

DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE PREVENTION

NOTICE

Notice is hereby given that the Department of Environmental Protection, acting in accordance with the provisions of M.G.L. chapter 111, Section 142A through 142N, will hold a public hearing on proposed amendments to 310 CMR 7.00. The amendments will be applicable to all districts.

The department is proposing to revise the following sections to the Air Pollution Control Regulations:

- 310 CMR 7.00 Definitions
- 310 CMR 7.06(1)(c) Visible Emissions
- 310 CMR 7.24(4) Organic Material Storage and Distribution

The Commonwealth is committed to measures designed to attain and maintain national ambient air quality standards. The proposed amendments are part of that commitment and will be proposed as a revision to the Massachusetts State Implementation Plan (SIP).

Public hearings will be conducted under the provisions of M.G.L. Chapter 30A on:

Tuesday, October 18, 2005, 9:30 AM
Department of Environmental Protection
One Winter Street, Conference Room A, Second Floor
Boston, MA 02108

Wednesday, October 19, 2005, 9:30 AM
Department of Environmental Protection
436 Dwight Street Room B42
Springfield, MA 01103

Testimony may be presented orally or in writing at the public hearing. Written comments will also be accepted until 5:00 PM on October 28, 2005. Written testimony must be submitted to:

Department of Environmental Protection
Bureau of Waste Prevention
One Winter Street 8th Floor
Boston, MA 02108
Attn: Robert Donaldson

Copies of the proposed regulations and supporting background information will be available for inspection during normal business hours at: the Bureau of Waste Prevention, One Winter Street, Boston, MA, and the four regional offices of the Department of Environmental Protection.

This information is available in alternate format upon request to the ADA Coordinator, BAS/HR, 4th Floor, One Winter Street, Boston, MA 02108. For special Accommodations for this event, contact Robert Donaldson at (617) 292-5619 ASAP.

By Order of the Department
Robert W. Golledge
Commissioner



Commonwealth of Massachusetts
Executive Office of Environmental Affairs
Department of Environmental Protection
Bureau of Waste Prevention
Business Compliance Division
One Winter Street
Boston, Massachusetts

Background Information Document
And
Proposed Amendments to:
310 CMR 7.00 Definitions
310 CMR 7.06(1)(c) Visible Emissions
310 CMR 7.24(4) Organic Material Storage and Distribution

Regulations for the Control of Air Pollution
In the
Berkshire Air Pollution Control District
Pioneer Valley Air Pollution Control District
Merrimack Valley Air Pollution Control District
Metropolitan Boston Air Pollution Control District
Central Massachusetts Air Pollution Control District
Southeastern Massachusetts Air Pollution Control District
For Public Comment and Hearings

Statutory Authority:
M.G.L. Chapter 111, Sections 142A through 142N

August 2005

Preamble

DEP is proposing to revise:

- 1) 310 CMR 7.00 - Definitions. The definition of Volatile Organic Compound (VOC) is proposed to be modified to exempt five additional compounds. The Environmental Protection Agency (EPA) issued final rules on November 29, 2004 exempting these compounds.
- 2) 310 CMR 7.06 – Visible Emissions. Visible emissions limitations are proposed for certain facilities required to have Operating Permits.
- 3) 310 CMR 7.24 – Organic Material Storage and Distribution. It is proposed to expand the time period during which gasoline tank trucks are required to be tested for vapor leak tightness.

Background on Visible Emissions

Alternate visible emission limitations for facilities required to have Operating Permits (310 CMR Appendix C) were adopted by the Department on August 3, 2001 - 310 CMR 7.06(1)(c). EPA, in its State Implementation Plan (SIP) oversight role, advised the Department that this regulation was not approvable for inclusion into the Massachusetts State Implementation Plan (SIP). EPA stated that the regulatory requirements would not be enforceable by EPA nor citizens. Subsequently in February 2004, the Department proposed further revision to 310 CMR 7.06(1)(c) to address EPA's concerns. Based upon testimony received as part of the February 2004 public process on this issue and further discussion with EPA, the Department is now proposing new language to replace 310 CMR 7.06(1)(c). The Department believes that this new language is sufficiently different from the February 2004 proposal to require a new public hearing and comment period.

In the early 1970's, Massachusetts adopted visible emission regulations to limit smoke and opacity from combustion facilities such as boilers. (See 310 CMR 7.06(1)(a) and (b)) These established not to be exceeded "caps" on the blackness of the emission (smoke) or degree of obscuration of light transmission (opacity).¹ Although the vast majority of boilers in the Commonwealth comply with these regulations, a small number of industrial size boilers do not comply during periods of startup, shutdown, soot blowing (periodic cleaning of the internal boiler surfaces to maintain heat transfer efficiency) or some other boiler specific transient operating conditions.² These visible emission excursion events are typically short term (a puff to several minutes) typically occurring three to four times per day.

¹ Many state visible emission regulations are stated in terms of average (versus "caps") visible emission levels. Typically, the allowed percent opacity level is determined by averaging a series of visible emission readings taken at 15-second intervals for six minutes. This is EPA's Method 9.

² Some states exempt visible emission exceedances during periods of start up, shut down, soot blowing and other transient operating conditions. According to EPA, states adopted these exemptions either prior to adoption of EPA policy or the exemptions were approved by EPA as part of state SIPs. See *State Implementation Plans (SIP): Policy Regarding Excess Emissions During Malfunctions, Startup, and Shutdown*, September 20, 1999, EPA. <http://www.epa.gov/ttn/oarpg/t1/memoranda/excem.pdf>

The federal Clean Air Act Amendments of 1990 required states to develop and implement Operating Permit Programs for major sources. Operating Permit facilities are highly regulated when compared with facilities not required to have these permits. They are required to self certify compliance semi-annually, are subject to federal rules regarding compliance evidence, and have specific terms and conditions in their permits for monitoring, testing, record keeping, and reporting for each pollutant, for each regulated operation at a facility.

The Department met several times with representatives of these facilities in the late 1990's. Consequently, 310 CMR 7.06(1)(c) was developed, proposed and adopted in 2001. The February 2004 proposal sought to address industry and EPA concerns and would have required an average opacity limit of 15 percent during normal operations with up to 27% opacity during events such as start up, shut down, soot blowing, and other specified operating conditions as approved by the Department. To take advantage of this regulation, facilities were to engage third party combustion experts to review operations, make recommendations for improvements and submit Plans of Good Operating Practices to the Department. Visible emission limits would be established upon Department approval of these plans and incorporated into the facility's Operating Permit.

Based upon an analysis of comments received on its February 2004 proposal, the Department has determined that additional regulatory conditions should be included to address infrequent opacity excursions.

The Department is again proposing to revise 310 CMR 7.06(1)(c) to address infrequent opacity excursions. Given the complexity of this issue, it is very important that comments on the proposal be clear, specific and complete for the public record. The Department wants to ensure that all reasonable options are fully aired in the public comment and hearing process. Specifically, the Department seeks comment on language in 7.06(1)(c)1.b. and 7.06(1)(c)1.c. These sections would limit the number of excursions that a facility could have over the 27% visible emissions limit during start-up, shut down, soot blowing and other specified operating conditions. For facilities that have certain continuous monitoring equipment, the facility would be prohibited from exceeding the 27% limit for more than one-tenth of 1% of the total block averages during any calendar quarter, provided certain other limits are met. Other affected facilities would be prohibited from exceeding the 27% limit except during one hour per calendar quarter, up to two 6-minute block averages during the hour could exceed the limit. The Department seeks comment on whether the proposed regulation strikes the right balance or whether the Department should allow fewer or more excursions above the 27% visible emissions limit during start up, shut down, soot blowing and other specified operating conditions.

Summary of Proposed Revisions

DEFINITION of Volatile Organic Compound (VOC)

The Department is proposing to amend the definition of Volatile Organic Compound (VOC) by adding the following five chemical compounds to the list of exempt VOCs:

t-butyl acetate
methyl formate
HFE-7000
HFE-7500
HFC227ea

EPA issued final rules to exempt these five compounds from the definition of VOC in the Federal Register on November 29, 2004. EPA also added designations (HFE-7100 and HFE-7200) to two previously exempted compounds to update nomenclature.

It should be noted that compounds that are exempt from VOC requirements are not exempt from any other applicable requirement in the regulations including the provisions of 310 CMR 7.02 Plan Approval and Emission Limitations.

VISIBLE EMISSIONS

It is proposed for facilities with boilers rated less than 500 million BTU per hour and subject to 310 CMR 7.00 Appendix C – Operating Permits, that visible emissions shall be limited to 15% opacity, 6-minute block average except as follows:

During startup, shutdown, soot blowing and other specified periods

- Visible emissions shall be limited to 27 percent, 6-minute block average and
- *During one hour per calendar quarter, visible emissions may exceed 27 percent opacity for up to two 6-minute block averages and
- *For facilities with certain monitoring equipment, visible emissions can exceed 27 percent opacity for one-tenth of one percent (0.1%) of the total 6-minute block averages during any calendar quarter provided:
 - Visible emissions do not exceed 60 percent opacity during any 6-minute block average,
 - At no time can visible emissions exceed 27 percent opacity for more than two 6-minute block averages during a one-hour period,
 - The one-hour average shall not exceed 27 percent opacity during the one-hour period when a 6-minute block average exceeds 27 percent opacity, and
 - The one-hour average shall be based on a 60-minute period beginning with the first 6-minute block average that exceeds 27 percent opacity.

**These conditions are to address infrequent opacity excursions and were not part of the February 2004 proposal.*

The operation of a facility with visible emissions limits as stated above shall be in accordance with the requirements of a Plan of Good Operating Practices. Such plan shall:

- Developed by a third party combustion expert to develop the plan with recommendations to minimize opacity;
- Provide documentation of the need for different opacity limits and a proposal for specific opacity limits;
- Indicate how improved technology, operating and maintenance procedures will minimize emissions;
- Contain corrective action procedures and return to compliance;
- Record keeping and monitoring requirements; and
- Be submitted for Department approval.

Plans of Good Operating Practice are subject to Department approval.

A formal approval process will make the limits and any terms and conditions of the plan enforceable.

The terms and conditions of an approved Plan are required to be put in the Operating Permit.

ORGANIC MATERIAL STORAGE AND DISTRIBUTION

The Department is proposing to expand the period during which gasoline tank trucks are required to be tested for vapor leak tightness. This revision will make Massachusetts requirements consistent with the EPA requirements at 40 CFR 63 Subpart R. The change will provide operators greater flexibility in scheduling testing, and help assure there are sufficient trucks available to deliver fuel.

Air Quality Impacts

The proposed changes will have minor, if any, air quality impact.

The change in the definition of VOC will decrease the number of compounds regulated as VOC's, but not change the potential regulation of these compounds for other air quality reasons.

The proposed amendments for visible emissions codify existing implementation practice of the visible emission regulations as they apply to large boilers.

The tank truck testing frequency proposal will have no impact as it does not affect standards, it increases testing flexibility.

Savings Clause

Any regulatory amendments that affect regulations and programs that are part of the Massachusetts State Implementation Plan (SIP) must demonstrate that they are no less stringent than the existing SIP and that any projected increases in emissions that result from the amendments are offset by equal or greater predicted emission decreases.

As there are no emission increases or adverse air quality impacts projected as a result of these proposed amendments, there are no compensatory emission decreases that need to be made.

Economic Impacts

The proposed revisions will have little if any economic impact because they simply codify the Department's existing regulatory implementation, make the regulations consistent with EPA rules, provide increased flexibility and bring the Department's regulations into line with current industry practice related to operation of large industrial boilers.

Impact on Small Business

There are no impacts on small business as the size and types of boilers that this proposal affects are not found at small businesses. The changes to the definition and tank truck testing frequency and the exemption of some compounds from VOC requirements may benefit some small businesses.

Agricultural Impacts

Massachusetts General Laws, Chapter 30A, Section 18 requires state agencies to evaluate the impact of proposed programs on agriculture within the Commonwealth. As the proposed amendments affect only industrial facilities and non-agricultural business, the Department has determined that the proposed regulations will have no adverse impact on agriculture in Massachusetts.

Toxics Use Reduction

Implementation of toxics use reduction is a Department-wide priority. Toxics use reduction is defined as in-plant practices that reduce or eliminate the total mass of contaminants discharged to the environment. These amendments are not expected to impact on that effort. Although the definition change exempts five additional compounds from VOC requirements, this action does not exempt them from any other applicable requirement in the regulations.

Impacts on Cities and Towns (Proposition 2 1/2)

Pursuant to Executive Order 145, the Department must assess the fiscal impact of new regulations on the commonwealth's municipalities. The Executive Order was issued in response to Proposition 2 1/2.

These regulations do not affect an activity conducted by a municipality.

MEPA

This proposed action is "categorically exempt" from the "Regulations Governing the Preparation of Environmental Impact Reports", 301 CMR 11.00, because the proposed amendments will not result in increased impacts. All reasonable measures have been taken to minimize adverse impacts.

Request for Comments

Comments on these proposed regulations should be sent to:

Mr. Robert T. Donaldson, Associate Director
Business Compliance Division
Bureau of Waste Prevention
Department of Environmental Protection
One Winter Street Eighth Floor
Boston, Massachusetts 02108

Public Participation

These proposed regulations will be subject to further public review and comment prior to promulgation. Public hearings to collect comments on the proposed amendments will be conducted under the provisions of Chapter 30A of the Massachusetts General Laws on:

October 18, 2005 – 9:30 AM

Department of Environmental Protection
One Winter Street, Second Floor
Boston, Massachusetts

October 19, 2005 – 9:30 AM

Department of Environmental Protection
436 Dwight Street, Room B42
Springfield, Massachusetts

Testimony may be presented orally or in writing at the public hearings. Written comments will be accepted until 5pm on October 28, 2005 at the Business Compliance Division, Department of Environmental Protection, One Winter Street, 8th Floor, Boston, MA 02108.

After public review and Department evaluation and response to comments, the final amendments will be submitted to the Secretary of State for promulgation. The amendments will also be submitted to the US Environmental Protection Agency for approval as a revision to the Massachusetts State Implementation Plan.

If there are any questions regarding the proposed amendments or this document, please contact Bob Donaldson at (617) 292-5619.

7.00 DEFINITIONS

Amend existing 310 CMR 7.00 Definition of Volatile Organic Compound to include the following five compounds in the list of exemptions and update nomenclature for two existing exempt compounds.

VOLATILE ORGANIC COMPOUND is any compound of carbon This definition includes all organic compounds except the following:

<u>CAS Number</u>	<u>Chemical Name</u>
.....
79209	methyl acetate
540885	t-butyl acetate
71556	methyl chloroform (1,1,1-trichloroethane)
107313	methyl formate
.....
375031	<u>HFE-7000 or n-C₃F₇OCH₃ (1,1,1,2,2,3,3-heptafluoro-3-methoxy-propane)</u>
163702076	<u>HFE-7100 or C₄F₉OCH₃ (1,1,1,</u>
.....
163702054	<u>HFE-7200 or C₄F₉OC₂H₅ (1-ethoxy-</u>
297730939	<u>HFE-7500 or HFE-s702 or T-7145 or L-15381 (3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-(trifluoromethyl) hexane)</u>
.....
431890	<u>HFC-227ea (1,1,1,2,3,3,3-heptafluoropropane)</u>
.....

7.06: U Visible Emissions

Delete the existing 310 CMR 7.06(1)(c) and replace with the following.

(c) Exception.

1. Visible Emission Limits.

In lieu of the requirements of 310 CMR 7.06(1)(a) and 310 CMR 7.06(1)(b), a facility subject to 310 CMR 7.00, Appendix C - Operating Permits with boilers rated less than 500 million Btu per hour energy input capacity, may elect to comply with the following:

- a. Except as provided in 310 CMR 7.06(1)(c)1.b.; 310 CMR 7.06(1)(c)1.c. and 310 CMR 7.06(1)(c)1.f. below, visible emissions shall not exceed 15 percent opacity during any 6-minute block average.
- b. During periods of start-up, shutdown, soot blowing, and other specified operating conditions, visible emissions shall not exceed 27 percent

opacity during any 6-minute block average except that during one hour per calendar quarter, visible emissions may exceed 27 percent opacity for up to two 6-minute block averages during the hour.

- c. For a facility equipped with a visible emission monitor with a numeric data reduction system that can printout individual block averages, the Department may approve visible emissions during periods of startup, shutdown, soot blowing and other specified operating conditions to exceed 27 percent opacity for one-tenth of one percent (0.1%) of the total 6-minute block averages during any calendar quarter provided visible emissions do not exceed 60 percent opacity during any 6-minute block average. At no time can visible emissions exceed 27 percent opacity for more than two 6-minute block averages during a one-hour period and the one-hour average opacity shall not exceed 27 percent opacity during the one-hour period when a 6-minute block averages exceeds 27 percent opacity. The one-hour average shall be based on a 60-minute period beginning with the first 6-minute block average that exceeds 27 percent opacity.
- d. Compliance with visible emission limits shall be based upon a six-minute block average determined either by the procedures set forth in Method 9, (as described in 40 CFR Part 60, Appendix A-4), or by a visible emission monitor required under the Operating Permit;
- e. Before a facility may operate in accordance with 310 CMR 7.06(1)(c) the facility must notify the Department in writing of such intention, develop and submit to the Department a plan of good operating practices, and receive notification from the Department that the plan has been approved;
- f. Any facility operating pursuant to 310 CMR 7.06(1)(c) shall comply with a good operating practices plan as approved; and
- g. When notified in writing at least two business days prior to scheduled shakedown activities, testing, and calibrations for the purpose of improving boiler performance, the Department may allow exemptions to 310 CMR 7.06(1)(c)1.a., 310 CMR 7.06(1)(c)1.b. and 310 CMR 7.06(1)(c)1.c. Such notification shall include a brief description of the activity, and its start time and anticipated end time. The Department may allow a shorter notification period upon request. The Department may deny or limit the frequency of such activities.

2. Plan of Good Operating Practices.

The plan of good operating practices shall, at a minimum:

- a. Be developed with recommendations from third party combustion systems experts;
- b. Describe how the application of modern technology of control, and practices for operating and maintaining the equipment, will minimize visible emissions;
- c. Describe any operating conditions other than startup, shutdown and soot blowing during which the facility proposes to take advantage of the exception in 310 CMR 7.06(1)(c);
- d. Propose the duration and frequency of startup, shutdown, soot blowing and any other specified conditions;
- e. Document the need for visible emission limitations greater than 15 percent opacity during startup, shutdown, soot blowing and any other specified operating conditions;
- f. Propose visible emission limitations that the facility will comply with 310 CMR 7.06(1)(c)b. during startup, shutdown, soot blowing and other specified operating conditions;
- g. Describe all necessary corrective action procedures and include schedules for implementing such procedures; and
- h. Propose record keeping and monitoring procedures sufficient to enable the Department to determine that visible emissions comply with the plan.

3. Department Action.

- a. Upon completion of review, the Department shall either approve or disapprove the plan of good operating practices.
- b. The terms and conditions of an approved plan shall be incorporated into the facility's Operating Permit.
- c. A Department approval shall specify the visible emission limitations for each operating condition, (i.e. startup, shutdown, soot blowing and other specified operating conditions approved by the Department); and specify corresponding monitoring, record keeping and reporting requirements, and other conditions necessary to ensure compliance with the visible emission limitations contained in the approval.

- d. Modifications to those portions of an approved plan that are not incorporated into the facility's Operating Permit shall be maintained on-site and made available to Department representatives upon request. Modifications to an approved plan shall be submitted to the Department for review with the facility's Operating Permit renewal application. The Department may require modification of an approved plan.

4. Notice of Exceedances.

Any facility operating pursuant to a Department approval issued under this exception shall notify the Department of any exceedance of a visible emission limitation in the time and manner required by the relevant permit deviation provisions in the facility's Operating Permit.

7.24 U Organic Material Storage and Distribution

Amend 310 CMR 7.24(4)(4), 310 CMR 7.24(4)(a) and 310 CMR 7.24(4)(e) to read as follows:

(4) Motor Vehicle Fuel Tank Trucks.

(a) No person owning, leasing, operating or controlling a tank truck that carries motor vehicle fuel with a true vapor pressure equal to or greater than 1.5 psia under actual storage conditions and receives fuel from or delivers fuel to a facility subject to 310 CMR 7.24(2), or delivers fuel to a facility subject to the requirements of 310 CMR 7.24(2) or (3) shall cause, suffer, allow or permit the tank truck to be loaded or unloaded unless the tank truck:

- 1. was tested within the 12 preceding months, and

.....
(e) [Reserved]

