

ORDER OF THE STATE OF WISCONSIN NATURAL RESOURCES BOARD  
RENUMBERING AND AMENDING, AMENDING AND CREATING RULES

The Wisconsin Natural Resources Board adopts an order to **renumber and amend** 428.22(1)(d); **amend** NR 428.04(1) and (3)(b), 428.05(1) and (4)(b)2., 428.07(intro.), (1)(a) and (b)1. and 3., (3) and (4)(c), 428.08(title) and (2)(title), 428.09(2)(a), 428.20(1), 428.22(2)(intro.), 428.23(1)(b)1., 428.24(1)(b)(intro.) and 428.25(1)(a)1.a. and c. and (3)(b); and to **create** NR 428.02(7e), 428.08(2)(f), 428.12, 428.22(1)(d)2., and 428.23(1)(b)9., relating to modification of existing rules for control of nitrogen oxide (NO<sub>x</sub>) emitted by stationary sources in the ozone nonattainment area in southeastern Wisconsin. The proposed revisions relate to issues for SIP approvability and miscellaneous implementation issues.

**AM-20-08**

**Analysis Prepared by the Department of Natural Resources**

- 1. Statute interpreted:** s. 285.11(6), Stats. The State Implementation Plan developed under s. 285.11(6), Stats., is revised.
- 2. Statutory authority:** s. 227.11(2)(a) and 285.11(1) and (6), Stats.
- 3. Explanation of agency authority:** Section 227.11(2)(a), Stats., gives state agencies general rule-making authority. Section 285.11(1) Stats., gives the Department the authority to promulgate rules consistent with ch. 285, Stats. Section 285.11(6), Stats., authorizes the Department to develop and revise a state implementation plan for the prevention, abatement and control of air pollution.
- 4. Related statute or rule:** The current provisions of ch. NR 428 establish nitrogen oxide (NO<sub>x</sub>) emission limits for new and existing facilities which are located in ozone non-attainment counties. The primary intent of these provisions is to fulfill Clean Air Act (CAA) requirements for demonstrating rate-of-progress towards attaining the 1-hour ozone standard and applying reasonably available control technology (RACT) to major sources of NO<sub>x</sub> emissions in counties designated as non-attainment under the 8-hour ozone standard. Modifications are proposed to existing portions of ch. NR 428.

**5. Plain language analysis:**

The proposed rule revisions address two areas: 1) incorporating the term and a definition of "maximum theoretical emissions" (MTE) in place of "potential to emit" (PTE) in order to adequately identify major sources and aid in federal approval of the NO<sub>x</sub> RACT program; and 2) revisions identified by the department and stakeholders which clarify and facilitate implementation of requirements within ch. NR 428.

**Identification of major sources**

The current NO<sub>x</sub> RACT rule's use of the term "potential to emit" in the applicability provision is not adequate to meet US EPA approval criteria since it allows consideration of control equipment. To address this issue, the proposed revision incorporates the use of "maximum theoretical emissions" (MTE) for identifying major sources subject to NO<sub>x</sub> RACT requirements.

**Clarification and Implementation Issues**

There are a number of non-substantive revisions proposed in the rule package to address clarification and implementation issues which are consistent with the original intent of the rules. There are no changes proposed to the emission limitations or which affect those individual emissions units subject to emission requirements. These revisions include:

- The proposed rule revision removes the reference to the federal Clean Air Interstate Rule (CAIR) and applies standard terms in identifying the appropriate units.
- The rule revision allows additional time for sources to submit an application for an alternative emission limit or compliance schedule.
- The proposed rule revision allows a source with an approved alternative RACT requirement to participate in emissions averaging for purposes of demonstrating compliance with the original RACT limitation or schedule.
- The proposed revision avoids triggering new source NO<sub>x</sub> limits when the modification is made solely to comply with existing NO<sub>x</sub> control requirements.
- Clarification and simplification of monitoring and reporting requirements.
- The applicability statement in s. NR 428.05(1) is being revised to remove the reference to "modified" sources.
- The Department proposes to identify limited periods when the current form of the emission limitation for glass furnaces is not appropriate. During these periods the numerical emission limit does not apply. Instead, the source is required to minimize NO<sub>x</sub> emissions through combustion optimization techniques described in s. NR 439.096.

#### **6. Summary of, and comparison with, existing or proposed federal regulation:**

The NO<sub>x</sub> emission requirements of NR 428 are in place to fulfill federal ozone requirements in non-attainment areas for demonstrating rate-of-progress towards meeting 1-hour ozone attainment and for implementing reasonably available control technology (RACT) for major sources of NO<sub>x</sub> emissions for the 8-hour ozone standard. Since there is no direct federal emission limitation for NO<sub>x</sub> RACT, states must meet these requirements through rule adoption and approval by the US EPA to the State Implementation Plan. Many states have NO<sub>x</sub> emission control requirements in place or are in the process of evaluating and developing necessary rules to meet federal ozone non-attainment requirements.

The US EPA regulates NO<sub>x</sub> emissions for similar sources and to similar control levels as those contained in ch. NR 428. These regulations include new source performance standards, new source review and prevention of significant deterioration requirements, federal engine standards, the Acid Rain program, the NO<sub>x</sub> State SIP Call and various source specific consent decrees.

#### **7. Comparison with similar rules in adjacent states (Illinois, Iowa, Michigan and Minnesota):**

The need for adjacent states to implement NO<sub>x</sub> emission control requirements varies based on ozone non-attainment designations in those states and the resulting applicable federal requirements. Illinois is in the process of developing NO<sub>x</sub> RACT rules. Michigan is evaluating their applicable federal requirements based on attainment status. Iowa and Minnesota currently do not have ozone non-attainment areas which trigger federal requirements for reductions of NO<sub>x</sub> emissions. As in the case of ch. NR 428, all rules developed by these states for ozone related purposes must undergo federal approval for inclusion into their State Implementation Plan.

#### **8. Summary of factual data and analytical methodologies used and how any related findings support**

**the regulatory approach chosen:**

Several proposed revisions are needed to address EPA's concern for approving the RACT rules into the State Implementation Plan. Other proposed revisions address implementation issues and the need for clarifications identified by the Department staff and stakeholders.

**9. Analysis and supporting documents used to determine the effect on small business or in preparation of an economic impact report:**

The existing rule requirements apply to large industrial or electric generation sources. Based on the limited nature of the proposed changes, there is no impact anticipated to small businesses.

**10. Agency contact person:**

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SECTION 1. NR 428.02(7e) is created to read:

NR 428.02(7e) "Maximum theoretical emissions" means the quantity of NO<sub>x</sub> emissions that theoretically could be emitted by a stationary source without consideration of control devices based on the design capacity or maximum production capacity of the source and 8,760 hours of operation per year. When appropriate, and upon request by the source owner or operator, maximum theoretical emissions may be limited by the imposition of conditions in a federally enforceable permit. The conditions shall be used in place of design capacity or maximum production capacity in calculating the maximum theoretical emissions for the source and may include, among other things, the establishment of production limitations, capacity limitations, or limitations on the hours of operation of any emission source, or a combination of any limitations. Production or capacity limitations shall be established on the basis of no longer than one month and may allow for averaging for up to 12 consecutive months.

SECTION 2. NR 428.04(1) and (3)(b) are amended to read:

NR 428.04(1) APPLICABILITY. The requirements of this section apply to emissions units described in this section that are located in the county of Kenosha, Milwaukee, Ozaukee, Racine,

Washington or Waukesha County and that are constructed or that undergo a major modification, as that term is described in ch. NR 405 or 408, after February 1, 2001. When determining whether an emissions unit undergoes a major modification for purposes of this section, any increase in CO emissions resulting from the operation of the emissions unit, or operation of NO<sub>x</sub> emissions control equipment for purposes of meeting state or federal NO<sub>x</sub> emission requirements, will not be considered in the emissions calculations.

(3)(b) *Specific requirements.* The owner or operator of each NO<sub>x</sub> emissions unit subject to the requirements of sub. (2) shall determine the ~~annual~~ unit's average NO<sub>x</sub> emission rate, ~~in pound per million Btu,~~ using methods and procedures specified in 40 CFR part 60, Appendix B, incorporated by reference in s. NR 484.04(21), or other ~~combustion~~ emissions monitoring methods approved by the department.

SECTION 3. NR 428.05(1) and (4)(b)2. are amended to read:

NR 428.05 (1) APPLICABILITY. The requirements of this section apply to emissions units described in this section that are located in the county of Kenosha, Manitowoc, Milwaukee, Ozaukee, Racine, Sheboygan, Washington or Waukesha County and that were initially constructed ~~or last modified~~ on or before February 1, 2001.

(4)(b)2. The owner or operator of an emissions unit subject to any of the requirements of sub. (3)(b) to (e) shall determine the unit's average NO<sub>x</sub> emission rate, ~~in pounds per million Btu,~~ using methods and procedures specified in 40 CFR part 60, Appendix B, incorporated by reference in s. NR 484.04(21), or other ~~combustion~~ emissions monitoring methods approved by the department.

SECTION 4. NR 428.07(intro.), (1)(a) and (b)1. and 3., (3) and (4)(c) are amended to read:

NR 428.07 **General requirements.** (intro) ~~The~~ Except as provided in s. NR 428.12, the owner or operator of an NO<sub>x</sub> emissions unit subject to the requirements of subch. I shall comply with the monitoring and reporting requirements of this subchapter.

(1)(a) ~~By the dates listed in sub. (2), the~~ The owner or operator of an NO<sub>x</sub> emissions unit shall

submit to the department a monitoring plan that describes in detail the systems to be used on the unit to satisfy the monitoring requirements of this subchapter- by the following deadlines:

1. For an emissions unit subject to emission limitations in s. NR 428.05(3), by December 21, 2002.

2. For an emissions unit subject to emission limitations in s. NR 428.04(2), at least 180 days prior to initial operation.

(b)1. Install all monitoring systems required under ~~this subchapter~~ s. NR 428.08 for monitoring NO<sub>x</sub> ~~mass emissions~~. This includes all systems required to monitor NO<sub>x</sub> emission rate, NO<sub>x</sub> concentration, heat input and flow, in accordance with ~~s. NR ss. NR 428.08 and~~ NR 439.09.

3. Successfully complete all certification tests and meet all ~~other provisions~~ operating specifications of this subchapter and 40 CFR parts 60 and 75 as applicable to the monitoring systems required for an emissions unit under subds. 1. and 2.

(3) REPORTING DATA PRIOR TO INITIAL CERTIFICATION. The owner or operator of an NO<sub>x</sub> emissions unit under sub. (2)(b) or (c) shall determine, record and report NO<sub>x</sub> ~~mass emissions~~, heat input, if required for purposes of compliance, and any other values required to determine NO<sub>x</sub> ~~mass emissions~~, for example NO<sub>x</sub> emission rate and heat input or NO<sub>x</sub> concentration and stack flow, using the provisions of 40 CFR 75.70(g), from the date and hour that the unit starts operating until all required certification tests are successfully completed.

(4)(c) No owner or operator of an NO<sub>x</sub> emissions unit may disrupt the continuous emission monitoring system, any portion thereof, or any other approved emission monitoring method, and thereby avoid monitoring and recording NO<sub>x</sub> ~~mass emissions emitted~~, except for periods of recertification or periods when calibration, quality assurance testing or maintenance is performed in accordance with the applicable provisions of this subchapter.

SECTION 5. NR 428.08(title) and (2)(title) are amended to read:

NR 428.08(title) **Specific provisions for monitoring NO<sub>x</sub> and heat input for the purpose of calculating NO<sub>x</sub> mass emissions.**

(2)(title) ~~NON-UTILITY~~ OTHER UNITS.

SECTION 6. NR 428.08(2)(f) is created to read:

NR 428.08(2)(f) An owner or operator of an emissions unit that installs and operates a continuous NO<sub>x</sub> emissions monitoring system according to the requirements of 40 CFR part 75 satisfies requirements of this subsection.

SECTION 7. NR 428.09(2)(a) is amended to read:

NR 428.09(2)(a) Meet all of the requirements of 40 CFR part 75 related to monitoring and reporting NO<sub>x</sub> mass emissions during the entire year and meet the reporting deadlines specified in sub. (1).

SECTION 8. NR 428.12 is created to read:

NR 428.12 **Alternative monitoring, recordkeeping and reporting.** (1) RACT EMISSIONS UNITS. The owner or operator of an NO<sub>x</sub> emissions unit that is also subject to an emission limitation in s. NR 428.22 may satisfy the NO<sub>x</sub> emissions monitoring and reporting requirements of this subchapter by meeting the applicable NO<sub>x</sub> emissions monitoring requirements in s. NR 428.23(1)(b) and (2) and the recordkeeping and reporting requirements in s. NR 428.24(1).

(2) NON-RACT EMISSIONS UNITS. The owner or operator of an NO<sub>x</sub> emissions unit subject to an emission limitation in s. NR 428.04(2) or 428.05(3) may satisfy the NO<sub>x</sub> emissions monitoring and reporting requirements of this subchapter by meeting, as applicable by source type, the NO<sub>x</sub> emissions monitoring requirements in s. NR 428.23(1)(b) and (2) and the recordkeeping and reporting requirements in s. NR 428.24(1).

SECTION 9. NR 428.20(1) is amended to read:

NR 428.20(1) APPLICABILITY. The requirements of this subchapter apply to the owner or operator of an NO<sub>x</sub> emissions unit which is in a source category identified in s. NR 428.22 and which is located at a facility with a combined total ~~potential to emit~~ maximum theoretical emissions for all NO<sub>x</sub> emissions units of 100 tons per year or more of NO<sub>x</sub> and which is in the county of Kenosha, Milwaukee, Ozaukee, Racine, Sheboygan, Washington or Waukesha.

SECTION 10. NR 428.22(1)(d) is renumbered NR 428.22(1)(d)1., and as renumbered is amended to read:

NR 428.22(1)(d) *Glass furnaces*. 1. For a glass manufacturing furnace with a maximum heat input capacity equal to or greater than 50 mmBtu per hour, 2.0 pounds per ton of produced glass, except as provided in subd. 2.

SECTION 11. NR 428.22(1)(d)2. is created to read:

NR 428.22(1)(d)2. When, on a daily basis, a glass furnace is operated at less than 25% of glass production capacity, the owner or operator shall operate the furnace according to the combustion optimization requirements of s. NR 439.096 and shall meet the monitoring requirements of s. NR 428.05(2)(e).

SECTION 12. NR 428.22(2)(intro.) is amended to read:

NR 428.22(2) ELECTRIC UTILITY BOILER COMPLIANCE SCHEDULE. (intro.) The owner or operator of an electric utility boiler ~~subject to the provisions of 40 CFR part 97~~ shall demonstrate compliance with the following interim NO<sub>x</sub> emission limitations, as applicable, on a 30-day rolling average by May 1, 2009 and with the emission limitations in sub. (1)(a) on and after May 1, 2013:

SECTION 13. NR 428.23(1)(b)1. is amended to read:

NR 428.23(1)(b)1. 'Part 75 continuous emissions monitoring.' The owner or operator of an affected unit as defined under s. NR 400.02(11), or an emissions unit subject to 40 CFR part 97 shall monitor NO<sub>x</sub> emissions for requirements of this subsection by installing and operating monitoring equipment and measuring and recording NO<sub>x</sub> emissions data according to methods and specifications electric utility boiler or combustion turbine that is subject to or becomes subject to the requirements of 40 CFR part 75 and 40 CFR part 75, Appendices A to I, incorporated by reference in s. NR 484.04(27), as required of an affected unit or an emissions unit subject to 40 CFR part 97 shall use those monitoring methods and specifications for monitoring NO<sub>x</sub> emissions for purposes of this subsection.

SECTION 14. NR 428.23(1)(b)9. is created to read:

NR 428.23(1)(b)9. 'Emissions monitoring preference.' a. The owner or operator of an emissions unit that installs and operates a continuous NO<sub>x</sub> emissions monitoring system according to the requirements of 40 CFR part 75 shall satisfy the applicable monitoring requirements of this section.

b. The owner or operator of an emissions unit that installs and operates a continuous NO<sub>x</sub> emissions monitoring system according to the requirements of 40 CFR part 60 shall satisfy the applicable monitoring requirements of subd. 3.

SECTION 15. NR 428.24(1)(b)(intro.) is amended to read:

NR 428.24(1)(b) *Reporting* (intro.) In the reports to the department required under s. NR 428.25(1), if applicable, or s. NR 439.03(1)(b), the owner or operator shall submit the following information:

SECTION 16. NR 428.25(1)(a)1.a. and c. and (3)(b) are amended to read:

NR 428.25(1)(a)1.a. The participation of an emissions unit in an emissions averaging program shall be designated for ~~a full~~ each calendar year. Individual emissions units may not be withdrawn from an

averaging program; during a calendar year, unless each emissions unit in the averaging program meets its applicable emission limit in s. NR 428.22.

c. An emissions unit for which the department has approved an alternative emission limit or compliance schedule under sub. (3) may not participate in an emissions averaging program under this subsection for the purpose of demonstrating compliance with the approved alternative emission limitation or compliance schedule.

(3)(b) The owner or operator of the emissions unit shall submit the request with the demonstration for an alternative RACT requirement ~~by the later of May 1, 2008 or by May 1 following the calendar year in which an emissions unit first becomes subject to an emission limitation in s. NR 428.22.~~ by the following deadlines:

1. By May 1, 2008 for an emissions unit subject to a compliance date of May 1, 2009.
2. By May 1, 2011 for an emissions unit subject to a compliance date of May 1, 2013.
3. By May 1 of the year following the calendar year in which an emissions unit first becomes subject to an emission limitation in s. NR 428.22, if the emissions unit first becomes subject to an emission limitation in s. NR 428.22 after December 31, 2007.

SECTION 17. EFFECTIVE DATE. This rule shall take effect on the first day of the month following publication in the Wisconsin administrative register as provided in s. 227.22 (2) (intro.), Stats

SECTION 18. BOARD ADOPTION. This rule was approved and adopted by the State of Wisconsin Natural Resources Board on April 22, 2009.

Dated at Madison, Wisconsin \_\_\_\_\_.

STATE OF WISCONSIN  
DEPARTMENT OF NATURAL RESOURCES

By \_\_\_\_\_  
Matthew J. Frank, Secretary

(SEAL)