

Chapter NR 439

REPORTING, RECORDKEEPING, TESTING, INSPECTION AND DETERMINATION OF COMPLIANCE REQUIREMENTS

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NR 439.01 Applicability; purpose. (1) **APPLICABILITY.** This chapter applies to all air contaminant sources and to all owners or operators of an air contaminant source.

(2) **PURPOSE.** This chapter is adopted under ss. 144.31, 144.34, 144.38 and 144.349, Stats., to establish general reporting, recordkeeping, testing, inspection and demonstration of compliance requirements for all air contaminant sources. Individual chapters of chs. NR 400 to 499, permits or orders may contain additional requirements.

History: Cr. Register, September, 1986, No. 369, eff. 10-1-86.

NR 439.02 Definitions. In addition to the definitions contained in this section, the definitions contained in ch. NR 400 also apply to the terms used in this chapter.

(1) "Audit samples" means glass vials, gas cylinders or other materials which contain a known concentration of a pollutant that may be used for the purpose of quality assurance of certain laboratory analyses required for the determination of compliance.

(2) "Baghouse" means a control device in which dust-laden gases are forced through a fabric bag and particulates are retained by direct interception, inertial impaction, diffusion, electrostatic attraction, or gravitational settling.

(3) "Compliance emission test" means a performance test required by the department or conducted in cooperation with the department involving the measurement of air contaminants to determine compliance with an emission limitation.

(4) "Condensable particulate matter" means any material, except uncombined water, that may not be collected in the front half of the particulate emission sampling train but which exists as a solid or liquid at standard conditions.

(5) "Continuous monitoring system" means the total equipment used to sample, to analyze, and to provide a permanent record of emissions or process parameters.

(6) "Emission sampling train" means the apparatus used to collect a representative sample in the performance of an emission test.

(7) "Fume incinerator" means a device which destroys organic compounds by combustion. Such devices may include direct flame incinerators, catalytic incinerators, and process boilers.

(8) "Mechanical collector" means a broad class of particulate control devices that separate dust from a gas stream by a combination of mechanical forces which include centrifugal, gravitational, and inertial. Such devices may include settling chambers, cyclones, and multicyclone collectors.

(9) "Monitoring device" means any instrument used to measure the operating parameters of a control device or process.

(10) "Noncriteria pollutant" means any air contaminant for which no ambient air quality standard is set in ch. NR 404.

(11) "Sampling port" means an opening through the wall of a stack or duct that is used to provide access for extraction of a sample.

(12) "Sootblowing" means the cleaning of heat exchanger surfaces by the use of steam or air to dislodge accumulated material.

History: Cr. Register, September, 1986, No. 369, eff. 10-1-86; am. (intro.), cr. (1) to (12), Register, September, 1987, No. 381, eff. 10-1-87.

NR 439.03 Reporting. (1) When requested by the department, a person shall furnish to the department information to locate and classify air contaminant sources according to the type, level, duration, frequency and other characteristics of emissions and such other information as may be necessary. The information shall be sufficient to evaluate the source's effect on air quality and compliance with chs. NR 400 to 499.

(2) The owner or operator of a source requested to submit information under sub. (1) may subsequently be required to submit annually, or at such other intervals as specified by the department, reports detailing any changes in the nature of the source since the previous report and the total quantities of the air contaminants emitted.

(3) When requested by the department, the owner or operator of a source shall submit to the department, within 60 days, a standard operating procedure which includes a detailed description of process and emission control equipment startup, operating and shut-down procedures designed to maintain compliance with emission limitations.

(4) (a) The owner or operator of a source shall report to the department the next business day following the onset, any malfunction or other unscheduled event at the source, not reported in advance to the department, which causes or may cause any emission limitation, including the visual emission limit, to be exceeded with the following exceptions:

1. Hazardous air spills which require immediate notice to the department under s. NR 445.05.

2. Exceedances of visible emission limitations detected by a continuous emission monitor which are less than 10% opacity above the opacity limit for a period not to exceed 30 minutes. These exceedances shall be

reported in the quarterly excess emissions reports required under s. NR 439.07 (3) (h).

(b) The person shall report the cause and duration of the exceedance, the period of time considered necessary for correction, and measures taken to minimize emissions during the period.

(5) The owner or operator of a source required to operate a continuous emission monitoring system or monitoring device shall notify the department of any shutdown, breakdown, or malfunction of such device or system which is anticipated to continue in excess of one week. Notice shall occur at the next business day following the onset of the shutdown, breakdown or malfunction.

(6) The owner or operator of a source shall report to the department in advance schedules for planned shutdown and startup of air pollution control equipment and the measures to be taken to minimize the down time of the control equipment while the source is operating. Scheduled maintenance or any other scheduled event, including startup, shutdown or sootblowing procedures which have been approved by the department under s. NR 436.03 (2) (b), which causes an emission limitation to be exceeded shall also be reported in advance to the department. Advance reporting under this subsection does not relieve any person from the duty to comply with any applicable emission limitation.

History: Renum. from NR 154.06 (2) and am. Register, September, 1986, No. 369, eff. 10-1-86; renum. from NR 439.025, r. (4) and (5), renum. and am. (1) to (3), (6) to (8), Register, September, 1987, No. 381, eff. 10-1-87.

NR 439.04 Recordkeeping. (1) The owner or operator of an air contaminant source to which chs. NR 400 to 499 apply shall maintain the following records:

(a) Records of all testing and monitoring conducted under chs. NR 400 to 499;

(b) Records detailing all malfunctions which cause any applicable emission limitation to be exceeded, including logs to document the implementation of the plan required by s. NR 439.11;

(c) Records detailing all activities specified in any compliance schedule approved by the department under chs. NR 400 to 499; and

(d) Any other records relating to the emission of air contaminants which may be requested in writing by the department.

(2) Copies of all records required under sub. (1) shall be retained by the owner or operator for a period of 3 years or for such other period as may be specified by the department.

History: Renum. from NR 154.06 (3), and am. Register, September, 1986, No. 369, eff. 10-1-86; renum. from NR 439.03 and am. Register, September, 1987, No. 381, eff. 10-1-87.

NR 439.05 Access to records. No person may deny information or access to records relating to emissions to an authorized representative of the department.

History: Renum. from NR 154.06 (4) and am. Register, September, 1986, No. 369, eff. 10-1-86; renum. from NR 439.04 and am. Register, September, 1987, No. 381, eff. 10-1-87.

NR 439.05 Methods and procedures for source testing. **History:** Renum. from NR 154.06 (5) and am. Register, September, 1986, No. 369, eff. 10-1-86; r. Register, September, 1987, No. 381, eff. 10-1-87.

NR 439.06 Methods and procedures for determining compliance with emission limitations. When a test is required by the department the owner or operator of a source shall use the applicable test methods listed in this section, and ss. NR 439.07 and 439.12, to determine compliance with emission limitations, unless other methods are approved, or a specific method is required, in writing, by the department. The test methods shall include quality control and quality assurance procedures and the data reporting format which are specified and approved by the department for collection, analysis, processing and reporting of compliance monitoring data. Notwithstanding the compliance demonstration methods which the owner or operator of a source is authorized to use under this chapter, the department may use any relevant information or appropriate method to determine a source's compliance with applicable emission limitations.

(1) **NONFUGITIVE PARTICULATE EMISSIONS.** The owner or operator of a source shall use Method 5, 5A, 5D or 17 in 40 C.F.R. pt. 60, Appendix A, incorporated by reference in ch. NR 484, to determine compliance with a nonfugitive particulate emission limitation.

(2) **SULFUR DIOXIDE EMISSIONS.** The owner or operator of a source shall use one or more of the following methods to determine compliance with a sulfur dioxide emission limitation:

(a) Method 6, 6A, 6B, 6C or 8 in 40 C.F.R. pt. 60, Appendix A, incorporated by reference in ch. NR 484, or

(b) Install, calibrate, maintain and operate a continuous emission monitor that meets the applicable performance specifications in 40 C.F.R. pt. 60, Appendix B, incorporated by reference in ch. NR 484 and follow quality control and quality assurance procedures for the monitor which have been submitted by the owner or operator of the source and approved by the department; or

(c) Perform periodic fuel sampling and analysis of fossil and nonfossil fuels using the methods and procedures specified in s. NR 439.07 (2).

(3) **ORGANIC COMPOUND EMISSIONS.** The owner or operator of a source shall use the following methods to determine compliance with an organic compound emission limitation:

(a) To determine organic compound emission concentrations or emission rates, Method 18, 25, 25A or 25B in 40 C.F.R. pt. 60, Appendix A, incorporated by reference in ch. NR 484.

(b) To determine the organic solvent content, the volume of solids, the weight of solids, the water content, and the density of surface coatings and inks, Method 24 or 24A, in 40 C.F.R. pt. 60, Appendix A, incorporated by reference in ch. NR 484.

(c) To detect organic compound emission leaks, Method 21, in 40 C.F.R. pt. 60, Appendix A, incorporated by reference in ch. NR 484.

(d) To verify the vapor tightness of gasoline delivery tanks, the method outlined in s. NR 420.04 (4).

(e) To determine compliance with an internal offset the equations in s. NR 425.04 (3).

(f) To determine the transfer efficiency of surface coating equipment, methods approved by the department.

(4) **CARBON MONOXIDE EMISSIONS.** The owner or operator of a source shall use one of the following methods to determine compliance with a carbon monoxide emission limitation:

(a) Method 10, in 40 C.F.R. pt. 60, Appendix A, incorporated by reference in ch. NR 484, or

(b) Install, calibrate, maintain and operate a continuous emission monitor that meets the applicable performance specifications in 40 C.F.R. pt. 60, Appendix B, incorporated by reference in ch. NR 484 and follow quality control and quality assurance procedures for the monitor which have been submitted by the owner or operator of the source and approved by the department.

(5) **LEAD EMISSIONS.** The owner or operator of a source shall use Method 12 in 40 C.F.R. pt. 60, Appendix A, incorporated by reference in ch. NR 484 to determine compliance with a lead emission limitation.

(6) **NITROGEN COMPOUND EMISSIONS.** The owner or operator of a source shall use one of the following methods to determine compliance with a nitrogen compound emission limitation:

(a) Method 7, 7A, 7B, 7C, 7D and 7E, in 40 C.F.R. pt. 60, Appendix A, incorporated by reference in ch. NR 484, or

(b) Install, calibrate, maintain and operate a continuous emission monitor that meets the applicable performance specifications in 40 C.F.R. pt. 60, Appendix B, incorporated by reference in ch. NR 484 and follow quality control and quality assurance procedures for the monitor which have been submitted by the owner or operator of the source and approved by the department.

(7) **TOTAL REDUCED SULFUR EMISSIONS.** The owner or operator of a source shall use one of the following methods to determine compliance with a total reduced sulfur emission limitation:

(a) Method 16 or 16A, in 40 C.F.R. pt. 60, Appendix A, incorporated by reference in ch. NR 484, or

(b) Install, calibrate, maintain and operate a continuous emission monitor that meets the applicable performance specifications in 40 C.F.R. pt. 60, Appendix B, incorporated by reference in ch. NR 484 and follow quality control and quality assurance procedures for the monitor which have been submitted by the owner or operator of the source and approved by the department.

(8) **NONCRITERIA POLLUTANT EMISSIONS.** The owner or operator of a source shall use methods and procedures approved, in writing, by the department to determine compliance with an emission limitation for an air contaminant not listed in subs. (1) to (7).

(9) **METHODS AND PROCEDURES FOR VISIBLE EMISSIONS.** (a) The owner or operator of a source shall use one of the following methods to determine compliance with a visible emission limitation:

1. Method 9 in 40 C.F.R. pt. 60, Appendix A, incorporated by reference in ch. NR 484, or

2. Install, calibrate, maintain, and operate a continuous emission monitor that meets the performance specifications in 40 C.F.R. pt. 60, Appendix B, incorporated by reference in ch. NR 484.

(b) The owner or operator of a source shall use Method 22, in 40 C.F.R. pt. 60, Appendix A, incorporated by reference in ch. NR 484, to determine compliance with a no visible emission requirement.

History: Cr. Register, September, 1987, No. 381, eff. 10-1-87.

NR 439.07 Methods and procedures for performing compliance stack emission testing, fuel sampling and analysis and continuous emission monitoring. The owner or operator of a source shall comply with all applicable methods and procedures listed in this section.

(1) **METHODS AND PROCEDURES FOR EMISSION TESTING.** (a) *General.* All emission tests conducted for the purpose of determining compliance with an emission limitation shall be performed according to the test methods established in 40 C.F.R. pt. 60, Appendix A, incorporated by reference in ch. NR 484 or according to other test methods approved in writing by the department. All emission testing shall be performed following the methods and procedures in this section. Unless the department requires or approves the performance of a test at less than capacity, all compliance emission tests shall be performed with the equipment operating at capacity or as close to capacity as practical.

(b) *Test plan.* The department shall be notified in writing at least 20 business days in advance of a compliance emission test to provide the department an opportunity to have a representative present to witness the testing procedures. The notice shall provide a test plan which includes, but need not be limited to, the following:

1. A description of the sampling equipment and the test methods and procedures to be used.
2. A description of the process to be tested.
3. A description of the process or operation variables which affect the air contaminant source's emissions.
4. The date and starting time of the test.
5. A description of the number and location of the sampling ports and sampling points including a sketch showing the distance of the sampling ports from the nearest upstream and downstream flow disturbances and the stack dimensions.
6. A statement indicating the production rate and the operating conditions at which the test will be conducted.

(c) *Test plan evaluation.* In evaluating the test plan, the department shall respond to the source owner or operator within 10 business days of receipt of the plan and may require the following:

1. A pre-test conference with the owner or operator of the source, the tester, and the department to discuss any deficiencies in the plan or settle any test procedure questions the department, the tester, or the source owner or operator might have.

(a) Identification of the individual responsible for inspecting, maintaining, and repairing the air pollution control equipment.

(b) The maximum intervals for inspection and routine maintenance.

(c) A description of the items or conditions that will be checked.

(d) A listing of materials and spare parts that will be maintained in inventory.

(e) An identification of the source and air pollution control equipment operation variables that will be monitored in order to detect a malfunction or failure; the correct operating range of these variables; and a description of the method of monitoring or surveillance procedures, or a reference to specific pages containing this information in manuals or other documents kept by the owner or operator. Where appropriate, the following operation variables shall be monitored for the specified air pollution control equipment:

1. Baghouses - pressure drop across the baghouse.
2. Mechanical collectors - pressure drop across the collector.
3. Electrostatic precipitators - primary and secondary voltage, primary and secondary current, and sparking rate.
4. Fume incinerator - temperature in the primary chamber and the afterburner.
5. Wet scrubber for particulates - pressure drop across the scrubber and demister, scrubber recycle liquor flow, pump discharge pressure, and pump motor current.
6. Absorption equipment for gases - pressure drop across the absorber and demister.
7. Adsorption equipment - pressure drop across adsorber and prefilter, and temperature within the adsorber.

(f) A description of the corrective procedures that will be taken in the event of a malfunction or failure, which results in the exceedance of the applicable emission limitation, in order to achieve and maintain compliance with the applicable emission limitations as expeditiously as possible but not longer than the time necessary to discontinue operation of the source consistent with safe operating procedures.

(g) A description of the activities and maximum intervals for inspection and routine maintenance of instrumentation installed and operated to monitor the operation of air pollution control equipment required in par. (e).

(h) Such other information as the department may deem pertinent.

(2) The department may order any owner or operator to submit the plan required by sub. (1) for review and approval. The department may amend the plan if deemed necessary for malfunction prevention or the reduction of excess emissions during malfunctions.

(3) No owner or operator may fail to carry out a plan required under sub. (1) or as amended under sub. (2).

(4) All air pollution control equipment shall be operated and maintained in conformance with good engineering practices to minimize the possibility for the exceedance of any emission limitations.

History: Renum. from NR 154.06 (9) and am. Register, September, 1986, No. 369, eff. 10-1-86; renun. from NR 439.09 and am. Register, September, 1987, No. 381, eff. 10-1-87.

NR 439.12 Compliance determination requirements. (1) **COMPLIANCE EMISSION TESTING.** (a) *Applicability and general requirements.* 1. The owner or operator of a direct stationary source specified in par. (b) which has been issued an air pollution control permit under s. 144.391, Stats., shall comply with the compliance emission testing requirements of this subsection.

2. Nothing in this subsection may be construed as preventing the department from requiring the performance of additional compliance emission tests on the affected sources or requiring tests for pollutants and sources other than those specified in this subsection.

3. All compliance emission tests under this subsection shall be performed according to s. NR 439.07 and chs. NR 445 to 449.

(b) *Affected emission points and air contaminants requiring testing.* 1. Except as provided in par. (d), the owner or operator of a source identified in this subdivision, with an emission point that has allowable emissions of particulate matter, sulfur dioxide, or organic compounds of 100 tons or more per year or allowable emissions of total reduced sulfur of 25 tons or more per year shall perform compliance emission testing according to the testing schedules in par. (c).

a. Compliance emission testing for particulate matter is required for an emission point subject to an emission limitation in s. NR 415.04 (2) (b) 2. or (c) 1., 415.05, 415.06, 415.07 or 415.08 (3) or (6).

b. Compliance emission testing for sulfur dioxide is required for an emission point subject to an emission limitation in s. NR 417.03, 417.07 (2), (3), (4), or (5), 418.025, 418.03 or 418.04.

c. Compliance emission testing for total reduced sulfur is required for an emission point subject to an emission limitation in s. NR 417.06.

d. Compliance emission testing for organic compounds is required for an emission point subject to an emission limitation in s. NR 421.03, 421.04, 422.05, 422.06, 422.07, 422.08, 422.09, 422.10, 422.11, 422.12, 422.13, 422.14, 422.15, 423.05, or 424.03 which uses a control device to achieve compliance with the applicable requirements. This test shall include a determination of the overall control efficiency of the control device on the affected emission point.

2. The owner or operator of a source, subject to the requirements of ch. NR 427 or chs. NR 445 to 449, shall perform compliance emission testing for lead, mercury, beryllium or vinyl chloride according to the testing schedules in par. (c).

a. Compliance emission testing for mercury is required for an emission point identified in s. NR 446.04 (1), (2) or (3).

b. Compliance emission testing for beryllium is required for an emission point identified in s. NR 448.03 (1).

d. Oxygen or carbon dioxide. The owner or operator of a fossil fuel-fired steam generator where measurement of oxygen or carbon dioxide in the flue gas is required to convert either sulfur dioxide or nitrogen oxides continuous emission monitoring data, or both, to units of the applicable emission limitation shall install, calibrate, operate and maintain a continuous monitoring system for the measurement of percent oxygen or carbon dioxide which meets the performance specifications of par. (f).

2. Nitric acid plants. The owner or operator of a nitric acid plant of greater than 300 tons per day production capacity, expressed as 100% acid, which is located in a nonattainment area for nitrogen oxides shall install, calibrate, maintain and operate a continuous monitoring system for the measurement of nitrogen oxides which meets the performance specifications of par. (f) for each nitric acid producing unit within the plant.

3. Sulfuric acid plants. The owner or operator of a sulfuric acid plant of greater than 300 tons per day production capacity, expressed as 100% acid, shall install, calibrate, maintain and operate a continuous monitoring system for the measurement of sulfur dioxide which meets the performance specifications of par. (f) for each sulfuric acid producing unit within the plant.

4. Fluid bed catalytic cracking unit catalyst regenerators at petroleum refineries. The owner or operator of a catalyst regenerator for fluid catalytic cracking units of greater than 20,000 barrels per day fresh feed capacity shall install, calibrate, maintain and operate a continuous monitoring system for the measurement of opacity which meets the performance specifications of par. (f).

(f) *Performance specification.* The owner or operator of monitoring equipment installed to comply with this subsection shall install, calibrate, maintain and operate the continuous emission monitor in accordance with the performance specifications in 40 C.F.R. pt. 60, Appendix B, incorporated by reference in ch. NR 484 and the requirements in s. NR 439.07 (3).

History: Cr. Register, September, 1987, No. 381, eff. 10-1-87.