Complete one section F for each process emission unit. Make additional copies of this section as necessary.

* Refers to the maximum rate at which the piece of equipment can utilize raw (or produce finished) materials. This is not the equipment normal operation rate nor any restricted (allowable) rate, but rather its absolute design capacity.

I. Description

Emission unit number: _____

1. Type of equipment: _____

2. Manufacturer: _____

3. Model number: _____

4. Maximum process rate*:

a. Raw material(s) _____
name name name

Raw material(s) _____
rate rate rate

b. Finished material(s) _____
name name

Finished material(s) _____
rate rate

5. Air pollution control equipment (if any):

a. Type (scrubber, fabric filter, etc.) _____

b. Model/manufacturer _____

c. Pollutants controlled (PM, VOC, NO_x, etc.) _____

d. Efficiency

Capture: _____
percent

Control: _____
percent

6. Date of installation: _____

7. Latest DEP Air quality approvals (if applicable):

Approval number Date

8. Stack data:

a. Dimensions

Height: _____
feet

Diameter: _____
inches

b. Range of gas exit velocity _____ to _____ fps



BWP AQ 14

Operating Permit Application

Transmittal Number _____

Facility ID# (if known) _____

F. Emission Unit – Process Equipment (cont.)

- c. Range of exit temperature _____ to _____ °F
- d. Stack material of construction _____

Associated fuel burning equipment

Complete this section for any fuel burning equipment integral to the process unit, for example, a dryer. Do not use this section for boilers or other fuel burning equipment identified as a separate emission unit in section E.

- 9. Type of equipment: _____
- 10. Manufacturer: _____
- 11. Model number: _____
- 12. Maximum input rating: _____
Btu/hr
- 13. Burner manufacturer: _____
- 14. Model number: _____
- 15. Number of burners in each combustion unit: _____
- 16. Fuels:

| | Primary fuel | Secondary fuel |
|---|--------------|----------------|
| a. Type and grade | _____ | _____ |
| b. Sulfur content | % by weight | % by weight |
| c. Maximum fuel firing rate (all burners firing) (indicate if gal/hr, lbs/hr, cubic feet per hour, etc.) | _____ | _____ |

II. Applicable Requirements/Limitations

- 1. Are alternative/flexible limits being proposed? Yes No
- 2. Are any new limits being proposed? Yes No
- 3. List all applicable requirements:
 - i. _____
 - ii. _____
- 4. Allowable usage limitations:
 - a. Hours per day: _____ Days per week: _____ Weeks per year: _____



BWP AQ 14

Operating Permit Application

Transmittal Number

Facility ID# (if known)

F. Emission Unit – Process Equipment (cont.)

| | | | |
|------------------|----------------|----------------|----------------|
| b. Fuels used | Primary | Secondary | |
| Type | _____ | _____ | |
| Amount | _____ | _____ | |
| Sulfur | _____ | _____ | |
| | weight percent | weight percent | |
| | | | |
| c. Raw materials | | | |
| Name | _____ | _____ | _____ |
| Amount | _____ | _____ | _____ |
| VOC | _____ | _____ | _____ |
| | weight percent | weight percent | weight percent |

5. Other allowable restrictions:

a. Work practices (cleanup, startup/shutdown, etc.)

i. _____

ii. _____

b. Process parameters (temperatures, pressures, opacity, etc.)

i. _____

ii. _____

iii. _____

c. Control equipment parameters (temperatures, pressures, etc.)

i. _____

ii. _____

iii. _____



BWP AQ 14

Operating Permit Application

Transmittal Number _____

Facility ID# (if known) _____

F. Emission Unit – Process Equipment (cont.)

6. Total allowable emissions:

Note: Attach additional pages as necessary.

| | Rate | Short-term | Long-term |
|-----------------|-------|------------|-----------|
| VOC | _____ | _____ | _____ |
| CO | _____ | _____ | _____ |
| PM10 | _____ | _____ | _____ |
| NO _x | _____ | _____ | _____ |
| SO ₂ | _____ | _____ | _____ |
| Other | _____ | _____ | _____ |
| Other | _____ | _____ | _____ |

III. Compliance Demonstration

- Are alternative/flexible compliance items being proposed? Yes No
- Are any new compliance items being proposed? Yes No

3. Monitoring – physical instrumentation:

- recorders _____
- meters _____
- other _____
- other _____

4. Recordkeeping:

- daily _____
- monthly _____
- other _____
- other _____



BWP AQ 14

Operating Permit Application

Transmittal Number

Facility ID# (if known)

F. Emission Unit – Process Equipment (cont.)

5. Reporting:

a. monthly _____

b. annual _____

c. other _____

6. Testing:

a. test methods _____

b. frequency _____

c. other _____

d. other _____

7. Enhanced monitoring (check one):

- emission unit not applicable to enhanced monitoring
- protocol attached
- enhanced monitoring provisions not yet required

Note: Attach additional pages as necessary.



BWP AQ 14

Operating Permit Application

Transmittal Number _____

Facility ID# (if known) _____

G. Emission Unit – Incinerator (Solid Waste, Sludge, Medical Waste, Other)

Important:
Complete one section G for each incinerator emission unit. Make additional copies of this sections as necessary.

Note: This section is **not** for afterburners or other pollution control equipment.

I. Description

Emission unit number: _____

1. Incinerator type (medical waste, municipal, etc.): _____
2. Manufacturer: _____
3. Model number: _____
4. Max. operating capacity (pounds or tons of waste per hour): _____
5. Waste type: _____
6. Charging ratio (for batch units only):
 - a. Batches per hour _____
 - b. Lbs/Batch (max.) _____
7. Heat recovery? Yes No
8. Number of hearths: _____
9. Total hearth area: _____
10. Automatic feeder? Yes No
11. Temperature range:

Primary: _____ to _____ °F

Secondary: _____ to _____ °F
12. Auxiliary burners:

| | Primary chamber | Secondary chamber |
|----------------------|-----------------|-------------------|
| a. manufacturer | _____ | _____ |
| b. model number | _____ | _____ |
| c. type of fuel used | _____ | _____ |
| d. maximum rating | _____ | _____ |
| | Btu/hr | Btu/hr |



BWP AQ 14

Operating Permit Application

Transmittal Number _____

Facility ID# (if known) _____

G. Emission Unit – Incinerator (Solid Waste, Sludge, Medical Waste, Other) (cont.)

13. Air pollution control equipment (if any):

- a. Type (scrubber, fabric filter. Etc.) _____
- b. Model/manufacturer _____
- c. Pollutants controlled (PM, VOC, NO_x, etc.) _____
- d. Efficiency _____
Capture: _____
Control: _____

14. Date of installation: _____

| 15. DEP Air Quality approvals (if applicable): | Approval number | Date |
|--|-----------------|-------|
| | _____ | _____ |
| | _____ | _____ |

16. Stack data:

- a. Dimensions _____
Height: _____ feet
Diameter: _____ inches
- b. Range of gas exit velocity: _____ to _____ fps
- c. Range of exit temperature: _____ to _____ °F
- d. Stack material of construction _____

II. Applicable Requirements/Limitations

- 1. Are alternative/flexible limits being proposed? Yes No
- 2. Are any new limits being proposed? Yes No

3. List all applicable requirements:

- i. _____
- ii. _____



BWP AQ 14

Operating Permit Application

Transmittal Number

Facility ID# (if known)

G. Emission Unit – Incinerator (Solid Waste, Sludge, Medical Waste, Other) (cont.)

4. Allowable usage limitations:

a. Hours per day: _____ Days per week: _____ Weeks per year: _____

| | | |
|----------------|----------------|----------------|
| b. Fuels used: | Primary | Secondary |
| Type | _____ | _____ |
| Amount | _____ | _____ |
| Sulfur | _____ | _____ |
| | weight percent | weight percent |

| | | | |
|-------------------|----------------|----------------|----------------|
| c. Raw materials: | | | |
| Name | _____ | _____ | _____ |
| Amount | _____ | _____ | _____ |
| VOC | _____ | _____ | _____ |
| | weight percent | weight percent | weight percent |

5. Other allowable restrictions:

- a. Work practices (cleanup, startup/shutdown, etc.)
 - i. _____
 - ii. _____

- b. Process parameters (temperatures, pressures, opacity, etc.)
 - i. _____
 - ii. _____
 - iii. _____

- c. Control equipment parameters (temperatures, pressures, etc.)
 - i. _____
 - ii. _____
 - iii. _____



BWP AQ 14

Operating Permit Application

Transmittal Number _____

Facility ID# (if known) _____

G. Emission Unit – Incinerator (Solid Waste, Sludge, Medical Waste, Other) (cont.)

6. Total allowable emissions:

Note: Attach additional pages as necessary.

| | Rate | Short-term | Long-term |
|-----------------|-------|------------|-----------|
| VOC | _____ | _____ | _____ |
| CO | _____ | _____ | _____ |
| PM10 | _____ | _____ | _____ |
| NO _x | _____ | _____ | _____ |
| SO ₂ | _____ | _____ | _____ |
| Other | _____ | _____ | _____ |
| Other | _____ | _____ | _____ |

III. Compliance Demonstration

1. Are alternative/flexible compliance items being proposed? Yes No

2. Are any new compliance items being proposed? Yes No

3. Monitoring – physical instrumentation:

a. recorders _____

b. meters _____

c. other _____

d. other _____

4. Recordkeeping:

a. daily _____

b. monthly _____

c. other _____

d. other _____



BWP AQ 14

Operating Permit Application

Transmittal Number

Facility ID# (if known)

G. Emission Unit – Incinerator (Solid Waste, Sludge, Medical Waste, Other) (cont.)

5. Reporting:

a. monthly _____

b. annual _____

c. other _____

6. Testing:

a. test methods _____

b. frequency _____

c. other _____

d. other _____

7. Enhanced monitoring (check one):

- emission unit not applicable to enhanced monitoring
- protocol attached
- enhanced monitoring provisions not yet required

Note: Attach additional pages as necessary.



BWP AQ 14

Operating Permit Application

Transmittal Number _____

Facility ID# (if known) _____

H. Emission Unit – Liquid Organic Material Storage

Important:

Complete one section H for each liquid organic material storage emission unit. Make additional copies of this section as necessary.

I. Description

Emission unit number: _____

1. Above ground Below ground

2. Type (floating roof, internal roof, fixed, etc.): _____

3. Physical description: Age: _____

Color: _____

4. Dimensions: Height: _____
feet

Diameter: _____
inches

5. Capacity: _____
gallons

6. Construction type: _____

7. Material stored:

a. Name _____

b. Vapor pressure and temp. (^oF) _____

c. RVP _____

d. Total oxygen content _____

e. Oxygenate name _____

f. Annual throughput _____

8. Loading/transferring: Yes No

a. Trucks

b. Ships/barges/marine vessels

c. Rail car

d. Other (specify): _____

Note:

c, d, e are for gasoline only.



BWP AQ 14

Operating Permit Application

Transmittal Number _____

Facility ID# (if known) _____

H. Emission Unit – Liquid Organic Material Storage (cont.)

9. Air pollution control equipment (if any):

a. Type (floating roof, carbon adsorption, afterburner, etc.) _____

b. Model/manufacturer _____

c. Pollutants controlled (PM, VOC, NO_x, etc.) _____

d. Efficiency _____

Capture: _____

Control: _____

10. Date of installation: _____

11. DEP Air Quality approvals (if applicable):

Approval number

Date

12. Stack data:

a. Dimensions

Height: _____

feet

Diameter: _____

inches

b. Range of gas exit velocity: _____

to

_____ fps

c. Range of exit temperature: _____

to

_____ °F

d. Stack material of construction _____

II. Applicable Requirements/Limitations

1. Are alternative/flexible limits being proposed?

Yes

No

2. Are any new limits being proposed?

Yes

No

3. List all applicable requirements:

i. _____

ii. _____



BWP AQ 14

Operating Permit Application

Transmittal Number _____

Facility ID# (if known) _____

H. Emission Unit – Liquid Organic Material Storage (cont.)

4. Allowable usage limitations:

a. Hours per day: _____ Days per week: _____ Weeks per year: _____

b. Fuels used: Primary Secondary

Type _____

Amount _____

Sulfur _____
weight percent weight percent

c. Raw materials:

Name _____

Amount _____

VOC _____

5. Other allowable restrictions:

a. Work practices (cleanup, startup/shutdown, etc.)

i. _____

ii. _____

b. Process parameters (temperatures, pressures, opacity, etc.)

i. _____

ii. _____

iii. _____

c. Control equipment parameters (temperatures, pressures, etc.)

i. _____

ii. _____

iii. _____



BWP AQ 14

Operating Permit Application

Transmittal Number _____

Facility ID# (if known) _____

H. Emission Unit – Liquid Organic Material Storage (cont.)

6. Total allowable emissions:

| | Rate | Short-term | Long-term |
|-----------------|-------|------------|-----------|
| VOC | _____ | _____ | _____ |
| CO | _____ | _____ | _____ |
| PM10 | _____ | _____ | _____ |
| NO _x | _____ | _____ | _____ |
| SO ₂ | _____ | _____ | _____ |
| Other | _____ | _____ | _____ |
| Other | _____ | _____ | _____ |

Note: Attach additional pages as necessary.

III. Compliance Demonstration

1. Are alternative/flexible compliance items being proposed? Yes No

2. Are any new compliance items being proposed? Yes No

3. Monitoring – physical instrumentation:

- a. recorders _____
- b. meters _____
- c. other _____
- d. other _____

4. Recordkeeping:

- a. daily _____
- b. monthly _____
- c. other _____
- d. other _____



BWP AQ 14

Operating Permit Application

Transmittal Number

Facility ID# (if known)

H. Emission Unit – Liquid Organic Material Storage (cont.)

5. Reporting:

a. monthly _____

b. annual _____

c. other _____

6. Testing:

a. test methods _____

b. frequency _____

c. other _____

d. other _____

7. Enhanced monitoring (check one):

- emission unit not applicable to enhanced monitoring
- protocol attached
- enhanced monitoring provisions not yet required

Note: Attach additional pages as necessary.



BWP AQ 14

Operating Permit Application

Transmittal Number _____

Facility ID# (if known) _____

I. Miscellaneous (other) Emission Units

Important:

Complete one section I for each emission unit not described otherwise in section E, F, G, or H. Make additional copies of this section as necessary.

I. Description

1. Type of emission unit (landfill, etc.): _____
2. Description emission unit (size, capacity, etc.): _____
3. Type of emissions (PM, VOC, NO_x, etc.): _____
4. Nature of emissions (fugitive dust, solid waste decomposition, etc.): _____
5. Air pollution control equipment (if any):
 - a. Type (scrubber, fabric filter, etc.) _____
 - b. Model/manufacturer _____
 - c. Pollutants controlled (PM, VOC, NO_x, etc.) _____
 - d. Efficiency

| | |
|----------|---------|
| Capture: | _____ |
| | percent |
| Control: | _____ |
| | percent |
6. Date of installation: _____
7. DEP Air Quality approvals (if applicable):

| Approval number | Date |
|-----------------|-------|
| _____ | _____ |
| _____ | _____ |
8. Stack data:
 - a. Dimensions

| | |
|-----------|--------|
| Height: | _____ |
| | feet |
| Diameter: | _____ |
| | inches |
 - b. Range of gas exit velocity: _____ to _____ fps
 - c. Range of exit temperature: _____ to _____ °F
 - d. Stack material of construction _____



BWP AQ 14

Operating Permit Application

Transmittal Number _____

Facility ID# (if known) _____

I. Miscellaneous (other) Emission Units (cont.)

II. Applicable Requirements/Limitations

1. Are alternative/flexible limits being proposed? Yes No

2. Are any new limits being proposed? Yes No

3. List all applicable requirements:

i. _____

ii. _____

4. Allowable usage limitations:

a. Hours per day: _____ Days per week: _____ Weeks per year: _____

b. Fuels used: Primary Secondary

Type _____

Amount _____

Sulfur _____
weight percent weight percent

c. Raw materials:

Name _____

Amount _____

VOC _____
weight percent weight percent weight percent

5. Other allowable restrictions:

a. Work practices (cleanup, startup/shutdown, etc.)

i. _____

ii. _____

b. Process parameters (temperatures, pressures, opacity, etc.)

i. _____

ii. _____

iii. _____



BWP AQ 14

Operating Permit Application

Transmittal Number _____

Facility ID# (if known) _____

I. Miscellaneous (other) Emission Units (cont.)

c. Controlled equipment parameters (temperatures, pressures, etc.)

i. _____

ii. _____

iii. _____

6. Total allowable emissions:

| | Rate | Short-term | Long-term |
|-----------------|-------|------------|-----------|
| VOC | _____ | _____ | _____ |
| CO | _____ | _____ | _____ |
| PM10 | _____ | _____ | _____ |
| NO _x | _____ | _____ | _____ |
| SO ₂ | _____ | _____ | _____ |
| Other | _____ | _____ | _____ |
| Other | _____ | _____ | _____ |

Note: Attach additional pages as necessary.

III. Compliance Demonstration

1. Are alternative/flexible compliance items being proposed? Yes No

2. Are any new compliance items being proposed? Yes No

3. Monitoring – physical instrumentation:

a. recorders _____

b. meters _____

c. other _____

d. other _____



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I. Miscellaneous (other) Emission Units (cont.)

4. Recordkeeping:

a. daily _____

b. monthly _____

c. other _____

d. other _____

5. Reporting:

a. monthly _____

b. annual _____

c. other _____

6. Testing:

a. test methods _____

b. frequency _____

c. other _____

d. other _____

7. Enhanced monitoring (check one):

emission unit not applicable to enhanced monitoring

protocol attached

enhanced monitoring provisions not yet required

Note: Attach additional pages as necessary.



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J. Total Facility Limits

1. Limitations:

2. Compliance demonstration:

3. Total Allowable Facility Emissions:

List total allowable emission for entire facility, including exempt activities described in Section C, but not activities specifically exempt, such as bathroom vents, etc.:

| Pollutant | Emissions (Tons Per Year) |
|------------------|----------------------------------|
| VOC | _____ |
| CO | _____ |
| PM10 | _____ |
| NO _x | _____ |
| SO ₂ | _____ |
| Other | _____ |
| Other | _____ |



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K. Compliance Certification

1. Describe the status of the facility with respect to all applicable air pollution requirements. Note specifically any activities not in compliance. Also note any final regulations that require compliance at a future date.

2. Describe how any units not in compliance will be brought into compliance.

3. Attach a schedule for emissions units that are not in compliance with all applicable requirements at the time of permit issuance. Such a schedule shall include a schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to compliance with any applicable requirements for which the facility will be in noncompliance at the time of permit issuance. This compliance schedule shall resemble and be at least as stringent as that contained in any judicial consent decree or administrative order to which the facility is subject. Any such schedule of compliance shall be supplemental to, and shall not sanction noncompliance with, the applicable requirements on which it is based.

Include a schedule for submission of certified progress reports (no less frequently than every six months) for sources required to have a schedule of compliance to remedy a violation.

Check one:

- Schedule attached
 All units in compliance, no schedule attached



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L. Certification

The following statements must be signed by a responsible official:

"I hereby accept the Department's authority to enter the premises of the permitted facility and perform reasonable inspections and sampling, as described in 310 CMR 7.00: Appendix C(3)(g)."

Name of Official

Signature

Date

"Except for those units identified as not in compliance and for which a schedule is attached, I certify that the facility will continue to comply with all current applicable requirements and will meet the requirements for applicable requirements that will become effective during the term of this permit on a timely basis."

Name of Official

Signature

Date

"I certify that I have personally examined the foregoing and am familiar with the information contained in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including possible fines and imprisonment."

Name of Official

Signature

Date



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M. Fee Calculation

NOTE: In the future, the fee calculation for this Operating Permit application may be adjusted according to the Consumer Price Index or in other ways. Please refer to the most recent copy of the fee regulations.

1. Emission Units:

- (i) # of Emission Units Listed in Section B that **Do Not** have add-on air pollution control equipment. _____ x \$405 = _____
- (ii) # of Emission Units Listed in Section B that **Have** add-on air pollution control equipment. _____ x \$549 = _____
- (iii) Total of (i) and (ii): Enter sum of (i) and (ii). _____ Total: _____

2. Actual Emissions:

Using information from the Emission Statement filed with the Department in the previous year, complete the following tables:

(i) Actual Adjusted Emissions:

| Pollutant | Actual Emissions (Total Facility) | – | Actual Emissions (from Exempt activities) | = | Actual Adjusted (enter difference or 4,000, whichever is less) |
|-----------------|--------------------------------------|---|--|---|--|
| PM10 | _____ | – | _____ | = | _____ |
| | tons/yr | | tons/yr | | tons/yr |
| VOC | _____ | – | _____ | = | _____ |
| | tons/yr | | tons/yr | | tons/yr |
| NO _x | _____ | – | _____ | = | _____ |
| | tons/yr | | tons/yr | | tons/yr |
| SO _x | _____ | – | _____ | = | _____ |
| | tons/yr | | tons/yr | | tons/yr |
| Pb | _____ | – | _____ | = | _____ |
| | tons/yr | | tons/yr | | tons/yr |



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Facility ID# (if known) _____

M. Fee Calculation (cont.)

(ii) Fee For Emissions:

| Pollutant | Actual Adjusted (from table above) | | Fee |
|-----------------|---------------------------------------|---------|-------|
| PM10 | _____ | x \$9 = | _____ |
| VOC | _____ | x \$9 = | _____ |
| NO _x | _____ | x \$9 = | _____ |
| SO _x | _____ | x \$9 = | _____ |
| Pb | _____ | x \$9 = | _____ |
| | | Total: | _____ |

3. Fee:

Total Fee (can not be less than \$2,312) = Emission unit fee + Fee for emissions

$$\begin{aligned}
 &= \text{item 1(iii)} \quad + \quad \text{total from item 2(ii)} \quad = \quad \text{Total Fee} \\
 &= \underline{\hspace{2cm}} \quad + \quad \underline{\hspace{2cm}} \quad = \quad \underline{\hspace{2cm}}
 \end{aligned}$$



Pollution Prevention Opportunities Worksheet

Supplemental Form for Operating Permit Application

A. Facility Information

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



1. Facility:

Facility Name

Street Address

City

State

Zip Code

2. Mailing address (if different from above):

Street/PO Box

City

State

Zip Code

B. Pollution Prevention Information

Note: Completion of this form is optional and not a prerequisite to obtaining an Operating Permit.

For more information or assistance, please contact the Executive Office of Environmental Affairs' Office of Technical Assistance at (617) 727-3260.

1. Input Substitution is the use of non toxic or less toxic raw materials in place of more toxic ones. Examples: no/low solvent coatings, clean fuels, aqueous cleaners, etc. Is Input Substitution a technique which could be employed at your facility?

Yes No

If Yes, on which emission point(s)?

Briefly describe:

2. Product Reformulation is a change in the design or composition of an end product such that a non or less toxic production process may be utilized. Is Product Reformulation a technique which can be employed at your facility?

Yes No

If Yes, briefly describe:

Additional hint: It may be useful to contact multiple raw material suppliers to determine if there are substitutions appropriate for your facility.



Pollution Prevention Opportunities Worksheet

Supplemental Form for Operating Permit Application

B. Pollution Prevention Information (cont.)

3. Production Unit Redesign or Modification is the altering of a process to eliminate the use of or to utilize a lesser quantity of toxic materials. Examples: coating equipment which improves transfer efficiencies, countercurrent rinses, etc. Is Production Unit Redesign or Modification a technique which can likely be employed at you facility?

Yes No

If Yes, briefly describe:

4. Production Unit Modernization is the replacing or upgrading production equipment and technologies. Is Production Unit Modernization a technique which can be implemented at your facility?

Yes No

If Yes, briefly describe:

5. Improved Operation and Maintenance includes improving housekeeping, system adjustments, control equipment, etc. and/or providing training to improve efficiency. (Examples: leak detection and repair, mixing protocols, maintenance logs and schedules for process, treatment, or control equipment.) Would improved operation and maintenance procedures be beneficial to your facility in order to minimize waste generation?

Yes No

If Yes, briefly describe:

Additional hint: Training equipment operators on pollution prevention practices will aid them in their efforts to minimize waste generation.

Can production scheduling be modified at your facility to minimize wastes (such as minimizing color changes)?

Yes No

If Yes, briefly describe:



Pollution Prevention Opportunities Worksheet

Supplemental Form for Operating Permit Application

B. Pollution Prevention Information (cont.)

Can any special purchasing or inventory practices be employed at your facility to minimize the generation of hazardous wastes? (Examples: just in time purchasing, rotation of stock to minimize shelf life losses, other storage requirements.)

Yes No

If Yes, briefly describe:

6. Integral Recycling within Production Process is the installation of closed loop recycling of certain substances as part of the production process. Is recycling within a production process a technique applicable to your facility?

Yes No

If Yes, briefly describe:

7. "Total Cost Assessment" attempts to more fully account for less tangible, longer term, and indirect costs associated with a project alternative (such things as: pollution related liabilities, company image, regulatory compliance costs, or other costs typically grouped under overhead). Can "Total Cost Assessment" economic analysis be used to evaluate processes at your facility in order to incorporate pollution prevention alternatives?

Yes No

If Yes, briefly describe:

8. Has production level staff had input to process design and operating procedures on how to minimize waste at your facility?

Yes No

If Yes, briefly describe:



Pollution Prevention Opportunities Worksheet

Supplemental Form for Operating Permit Application

B. Pollution Prevention Information (cont.)

9. Does your company's employee performance evaluation and or reward system consider employee efforts to employ prevention?

Yes No

If Yes, briefly describe:
