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DEPARTMENT OF ENVIRONMENTAL PROTECTION

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BUREAU OF AIR QUALITY CONTROL

**CHAPTER 134: REASONABLY AVAILABLE CONTROL TECHNOLOGY FOR FACILITIES THAT EMIT VOLATILE ORGANIC COMPOUNDS (VOC-RACT)**

**SUMMARY:** This regulation establishes Reasonably Available Control Technology (RACT) requirements for facilities that emit or have the potential to emit forty (40) tons or more per year of volatile organic compounds (VOC).

1. **Scope and Applicability**

A. **Affected facilities**

1. This regulation applies to any facility that emits or has the potential to emit forty (40) tons or more of VOC per calendar year.

In determining a facility's potential to emit VOC, total VOC emissions includes all VOC emissions occurring at the facility from VOC-emitting equipment or processes, except VOC emissions from equipment exempted in Section 1(C) of this Chapter. Emissions of VOC emitting activities from general maintenance shall be included to the extent possible.

2. Any facility subject to this Chapter that has potential to emit 40 tons per year or more but did not have actual emissions of forty (40) tons or more of VOC per calendar year since January 1, 1987, may be exempt from the requirements of Sections 3 and 4 of this Chapter under the requirements stated in Section 6 of this rule.

Each owner or operator of a facility that is initially exempt from the requirements of Sections 3 and 4 and then becomes subject to this Chapter under the applicability threshold provisions of Section 1(A) of this Chapter must notify the Department, in writing, of its applicability within thirty (30) days and must comply with the provisions and schedules specified in Section 3 with final compliance no longer than two (2) years after becoming subject to this Chapter.

3. Any facility subject to this Chapter with actual emissions greater than 40 tons per year but less than 50 tons VOC per calendar year actual emissions, since January 1, 1987, that elects to amend its license and accept license restrictions under the 40 tons of VOC per year potential to emit at the time of the RACT

applicability determination, may be exempt from the applicability of this Chapter.

4. As of the effective date of the 1995 amendment to this Chapter, the following VOC-emitting equipment or processes are no longer exempt from this rule: offset lithography, volatile organic liquid storage tanks, industrial wastewater, wood furniture, plastic parts coating (business machines), plastic parts coating (other), autobody refinishing, clean up solvents, ship building, aerospace coating and SOCOMI batch processes.

**NOTE:** The above VOC-emitting equipment and processes were previously exempt pursuant to Section 1(C)(3) of this rule as promulgated in 1993 because EPA had listed them as categories for which CTGs were under development pursuant to a list in Appendix E of the General Preamble of Title I (57 Federal Register 18077). The CTG's have not been developed and the CAAA requires states to adopt rules for these sources by November 15, 1994.

**B. Applicable Effective Dates.**

This regulation shall be applicable in all regions of the State of Maine as follows:

1. For affected facilities subject to Sections 1(A)(1) and 1(A)(2) of this rule, the applicable effective date is October 17, 1993, except
2. For affected facilities subject to Section 1(A)(4) of this rule, the applicable effective date is February 15, 1995, and

**C. Exempted VOC-emitting equipment or processes.**

The following VOC-emitting equipment or processes are exempted in determining a facility's total VOC emissions:

1. VOC-emitting equipment or processes that are subject to regulation under 40 CFR Part 61: National Emission Standards for Hazardous Air Pollutants (NESHAPS);
2. VOC-emitting equipment or processes that achieves Best Available Control Technology for VOC or the Lowest Achievable Emission Rate for VOC, as determined by the Department and imposed in an air emission license which contains specific emission limitations for all affected VOC-emitting equipment or processes and was issued pursuant to federally approved permitting regulations or regulations promulgated by the Environmental Protection Agency (EPA);
3. VOC-emitting equipment or processes that receive RACT, as determined by the Department in accordance with the following:

- a. Pursuant to a VOC control regulation approved by the EPA for which a Control Techniques Guideline (CTG) document was written, or
  - b. As contained in a federally enforceable air emission license issued by the Department prior to the applicable effective date;
4. VOC-emitting equipment from which the VOCs emitted are from the incomplete combustion of any material, except where material is heated, burned, combusted or otherwise chemically changed under oxygen-deficient conditions by design;
  5. Kraft Recovery Boilers;
  6. Indirect contact wood kilns and wood yards; and
  7. Paper machine area emissions which include paper machines, and the finishing and converting areas.

## 2. **Definitions**

**A. Control Techniques Guideline (CTG) document.** "Control Techniques Guideline (CTG) document" means a document describing information about air pollution control techniques for VOC written by EPA in accordance with Subsection 108 of the federal Clean Air Act.

**B. Pollution prevention.** "Pollution prevention" means source reduction through increased efficiency or conservation of raw materials, energy, water or other natural resources.

**C. VOC-emitting equipment or processes.** "VOC-emitting equipment or processes" means any equipment, buildings, or activities that result in the emission of VOC, either through a duct or stack or as fugitive emissions.

## 3. **VOC RACT Requirements.**

Unless exempted from these standards pursuant to Section 1(A)(2) of this Chapter, the owner or operator of any facility subject to this Chapter that emits or has the potential to emit forty (40) tons or more per calendar year of VOC must comply with one of the four VOC emission standards options and to the requirements of Section 3(B) VOC Emission Reduction Plan.

## A. VOC Emission Standards Options

1. **Option A: VOC Capture and Control Systems.** The owner or operator must install and operate a system to capture and control VOC emissions such that the total VOC emissions do not exceed, on a daily basis, fifteen (15) % of the uncontrolled daily VOC emissions.
2. **Option B: VOC Emission Reduction Program.** The owner or operator must implement a program to reduce VOC use and VOC emissions such that total VOC emissions do not exceed, on a daily basis, twenty (20)% of the total daily VOC emissions in calendar year 1990, calculated on either a mass of VOC per mass of solids applied basis if the VOC-emitting equipment or processes apply surface coating, or a mass of VOC per unit of production basis. If a facility was not in operation in 1990, the owner or operator must use the total VOC emissions in the next calendar year following 1990 in which the facility was in operation.
3. **Option C: VOC Alternative Reduction Program (Source Specific RACT Determination).** The owner or operator must submit to the Department within two (2) months from the applicable effective date of this Chapter, written notification that Alternative RACT options will be studied to examine the technical and economical feasibility of control device equipment and pollution prevention options capable of achieving VOC reductions equivalent to or greater than a VOC reduction achieved by Section 3(A)(1) Option A or 3(A)(2) Option B of this Chapter and must implement a program pursuant to Section 3(B)(3).
4. **Option D: RACT Control for Pulp and Paper Processes.** The owner or operator of the following pulp and paper processes shall submit written notification that RACT for the applicable processes is in place by May 31, 1995, as required by Section (B)(4) of this Chapter. RACT for the following sources, is as specified:
  - a. bleach plant emissions shall be controlled as required by Chapter 122.
  - b. waste water treatment plant air emissions shall be controlled through the operation of a waste water treatment system as required by effluent discharge license restrictions issued pursuant to each facility's National Pollution Discharge Elimination System (NPDES) discharge permit.
  - c. pulp stock washer system and pulp liquor storage tanks emissions shall be controlled in accordance with Best Practicable Treatment (BPT) pursuant to Chapters 115 or through a wet scrubber at sulfite mills.
  - d. digester system emissions, multiple evaporator systems, condensate

stripper systems, smelt tanks and lime kilns shall be controlled through incineration or wet scrubber systems in accordance with BPT pursuant to Chapter 124 or through a wet scrubber at sulfite mills.

e. MgO recovery boilers at sulfite mills shall be controlled through a three-stage venturi scrubber system.

## **B. VOC Emission Reduction Plan**

1. **Option A Plan Requirements (Capture and Control System).** The owner or operator of any facility subject to Section 3(A)(1) Option A of this Chapter must submit to the Department, no later than six (6) months from the applicable effective date of this Chapter for the sources originally subject to this rule, and no later than two (2) months for sources subject to this Chapter as a result of the 1995 amendment; a VOC emission reduction plan that includes the following:

- a. A complete application form.
- b. An inventory including identification of all VOC-emitting equipment or processes at the facility, including equipment exempted under Section 1(C) of this Chapter;
- c. The maximum potential to emit VOC for each identified VOC-emitting equipment or process not exempted under Section 1(C) of this Chapter;
- d. The amount of VOC emitted each day from each identified VOC-emitting equipment or process at the facility not exempted under Section 1(C) of this Chapter, based on actual daily totals or calculated as a daily average based on annual consumption and production rates;
- e. A description of the system to capture and control VOC emissions;
- f. Testing procedures, monitoring procedures, and recordkeeping and reporting procedures to demonstrate to the satisfaction of the Department and EPA compliance with this Chapter; and
- g. A schedule for implementation of the system to capture and control VOC emissions which extends no later than May 31, 1995, including a demonstration of compliance.

2. **Option B Plan Requirements (Emission Reduction Program)** The owner or operator of any facility subject to Section 3(A)(2) Option B, of this Chapter must submit to the Department, no later than six (6) months from the applicable effective date of this Chapter for the sources originally subject to this rule, and no

later than two (2) months from the applicable effective date for sources subject to this Chapter as a result of the 1995 amendment; a VOC emission reduction plan that includes items (a), (b), (c), (d), and (f), in Section 3(B)(1) of this Chapter, and the following:

- a. A calculation of the average amount of VOC emitted to the atmosphere each day in which the VOC-emitting equipment or process operated in calendar year 1990 stated in terms of either the mass of VOC emitted per mass of solids applied basis, or the mass of VOC emitted per unit of production basis. If a facility was not in operation in 1990, the calculation should be based on the next calendar year following 1990 in which the facility was in operation.
- b. A calculation of the average amount of VOC anticipated to be emitted to the atmosphere each day on which the VOC-emitting equipment or process operates upon implementation of the VOC emission reduction plan, stated in terms of either the mass of VOC emitted per mass of solids applied basis, or the mass of VOC emitted per unit of production basis;
- c. A schedule for implementation which extends no later than May 31, 1995, including a demonstration of compliance.

**3. Option C Plan Requirements (Alternative Feasibility Study)** The owner or operator of any facility subject to Section 3(A)(3) Option C, of this Chapter must:

- a. Submit to the Department for approval, no later than six (6) months from the applicable effective date of this Chapter for the sources originally subject to this rule, and no later than two (2) months from the applicable effective date for sources subject to this Chapter as a result of the 1995 amendment; a report detailing various options for the reduction of VOC emissions to the atmosphere. Each report must include at a minimum items (a), (b), (c), and (d), contained in Section 3(B)(1) of this Chapter and the following:
  - i. An examination of the technical and economic feasibility of available add-on VOC control device equipment and an examination of the technical and economic feasibility of changing to low VOC emitting processes (i.e. pollution prevention options) for all VOC emitting equipment;
  - ii. In the case of VOC emitting equipment which is also subject to a future MACT (Maximum Achievable Control Technology) compliance deadline pursuant to Section 112 of the Clean Air Act, a facility may annualize controls for that piece of equipment over

the period of time between May 31, 1995 and the MACT compliance date, to the extent that it is shown that the controls installed to meet the May 31, 1995 RACT deadline have no usefulness in meeting MACT requirements.

iii. The control or pollution prevention option selected, stating emission limits, and test methods to demonstrate compliance;

iv. The amount of VOC that is proposed to be reduced from each affected VOC-emitting equipment or process identified in Section 3(B)(1)(b) of this Chapter;

v. A schedule for implementation which extends no longer than May 31, 1995, including a demonstration of compliance;

vi. A means of assessing continuous compliance, including test methods, monitoring devices, recordkeeping and reporting requirements;

b. Submit to the Department other information that is deemed by the Department to be required to determine RACT within thirty (30) days of receipt of such request, unless otherwise provided by the Department.

c. Complete installation of process and/or control equipment or implementation of the VOC reduction plan as required by the Department Order issued under Section 5.

d. In no case shall the complete implementation of RACT be delayed beyond May 31, 1995.

e. Within six (6) months of receipt of written notification from the Department of an owner's or operator's failure to submit all information required in Section 3(B)(3), the provisions of Section 3(A)(1) or 3(A)(2) shall apply.

**4. Option D Plan Requirements (RACT Control for Pulp and Paper Processes)** The owner or operator of any facility subject to Section 3(A)(4) Option D, of this Chapter must submit to the Department, by May 31, 1995, a written notification that the applicable processes are meeting RACT.

**4. Testing Requirements and Methods.**

Within sixty (60) days of receipt of written notification by the Department, the owner or

operator of a facility subject to Section 3(A)(1), 3(A)(2), and 3(A)(3) VOC RACT Alternatives of this Chapter, must conduct emission tests to demonstrate compliance with this regulation. Within thirty (30) days of the completion of such tests, the owner or operator must submit to the Department the results of such testing.

**A. Option A Test Methods (Capture and Control System)** If the facility is subject to Section 3(A)(1) Option A of this Chapter, the owner or operator must demonstrate compliance using sampling and analytical procedures promulgated by the EPA and found at 40 CFR Part 60, Appendix A. When determined by the Department to be necessary, the owner or operator must document the effectiveness of a system to capture and control VOC using the procedures contained in 40 CFR Part 52, Subsection 52.741, Appendix B. If approved by the Department, other sampling and analytical procedures may be used. If a VOC recovery device is used, compliance may be based on a mass balance.

**B. Option B and C Test Methods (Emission Reduction Plan or Alternate Feasibility Study)** If the facility is subject to Sections 3(A)(2) Option B or 3(A)(3) Option C of this Chapter, the owner or operator must demonstrate compliance under the following conditions:

1. The owner or operator must use sampling and analytical procedures promulgated by the EPA and found at 40 CFR Part 60, Appendix A; or
2. The owner or operator must use a mass balance procedure based on known quantities of materials purchased, stored in inventory, and/or reclaimed, as approved by the Department and EPA; or
3. The owner or operator must use other procedures deemed appropriate by the Department and EPA; and
4. When determined by the Department to be necessary, the owner or operator must document the effectiveness of a system to capture and control VOC using the procedures contained in 40 CFR Part 52, Subsection 52.741, Appendix B. If approved by the Department, other sampling and analytical procedures may be used.

5. **Approval Process for Department Order**

**A. Compliance Determination.** After receipt of a VOC Emission Reduction Plan submitted pursuant to Section 3(B)(1), 3(B)(2), and 3(B)(3) of this Chapter, the Department shall submit to the owner or operator written notification stating whether the plan is sufficient to allow the Department to determine if the facility has met the requirements of Section 3(A)(1), 3(A)(2), and 3(A)(3) and 3(B)(1), 3(B)(2), and 3(B)(3). If the Department deems the VOC emission reduction plan to be insufficient to determine



if the facility has met the requirements of Section 3(B)(1), 3(B)(2), and 3(B)(3), the Department shall request from the owner or operator the appropriate information.

**B. Draft Department Order Format.** After receipt of a VOC Emission Reduction Plan, and all other information deemed by the Department necessary to determine if the facility has met the requirements of Section 3(A)(1), 3(A)(2), and 3(A)(3) and 3(B)(1), 3(B)(2), and 3(B)(3) of this Chapter, the Department shall send to the owner or operator, and to EPA for those facilities that choose Option C, a proposed draft Department Order containing the following information:

1. An inventory of all VOC-emitting equipment or processes, not exempted under Section 1(C ) of this Chapter;
2. Emission limits for all VOC-emitting equipment or processes, not exempted under Section 1(C ) of this Chapter;
3. A schedule requiring compliance with the emission limits;
4. Procedures for determining initial compliance with the emission limits;
5. Procedures for assessing continuous compliance with the emission limits;
6. Recordkeeping requirements; and
7. Reporting requirements.

**C. Public Notification Requirements for Draft Department Order.** The owner or operator of each facility that elects Option C of Section 3 must notify the public, by advertisement in a newspaper of general circulation in the region in which the facility is located, at least thirty (30) calendar days prior to the date upon which the public comment period ends. The notice must announce availability of the VOC emission reduction plan, the Department's preliminary determination in the form of a draft order, as well as the opportunity for submission of written public comment. The notice must also announce the date, place and time a public meeting will be held upon written request. If the Department's Augusta office receives a written request for a public meeting within fifteen (15) calendar days from the date upon which the notice is published, a public meeting must be held on the date and time as scheduled in the public notice.

**D. Final Department Order** The Department may issue to the owner or operator a final Department Order. Orders issued pursuant to Option C shall be submitted to EPA for approval as a SIP revision.

6. **Recordkeeping and Reporting Requirements for Facilities Exempt from Sections 3**

**and 4**

A. Pursuant to Section 1(A)(2) of this chapter, any facility subject to this Chapter that has the potential to emit but did not have actual emissions of forty (40) tons or more of VOC per calendar year since January 1, 1987, may be exempt from the requirements of Sections 3 and 4 of this rule under the following conditions:

1. The owner or operator submits to the Department, within two (2) months from the applicable effective date of this Chapter, a report that:
  - a. documents the actual emissions of VOC emitted from each VOC-emitting equipment or process in each calendar year beginning January 1, 1987, and
  - b. describes the design and operation of the affected VOC-emitting equipment or process, including equipment exempted under Section 1(C) of this Chapter;
2. The owner or operator shall maintain annual records documenting the actual emissions of VOC emitted each year from each VOC-emitting equipment or process not exempted under Section 1(C) of this Chapter, .

**BASIS STATEMENT :** In the State of Maine, nine counties are classified as nonattainment for the federal ozone air quality standard. Volatile organic compounds (VOC), emitted by various industrial processes, contribute to the formation of ozone. This regulation will reduce the VOC emitted by facilities that have the potential to emit forty (40) tons or more of VOC per calendar year. Under the Clean Air Act Amendments of 1990, the State of Maine must submit plans to control, by May 31, 1995, VOC from all major stationary sources not covered by a Control Techniques Guideline (CTG) document.

In addition to the above Basis Statement, the Department has filed with the Secretary of State the response to representative comments received during the comment period.

**BASIS STATEMENT FOR AMENDMENT OF FEBRUARY 8, 1995 :** The 1995 amendments to this rule reflect changes that clarify the applicability thresholds of facilities subject to recordkeeping and reporting requirements. The amendments also correct a conflict with the Clean Air Act Amendments of 1990, regarding the implementation date for certain source categories. The amendments incorporate an evaluation of annualized costs of controls for any source that will also be subject to future federal MACT requirements.

In addition, the Department has incorporated other public comments and filed a Supplemental Basis Statement Response to Comment with the Secretary of State.

**AUTHORITY:** 38 MRS § 585-A

**EFFECTIVE DATE:** October 17, 1993  
Amended: February 15, 1995