

PART E - SOURCE EMISSION AND OPERATING STANDARDS

§2105.06 MAJOR SOURCES OF NITROGEN OXIDES AND VOLATILE ORGANIC COMPOUNDS

- a. **Applicability.** This Section applies to all major sources of nitrogen oxides or VOCs in existence as of November 1, 1992, for which no applicable emission limitations have been established by regulations under this Article.
- b. **General.**
 1. The owner or operator of each source subject to this Section shall have, by on or before April 30, 1993, submitted in writing to the Department, for each such source:
 - A. A description of the source;
 - B. The annual potential uncontrolled emissions of nitrogen oxides and VOCs;
 - C. The annual potential emissions of nitrogen oxides and VOCs;
 - D. The actual emissions of nitrogen oxides and VOCs for the calendar year 1992; and
 - E. A detailed description of the methods used to determine these emissions.
 2. The owner or operator of each source subject to this Section shall have, by on or before September 1, 1993, submitted in writing to the Department, for each such source, a proposal for what constitutes reasonably available control technology (RACT) for each such source. Each RACT proposal shall include, at a minimum:
 - A. The technical and economic support documentation for such proposal; and
 - B. The schedule for implementing such proposal as expeditiously as practicable but by not later than the deadline set forth under Paragraph 3 below.
 3. On and after the deadline set forth in a schedule approved by the Department, but not later than either May 31, 1995, or such other deadline established by the Administrator, whichever is later, no person shall operate, or allow to be operated, any source subject to this Section unless there is implemented and operating at such source RACT either as set forth in Subsections d and f of this Section or as expressly approved in writing by the Department pursuant to this Section.
 4. Following the implementation of the RACT requirements under this Section, the owner or operator of a combustion unit with a rated heat input of:
 - A. 250 million BTUs per hour or greater and subject to Section 2108.03.b of this Article shall, through the use of a Department approved continuous emission monitoring system, determine the maximum possible rate of emissions of NO_x from the combustion unit, in pounds per hour, and report such monitoring and determination to the Department, in writing, in a format acceptable to the Department.
 - B. Greater than 100 million BTUs per hour and not subject to Section 2108.03.b of this

Article shall, through the use of a Department approved periodic source testing or predictive modeling program or continuous emission monitoring system, determine the maximum possible rate of emissions of NO_x from the combustion unit, in pounds per hour, and report such monitoring and determination to the Department, in writing, in a format acceptable to the Department.

5. The maximum possible rate of emissions from the monitoring and reporting required under Paragraph 4 above shall consist of the potential emissions after full implementation of all RACT technology and conditions, but not less than actual emissions, and shall constitute the RACT emission limitation for the source which shall immediately be proposed as a federally enforceable permit condition for such source.

c. **Federal Approval.**

1. For all proposals under this Section, the Department shall submit to the EPA for approval each approved RACT proposal as a proposed revision to Allegheny County's portion of the SIP.
2. The owner or operator of each source subject to this Section shall bear the costs of providing public notice and stenographic transcripts of any public hearings held with respect to the proposal and, upon the request of the Department, shall obtain facilities for such public hearings.

d. **Presumptive RACT Requirements for Certain NO_x Sources.** For each source of NO_x emissions subject to this Section and specified in this Subsection, compliance with the following requirements shall constitute RACT for such source:

1. For a coal-fired combustion unit with a rated heat input equal to or greater than 100 million BTUs/hour, presumptive RACT shall be the installation and operation of low NO_x burners with separated overfire air.
2. For a combustion unit with a rated heat input equal to or greater than 20 million BTUs/hour and less than 50 million BTUs/hour presumptive RACT shall be the performance of an annual adjustment or tuneup on the combustion process, to include, at a minimum:
 - A. Inspection, adjustment, cleaning, or replacement of fuel-burning equipment, including the burners and moving parts necessary for proper operation as specified by the manufacturer;
 - B. Inspection of the flame pattern or characteristics and adjustments necessary to minimize total emissions of NO_x, and to the extent practicable minimize emissions of CO; and
 - C. Inspection of the air-to-fuel ratio control system and adjustments necessary to ensure proper calibration and operation as specified by the manufacturer.
3. For combustion units subject to Paragraph d.2 of this Section, any person who operates, or allows to be operated, such adjusted equipment shall record each adjustment conducted under the procedures in Paragraph d.2 in a permanently bound log book, or other method approved by the Department, which contains, at a minimum:
 - A. The date of the adjustment procedure;
 - B. The name of the service company and technicians;

- C. The operating rate or load after adjustment;
 - D. The CO and NO_x emission rates after adjustment;
 - E. The excess oxygen rate after adjustment; and
 - F. Other information required by the applicable operating permit.
4. For oil, gas, or combination oil/gas units, any person who operates, or allows to be operated, such units shall maintain records including a certification from the fuel supplier of the type of fuel and for each shipment of distillate oils number 1 or 2, a certification that the fuel complies with ASTM D396-78 "Standard Specifications for Fuel Oils". For residual oils, minimum recordkeeping includes a certification from the fuel supplier of the nitrogen content of the fuel, and identification of the sampling method and sampling protocol.
 5. For oil and gas and combination oil/gas fired units subject to Paragraph d.2 of this Section, any person who operates, or allows to be operated, such units shall make the annual adjustment in accordance with the EPA document "Combustion Efficiency Optimization Manual for Operators of Oil and Gas-fired Boilers," September 1983, (EPA-340/1-83-023) or equivalent procedures approved in writing by the Department.
 6. For the following source types, presumptive RACT emission limitations are the installation, maintenance, and operation of the source in accordance with manufacturer's specifications:
 - A. Boilers and other combustion sources with individual rated gross heat inputs less than 20 million BTUs/hour of operation;
 - B. Combustion turbines with individual heat input rates less than 25 million BTUs/hour which are used for natural gas distribution;
 - C. Internal combustion engines rated at less than 500 bhp (gross) which are set and maintaining four degrees retarded relative to standard timing;
 - D. Incinerators or thermal/catalytic oxidizers used primarily for air pollution control;
 - E. Any fuel-burning equipment, gas turbine, or internal combustion engine with an annual capacity factor of less than 5%, or an emergency standby engine operating less than 500 hours in a consecutive 12-month period;
 - F. Sources which have been approved as meeting LAER for NO_x emissions since November 15, 1990, with federally enforceable emission limitations; and
 - G. Sources which have been approved as meeting BACT for NO_x emissions since November 15, 1990, with federally enforceable emission limitations, although these sources shall still meet any more stringent category-wide RACT emission limitations promulgated by the EPA or under this Article.
- e. **NO_x RACT Emission Averaging General Requirements.**
1. The owners and operators of NO_x emitting sources subject to this Section may submit a written proposal to the Department as part of an application for operating permits to average emissions to meet RACT requirements of this Section. Emission averaging which complies with applicable

EPA requirements and is approved as a SIP revision, and which meets the criteria in Paragraph e.2 of this Section and is approved by the Department shall satisfy the requirements of this Section. The Department shall approve, deny, or modify each averaging proposal.

2. The Department shall not approve an emission averaging proposal unless the proposal demonstrates compliance with the following requirements to the Department's satisfaction:
 - A. The proposal shall demonstrate that the aggregate emissions achieved through the RACT averaging proposal are less than the sum of emissions that would be achieved by complying with the RACT requirement on a source specific basis.
 - B. The averaging proposal shall include a tons per year emission cap and an emission rate such as pounds/million BTUs for each source in the averaging proposal that provide for verification and enforcement of the averaging proposal.
 - C. Emission reductions attributed to the shutdown or curtailment of operation of a source may not be included in an averaging proposal.
 - D. The proposal shall demonstrate that the ambient air quality impact resulting from implementation of the averaging proposal is less than or equivalent to the impact from each source complying with the RACT requirements in this Section individually. The demonstration shall consider the area of emissions impact and the periods of time of emissions impact except as follows:
 - i. For emission averaging involving sources located within the same nonattainment area, the demonstration shall only consider the periods of time of emissions impact.
 - ii. For emission averaging involving sources not located within the same nonattainment area which are located less than 125 miles from another source involved in the averaging proposal, the demonstration shall only consider the periods of time of emissions impact.
 - E. The proposal shall provide that each source involved in the averaging proposal shall be required to use continuous emission monitors and record emissions following the requirements of Parts G and H of this Article. The participating sources are required to establish telemetry links between the sources and to provide real time emission data to all sources affected by the averaging proposal. For an averaging proposal involving sources on contiguous property, the Department may approve alternate requirements provided the proposal demonstrates that the alternate methodologies are credible, workable, replicable, and fully enforceable and accurately quantify emissions from all sources participating in the averaging program.
3. An averaging proposal shall not be implemented until approved by the EPA as a SIP revision.
4. Every source involved in the approved averaging proposal is in violation of this Article when a source subject to the averaging proposal exceeds an emission limitation or averaging requirement established under this Section.
5. Additional emission reductions required under this Article, the Clean Air Act, the Air Pollution Control Act, or any regulations promulgated under the Clean Air Act or Air Pollution Control Act shall be in addition to and not a substitute for the emission reductions required by the

averaging proposal.

- f. **Presumptive RACT Requirements for Certain VOC Sources.** For each source of VOC emissions subject to this Section and specified in this Subsection, the installation, maintenance, and operation of the source in accordance with manufacturer's specifications shall constitute RACT for such source:
1. Sources which have been approved as meeting LAER for VOC emissions since November 15, 1990, with federally enforceable emission limitations; and
 2. Sources which have been approved as meeting BACT for VOC emissions since November 15, 1990, with federally enforceable emission limitations, although these sources shall still meet any more stringent category-wide RACT emission limitations promulgated by the EPA or under this Article.
- g. **Recordkeeping.** Any person who operates, or allows to be operated, any source of nitrogen oxides or VOCs subject to this Section shall keep records to demonstrate compliance with the requirements of this Section.
1. Such records shall provide sufficient data and calculations to clearly demonstrate that the requirements of this Section are met.
 2. Data or information required to determine compliance shall be recorded and maintained in a time frame consistent with the averaging period of the requirement.
 3. The records shall be retained for at least two years and shall be made available to the Department on request.
 4. An owner or operator claiming that a source is exempt from the RACT requirements of this Section, based on the source's potential to emit, shall maintain records that clearly demonstrate to the Department that the source is not subject to the requirements of this Section.
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