

(a) Perform compliance emission testing following Method 6, 6A, 6B, 6C or 8 in 40 CFR part 60, Appendix A, incorporated by reference in s. NR 484.04.

(b) Install, calibrate, maintain and operate a continuous emission monitor that meets the applicable performance specifications in 40 CFR part 60, Appendix B or, for affected units, the performance specifications in 40 CFR part 75, Appendices A to I, incorporated by reference in s. NR 484.04. The owner or operator of the source shall submit a quality control and quality assurance plan for approval by the department. The monitor shall follow the plan, as approved by the department.

(c) Perform periodic fuel sampling and analysis of fossil and nonfossil fuels using the methods and procedures specified in s. NR 439.08.

(3) **ORGANIC COMPOUND EMISSIONS.** The owner or operator of a source shall use the test methods and procedures listed in this subsection to determine compliance with an organic compound emission limitation. If a test method inadvertently measures compounds which are listed in s. NR 400.02 (100) as having negligible photochemical reactivity, the owner or operator may exclude these compounds when determining compliance with a VOC emission limit if the amount of these compounds is accurately quantified and the exclusion is approved by the department. As a precondition to excluding these compounds as VOC or at any subsequent time, the department may require an owner or operator to provide monitoring or testing methods and results demonstrating, to the satisfaction of the department, the amount of negligibly reactive compounds in the source's emissions. Unless a source achieves compliance through an averaging method specifically authorized by the department, organic compound emission limitations in chs. NR 419 to 424 shall be achieved on an instantaneous basis.

(a) Method 18, 25, 25A or 25B in 40 CFR part 60, Appendix A, incorporated by reference in s. NR 484.04, shall be used to determine organic compound emission concentrations or emission rates.

(b) Method 24 or 24A in 40 CFR part 60, Appendix A, incorporated by reference in s. NR 484.04, shall be used 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.

(c) Method 21 in 40 CFR part 60, Appendix A, incorporated by reference in s. NR 484.04, shall be used to detect organic compound emission leaks except as provided in par. (i) 2. or 3.

(d) Method 27 in 40 CFR part 60, Appendix A, incorporated by reference in s. NR 484.04, shall be used to verify the vapor tightness of gasoline delivery tanks.

(e) An equation established under s. NR 425.05 (1) (b) 2. or contained in 425.05 (2) (b) 2. shall be used to determine compliance with an internal offset.

(f) Methods approved by the department shall be used to determine the transfer efficiency of surface coating equipment.

(g) Method 25A in 40 CFR part 60, Appendix A, incorporated by reference in s. NR 484.04, shall be used to determine compliance with the aerosol can filling VOC emission limit in s. NR 424.04. If a flame ioniza-

tion detector is used to test compliance with s. NR 424.04, test equipment calibration shall be conducted with propane. During the testing procedure, the flame ionization detector shall continuously measure VOC emissions for a minimum of one hour per aerosol can filling line with the control device not in operation and for a minimum of one hour with the control device in full operation. Production data taken concurrently with the testing procedure shall be used to calculate the VOC emission rates for the tested aerosol can filling line when the control device is not in operation and when the control device is in full operation.

(h) Compounds identified in s. NR 400.02 (100) shall be treated as water to determine compliance with emission limitations which refer to water.

(i) The owner or operator of a gasoline dispensing facility shall use the methods in this paragraph to determine compliance of motor vehicle fueling vapor recovery systems required under s. NR 420.045 (7):

1. San Diego Air Pollution Control District Test Procedure TP-91-2, incorporated by reference in s. NR 484.05, shall be used for dynamic backpressure and liquid blockage tests.

2. San Diego Air Pollution Control District Test Procedure TP-91-1, incorporated by reference in s. NR 484.05, shall be used for leak tests.

3. The department may approve the use of alternative test methods for a vapor recovery system only if the manufacturer, installer or operator of the vapor recovery system demonstrates all of the following:

a. The test method in subd. 1. or 2. is not applicable to the vapor recovery system.

b. The proposed test method will provide test results which are similar to those provided by the test method in subd. 1. or 2. in terms of accuracy and validity.

c. The proposed test method has been accepted by another air pollution control agency within the United States.

(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, 10A or 10B in 40 CFR part 60, Appendix A, incorporated by reference in s. NR 484.04.

(b) Install, calibrate, maintain and operate a continuous emission monitor that meets the applicable performance specifications in 40 CFR part 60, Appendix B, incorporated by reference in s. NR 484.04, 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 CFR part 60, Appendix A, incorporated by reference in s. NR 484.04, 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 or 7E in 40 CFR part 60, Appendix A, incorporated by reference in s. NR 484.04.

(b) Install, calibrate, maintain and operate a continuous emission monitor that meets the applicable performance specifications in 40 CFR part 60, Appendix B, or, for affected sources, the performance specifications in 40 CFR part 75, Appendices A through I, incorporated by reference in s. NR 484.04. The owner or operator of the sources shall submit and follow the quality control and quality assurance plan for the monitor which has been 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 15A, 16, 16A or 16B in 40 CFR part 60, Appendix A, incorporated by reference in s. NR 484.04.

(b) Install, calibrate, maintain and operate a continuous emission monitor that meets the applicable performance specifications in 40 CFR part 60, Appendix B, incorporated by reference in s. NR 484.04, 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) **EMISSIONS OF OTHER AIR CONTAMINANTS.** The owner or operator of a source shall use methods and plans 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 CFR part 60, Appendix A, incorporated by reference in s. NR 484.04.

2. Install, calibrate, maintain and operate a continuous emission monitor that meets the applicable performance specifications in 40 CFR part 60, Appendix B or 40 CFR part 75, Appendices A through I, incorporated by reference in s. NR 484.04, and follow a quality control and quality assurance plan for the monitor which has been approved by the department.

(b) The owner or operator of a source shall use Method 22 in 40 CFR part 60, Appendix A, incorporated by reference in s. NR 484.04, to determine compliance with a no visible emission requirement.

History: Cr. Register, September, 1987, No. 381, eff. 10-1-87; cr. (3) (g), Register, April, 1988, No. 388, eff. 5-1-88; am. (intro.) (3) and (6) (a), cr. (3) (h), Register, February, 1990, No. 410, eff. 3-1-90; am. (intro.) and (2) (c), Register, May, 1992, No. 437, eff. 6-1-92; am. (3) (c), cr. (3) (i), Register, January, 1993, No. 445, eff. 2-1-93; am. (2) (a) and (3) (intro.), Register, May, 1993, No. 449, eff. 6-1-93; am. (intro.), (1), (4) (a), (6) (b), (6) (e), (7) (a), (8), (9) (a) 2., cr. (1m), Register, December, 1993, No. 456, eff. 1-1-94; am. (1), (1m), (2) (a), (b), (3) (a) to (d), (g), (i) 1., 2., (4) (a), (b), (5), (6) (a), (b), (7) (a), (b), (9) (a) 1., 2., (9) (b), Register, February, 1995, No. 470, eff. 3-1-95; am. (2) (b), Register, April, 1995, No. 472, eff. 5-1-95.

**NR 439.07 Methods and procedures for periodic compliance emission testing.** The owner or operator of a source required to conduct emission testing under s. NR 439.075 shall comply with all applicable methods and procedures listed in this section.

(1) **GENERAL.** All emission tests conducted for the purpose of determining compliance with an emission limitation under chs. NR 400 to 499 shall be performed according to the test methods established in 40 CFR part 60, Appendix A, incorporated by reference in s. NR 484.04, or according to other test methods approved in writing by the department. The owner, operator or contractor responsible for emission testing shall follow the 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 practicable.

(2) **EMISSION TEST NOTIFICATION AND TEST PLAN SUBMITTAL.** 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:

(a) A description of the sampling equipment and the test methods and procedures to be used.

(b) A description of the process to be tested.

(c) A description of the process or operation variables which affect the air contaminant source's emissions.

(d) The date and starting time of the test.

(e) 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.

(f) A statement indicating the production rate and the operating conditions at which the test will be conducted.

(3) **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:

(a) A pre-test conference which includes 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.

(b) Any reasonable stack or duct modification or any change to the sampling method that is deemed necessary by the department to obtain a representative sample.

(c) Additional tests for the same pollutants to be performed at the same or different operating conditions.

(d) A rescheduling of the test to accommodate witnessing or source production schedules.

(4) **NOTIFICATION OF TEST PLAN REVISION.** The source owner or operator shall notify the department of any modifications to the test plan at least 5 business days prior to the test.

(5) **TESTING FACILITIES.** The department may require the owner or operator of a source to provide the following emission testing facilities:

due within 30 days following the end of the calendar quarter. The owner or operator shall obtain certification from the supplier that the applicable methods and procedures in s. NR 439.08 (1) were followed by the supplier. The report shall include the following information for each calendar quarter:

1. The total quantity of coal burned expressed in tons.
2. Weighted average percent of the ash content of the coal burned.
3. Weighted average percent of the sulfur content of the coal burned.
4. Weighted average heat content expressed in Btu per pound of the coal burned.
5. Weighted average sulfur dioxide emission rate in terms of pounds of sulfur dioxide per million Btu heat input from the coal burned.

(e) The owner or operator of a coal burning installation which has a coal burning rate less than 1,000 tons per year shall retain copies of the supplier's analyses at the installation for each shipment of coal received. The owner or operator shall obtain certification from the supplier that the applicable methods and procedures in s. NR 439.08 (1) were followed. The supplier's analyses shall include, at a minimum, each shipment's coal quantity, sulfur content, ash content and heat content.

(3) REQUIREMENTS FOR RESIDUAL FUEL OIL BURNING INSTALLATIONS.

(a) The owner or operator of a residual fuel oil burning installation which has a residual fuel oil burning rate equal to or greater than 1.5 million gallons per year shall sample residual fuel oil and submit reports on residual fuel oil quality in the following manner:

1. Perform liquid fossil fuel sampling for each storage tank of residual fuel oil and analyze these samples for sulfur content and heat content according to the applicable methods and procedures for sampling and analysis in s. NR 439.08 (2).

2. Submit quarterly reports within 30 days following the end of each calendar quarter which include the following information for each month during the calendar quarter:

- a. Total quantity of residual fuel oil burned expressed in thousands of gallons.

- b. Weighted average percent of the sulfur content of the residual fuel oil burned.

- c. Weighted average heat content expressed in Btu per gallon of residual fuel oil burned.

- d. Weighted average sulfur dioxide emission rate in terms of pounds of sulfur dioxide per million Btu heat input from the residual fuel oil burned.

(b) The owner or operator of a residual fuel oil burning installation which has a residual fuel oil burning rate equal to or greater than 150,000 gallons per year but less than 1.5 million gallons per year shall submit, on a quarterly basis, information on residual fuel oil quality which is calculated from the supplier's analyses for each shipment of residual fuel oil received at the installation. Each quarterly report is due within 30 days following the end of the calendar quarter. The owner or operator of the

installation shall obtain certification from the supplier that the applicable methods and procedures in s. NR 439.08 (2) were followed by the supplier. The report shall include the following information for each calendar quarter:

1. Total quantity of residual fuel oil burned expressed in thousands of gallons.
2. Weighted average percent of the sulfur content of the residual fuel oil burned.
3. Weighted average heat content expressed in Btu per gallon of residual fuel oil burned.
4. Weighted average sulfur dioxide emission rate in terms of pounds of sulfur dioxide per million Btu heat input from the residual fuel oil burned.

(c) The owner or operator of a residual fuel oil burning installation which has a residual fuel oil burning rate less than 150,000 gallons per year shall retain copies of the supplier's analyses at the installation for each shipment of residual fuel oil received. The owner or operator shall obtain certification from the supplier that the applicable methods and procedures in s. NR 439.08 (2) were followed. The supplier's analyses shall include, at a minimum, each shipment's residual fuel oil quantity, sulfur content and heat content.

(4) **REQUIREMENTS FOR INSTALLATIONS BURNING FUELS OTHER THAN COAL OR RESIDUAL FUEL OIL.** The owner or operator of an installation subject to reporting requirements under s. NR 439.03 which burns fuel other than coal or residual fuel oil may be required to sample and analyze the fuel used in a manner specified by the department.

History: Renum. from NR 439.075 (2) and am., cr. (4), Register, May, 1992, No. 437, eff. 6-1-92; am. (2) (a) 1., Register, February, 1995, No. 470, eff. 3-1-95.

**NR 439.09 Methods and procedures for continuous emission monitoring.** The owner or operator of a source required to conduct continuous emission monitoring under s. NR 439.095 shall use the methods and procedures listed in this section to install, calibrate, maintain and operate a continuous emissions monitoring system, or other methods and procedures approved, in writing, by the department:

(1) Continuous emissions monitoring systems for measuring opacity shall comply with all the provisions and requirements in Performance Specification 1 in 40 CFR part 60, Appendix B, incorporated by reference in s. NR 484.04.

(2) Continuous emissions monitoring systems for measuring sulfur dioxide or nitrogen oxides shall comply with all the provisions and requirements in Performance Specification 2 in 40 CFR part 60, Appendix B or, for affected units, the performance specifications in 40 CFR part 75, Appendices A to I, incorporated by reference in s. NR 484.04.

(3) Continuous emissions monitoring systems for measuring oxygen or carbon dioxide shall comply with all the provisions and requirements in Performance Specification 3 in 40 CFR part 60, Appendix B or, for affected units, the performance specifications in 40 CFR part 75, Appendices A to I, incorporated by reference in s. NR 484.04.

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(4) Continuous emissions monitoring systems for measuring carbon monoxide shall comply with all the provisions and requirements in Performance Specification 4 in 40 CFR part 60, Appendix B, incorporated by reference in s. NR 484.04.

(5) Continuous emissions monitoring systems for measuring total reduced sulfur shall comply with all the provisions and requirements in Performance Specification 5 in 40 CFR part 60, Appendix B, incorporated by reference in s. NR 484.04.

(6) Continuous emission rate monitoring systems shall comply with all the provisions and requirements in Performance Specification 6 in 40 CFR part 60, Appendix B, incorporated by reference in s. NR 484.04.

(7) Continuous emissions monitoring systems for measuring hydrogen sulfide shall comply with all the provisions and requirements in Performance Specification 7 in 40 CFR part 60, Appendix B, incorporated by reference in s. NR 484.04.

(7m) Continuous emissions monitoring systems for measuring VOCs shall comply with all the provisions and requirements in the department's approval issued under s. NR 439.095 (1).

(8) The owner or operator of a continuous emissions monitoring system shall comply with the quality control and quality assurance plan submitted by the owner or operator of the source and approved by the department.

(9) Continuous emissions monitoring systems shall meet the following minimum frequency of operation requirements:

(a) Opacity monitors shall complete one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

(b) Sulfur dioxide, nitrogen oxides, oxygen, carbon dioxide, carbon monoxide, hydrogen sulfide, total reduced sulfur and VOC monitors shall complete one cycle of sampling, analyzing and data recording for each successive 15-minute period. The values recorded shall be averaged hourly. Hourly averages shall be computed from 4 data points equally spaced over each 1 hour period, except during periods when calibration, quality assurance or maintenance activities are being performed. During these periods, a valid hour shall consist of at least 2 data points separated by a minimum of 15 minutes.

(10) The owner or operator of a continuous emissions monitoring system shall submit quarterly excess emission reports to the department within 30 days following the end of each calendar quarter in accordance with pars. (a) to (d). The owner or operator shall submit either a full excess emission report under par. (a) or a summary excess emission report under par. (d), as specified in writing by the department.

(a) The full excess emission reports required under this subsection shall contain the following information:

1. The date and starting and ending times or duration of each period of excess emissions and the magnitude of the emissions.

2. The periods of excess emissions that occur during startups, shutdowns, sootblowing, control equipment malfunction, process malfunction

tion, fuel problems, other known causes or for unknown causes. The report shall identify the cause of any malfunction and the measures taken to reduce excess emissions.

3. The date and starting and ending time of any period during which the monitoring system was inoperative for any reason or causes, including monitor malfunction or calibration, except for zero and span checks. The report shall identify the repairs or adjustments made to the system.

4. The date and starting and ending time of any period during which the process being monitored was inoperative.

5. When no period of excess emissions occurred during the quarter and the monitoring system had no period of downtime, an excess emissions report shall be filed stating such information.

(b) Unless otherwise specified by the department, in the reports required under this subsection, periods of excess emissions shall be reported as follows:

1. For opacity, any 6-minute period during which the average opacity exceeds the applicable emission limit.

2. For sulfur dioxide, any 24-hour rolling average during which the average sulfur dioxide emissions exceed the applicable emission limitation.

3. For nitrogen oxides, any 24-hour rolling average during which the average nitrogen oxides emissions exceed the applicable emission limitation.

4. For carbon monoxide, any one-hour period during which the average carbon monoxide emissions exceed the applicable emission limitation.

5. For total reduced sulfur, any 24-hour rolling average during which the average total reduced sulfur emissions exceed the applicable emission limitation.

(c) For purposes of reporting exceedances on the basis of a 24-hour rolling average under this subsection, any hourly average may be included in only one 24-hour period. An exceedance shall be based on at least 18 and not more than 24 valid recordings of hourly average emission rates in any 24 hour period.

(d) The summary excess emission report shall be submitted on a form provided by the department or in a format approved by the department.

History: Renum. from NR 439.07 (3) and am., cr. (8) (intro.), Register, May, 1992, No. 437, eff. 6-1-92; r. and recr. (6) to (8), cr. (9) and (10), Register, December, 1993, No. 456, eff. 1-1-94; cr. (7m), am. (9) (b), Register, June, 1994, No. 462, eff. 7-1-94; am. (1) to (7), Register, February, 1995, No. 470, eff. 3-1-95; am. (2), (3), Register, April, 1995, No. 472, eff. 5-1-95.

**NR 439.095 Continuous emission monitoring requirements. (1) APPLICABILITY AND GENERAL REQUIREMENTS.** Except as provided in sub. (2), the owner or operator of a direct stationary source listed in this subsection shall install, calibrate, operate and maintain all monitoring equipment necessary for continuously monitoring the pollutants specified in this subsection for the applicable source. The type of monitoring equipment used and the manner and location of its installation are subject to prior Register, April, 1995, No. 472



department approval. The sources and their respective monitoring requirements are:

(a) Fossil fuel fired steam generators identified in sub. (5) shall be monitored for opacity, nitrogen oxide emissions, sulfur dioxide emissions, and oxygen or carbon dioxide.

(b) Fluid bed catalytic cracking unit catalyst regenerators identified in sub. (5) shall be monitored for opacity.

(c) Sulfuric acid plants identified in sub. (5) shall be monitored for sulfur dioxide emissions.

(d) Nitric acid plants identified in sub. (5) shall be monitored for nitrogen oxide emissions.

(e) Yeast manufacturing fermenters identified in sub. (5) shall be monitored for VOCs.

(f) Phase I and phase II acid rain units identified in sub. (5) shall be monitored for sulfur dioxide, nitrogen oxides, carbon dioxide, stack flow rate and opacity.

(2) EXEMPTIONS. The department may grant an exemption from any monitoring requirement of this section for any source which is:

(a) Subject to a continuous emission monitoring requirement under a new source performance standard in ch. NR 440; or

(b) Scheduled for retirement prior to October 1, 1992 if the source demonstrates, to the satisfaction of the department, that the source will cease operations prior to the scheduled retirement date.

(3) INSTALLATION DEADLINES. The owner or operator of a source which is required under sub. (1) to install continuous monitoring equipment shall complete the installation and performance tests of the equipment and begin monitoring and recording not later than April 1, 1989, except as provided in pars. (a) and (b). The department may grant requests for extensions of the time provided for installation of monitors for facilities unable to meet the prescribed time frame if the owner or operator of the facility demonstrates that good faith efforts have been made to obtain and install the devices within the prescribed time frame.

(a) For new sources, monitoring and recording shall begin upon startup.

(b) For boilers connected to a single stack which have individual coal burning rates of less than 25,000 tons per year but which have a combined coal burning rate of 25,000 tons or more per year, monitoring and recording shall begin not later than January 1, 1993.

(4) MONITORING SYSTEM MALFUNCTION. The department may grant a temporary exemption from the monitoring and reporting requirements of this section during any period of monitoring system malfunction if the source owner or operator shows, to the satisfaction of the department, that the malfunction was unavoidable and is being repaired as expeditiously as practicable.

(5) MINIMUM MONITORING REQUIREMENT. The owner or operator of a source listed in this subsection shall, as a minimum, meet the monitoring requirements of this subsection and sub. (1).

(a) *Fossil fuel fired steam generating facilities.* Except as provided for under par. (f), the owner or operator of fossil fuel fired steam generating facilities subject to sub. (1) shall comply with the monitoring requirements in this paragraph:

1. *Opacity.* The owner or operator of any steam generating facility which has a total heat input capacity equal to or greater than 250 million Btu per hour shall install, calibrate, maintain and operate a continuous monitoring system which meets the performance specifications of sub. (6) for the measurement of opacity from each stack serving a coal fired boiler or boilers with a combined coal burning rate of 25,000 tons or more per year, unless the source utilizes an alternative method of compliance determination approved, in writing, by the department.

2. *Sulfur dioxide.* The owner or operator of any steam generating facility shall install, calibrate, maintain and operate a continuous monitoring system for the measurement of sulfur dioxide which meets the performance specifications of sub. (6) if:

a. The facility total heat input capacity is equal to or greater than 250 million Btu per hour and the facility has a control system which reduces sulfur dioxide emissions by more than 5% of the uncontrolled sulfur dioxide rate; or

b. The coal burning rate of all boilers at the facility which emit to a stack without a sulfur dioxide control system is equal to or greater than 100,000 tons of coal per year, unless the source utilizes an alternative method of compliance determination approved, in writing, by the department which meets the requirements of s. NR 439.085.

3. *Nitrogen oxides.* The owner or operator of a fossil fuel fired steam generator with a capacity greater than 1000 million Btu per hour heat input which is located in a nonattainment area for nitrogen oxides shall install, calibrate, maintain and operate a continuous monitoring system for the measurement of the source's nitrogen oxides emissions which meets the performance specifications of sub. (6), unless the source owner or operator demonstrates by a compliance emission test that the source emits nitrogen oxides at levels 30% or more below the applicable emission limit.

4. *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 sub. (6).

(b) *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 sub. (6) for each nitric acid producing unit within the plant.

(c) *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 monitor-

ing system for the measurement of sulfur dioxide which meets the performance specifications of sub. (6) for each sulfuric acid producing unit within the plant.

(d) *Fluid bed catalytic cracking unit catalyst regenerators at petroleum refineries.* The owner or operator of a catalyst regenerator for fluid bed 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 sub. (6).

(e) *Yeast manufacturing plants.* The owner or operator of any yeast manufacturing facility subject to s. NR 424.05 shall install, calibrate, maintain and operate a continuous monitoring system for the measurement of VOCs which meets the performance specifications of the department's approval issued under sub. (1) for each fermenter which does not use add-on control equipment to meet the emission limitations of s. NR 424.05 (2) (a).

(f) *Phase I and phase II affected units.* The owner or operator of any phase I or phase II affected unit shall install, calibrate, maintain and operate a continuous monitoring system for the measurement of sulfur dioxide, nitrogen oxides, carbon dioxide, stack flow rate and opacity which meets the performance specifications in sub. (6) for each affected unit, or as approved by the department, for a combination of affected units that share a common stack.

(6) **PERFORMANCE SPECIFICATIONS.** The owner or operator of monitoring equipment installed to comply with this section shall install, calibrate, maintain and operate the continuous emission monitor in accordance with the performance specifications in 40 CFR part 60, Appendix B or, for affected units, the performance specifications in 40 CFR part 75, Appendices A to I, incorporated by reference in s. NR 484.04, and the requirements in s. NR 439.09. The owner or operator of the source shall submit a quality control and quality assurance plan for approval by the department. The monitor shall follow the plan, as approved by the department.

History: Renum. from NR 439.075 (3) and am., Register, May, 1992, No. 437, eff. 6-1-92; cr. (1) (e) and (5) (e), Register, June, 1994, No. 462, eff. 7-1-94; am. (6), Register, February, 1995, No. 470, eff. 3-1-95; cr. (1) (f), (5) (f), am. (5) (a) (intro.), (6), Register, April, 1995, No. 472, eff. 5-1-95.

**NR 439.10 Circumvention.** No persons may cause, allow or permit the installation or use of any article, machine, equipment, process or method, which conceals an emission which would otherwise constitute a violation of an applicable rule unless written approval has been obtained from the department. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance and the unnecessary separation of an operation into parts to avoid coverage by a rule that applies only to operations larger than a specified size.

History: Renum. from NR 154.06 (8), Register, September, 1986, No. 369, eff. 10-1-86; renum. from NR 439.08 and am. Register, September, 1987, No. 381, eff. 10-1-87.

**NR 439.11 Malfunction prevention and abatement plans.** (1) The owner or operator of any direct or portable source which may emit hazardous substances or emits more than 15 pounds in any day or 3 pounds in any hour of any air contaminant for which emission limits have been adopted shall prepare a malfunction prevention and abatement plan to prevent,

detect and correct malfunctions or equipment failures which may cause any applicable emission limitation to be violated or which may cause air pollution. The plan shall be in writing and updated at least every 5 years, and shall include:

(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 of the air pollution control equipment. The maximum interval for routine inspection and maintenance may not exceed that recommended by the manufacturer unless otherwise specified in a plan prepared under this section.

(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) 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. These corrective procedures shall 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.

(f) A description of the activities and maximum intervals for routine maintenance and inspection of instrumentation installed and operated to monitor the operation of air pollution control equipment as required under s. NR 439.055 (1). The maximum interval for inspection and routine maintenance may not exceed that recommended by the manufacturer of the instrumentation unless otherwise specified in a plan prepared under this section.

(g) The calibration schedule for any device which monitors either a source or air pollution control equipment operational variable. The time between calibrations may not exceed one year or as specified in a plan prepared under this section, whichever is shorter.

(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; renum. from NR 439.09 and am. Register, September, 1987, No. 381, eff. 10-1-87; am. (1) (g), Register, May, 1992, No. 437, eff. 6-1-92; am. (1) (intro.) and (b), r, and recr. (1) (e) to (g), Register, December, 1993, No. 456, eff. 1-1-94.