

The statement of scope for this rule, SS 064-21 was approved by the Governor on July 16, 2021, published in Register No. 787B on July 26, 2021, and approved by the Natural Resources Board on December 8, 2021. This rule was approved by the Governor on insert date.

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

The Wisconsin Natural Resources Board proposes an order to **amend** NR 428.04 (2) (g) 1. d., 428.05 (2) (b), 428.07 (1) (a) 2., 428.22 (1) and 484.04 Table 2 Row (15m); to **repeal and recreate** NR 428.04 (3) and 428.05 (4); and to **create** NR 400.03 (4) (mf), 428.02 (7i), (7p), (7u), and (7w), 428.04 (2) (i) and (4) (c), 428.05 (2) (f), (3) (f), and (5) (c), 428.055, 428.08 (2) (g) and (3), 428.21 (3) (d), 428.22 (3) and 428.24 (1) (c), relating to nitrogen compound emissions regulations.

**AM-05-21**

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

**1. Statute Interpreted:** The State Implementation Plan developed under s. 285.11 (6), Wis. Stats., is revised.

**2. Statutory Authority:** Sections 227.11(2)(a), 285.11(1) and (6), Wis. Stats.

**3. Explanation of Agency Authority:** Section 227.11(2)(a), Wis. Stats., expressly confers rulemaking authority to an agency where such rules are necessary to effectuate the purpose of existing statutory authority. The department is required under s. 285.11(1), Wis. Stats., to promulgate and implement air pollution control rules consistent with ch. 285, Wis. Stats. In addition, s. 285.11(6), Wis. Stats., requires the department to prepare and develop comprehensive state implementation plans (SIPs) for prevention, control and abatement of air pollution and revise and implement those plans to conform with the Clean Air Act (CAA).

Several provisions of the CAA provide the federal statutory basis for this rule. Sections 172(c)(2) and 182(b)(1) of the CAA require the state to provide Reasonable Further Progress (RFP) plans for ozone nonattainment areas. Section 182(f) of the CAA requires Reasonably Available Control Technology (RACT) requirements for nitrogen oxides (NO<sub>x</sub>) to be included in the SIP for Moderate (and above) ozone nonattainment areas.

**4. Related Statutes or Rules:** The proposed rule changes revise and clarify NO<sub>x</sub> control requirements contained in ch. NR 428, Wis. Adm. Code. A definition for a common abbreviation is added to ch. NR 400, Wis. Adm. Code. Proposed cross-reference updates in ch. NR 484, Wis. Adm. Code, align the chapter with the proposed revisions in ch. NR 428, Wis. Adm. Code.

**5. Plain Language Analysis:** NO<sub>x</sub> reacts with volatile organic compounds in the presence of sunlight to form ground-level ozone. Concentrations of ozone above the National Ambient Air Quality Standards (NAAQS) are known to adversely impact human health and the environment. The U.S. Environmental Protection Agency (EPA) has designated several areas along the Lake Michigan shoreline in eastern Wisconsin as “nonattainment areas” due to ozone concentrations violating the NAAQS. Emissions sources located in nonattainment areas are subject to more stringent controls under the CAA.

Chapter NR 428, Wis. Adm. Code, regulates the emissions of NO<sub>x</sub> from certain stationary sources located in current ozone nonattainment areas and areas with a history of ozone nonattainment, including the counties of Kenosha, Manitowoc, Milwaukee, Ozaukee, Racine, Sheboygan, Washington and

Waukesha. Subchapters I through III were added in January 2001 to fulfill the Rate of Progress/Reasonable Further Progress plans as required by Sections 172(c)(2) and 182(b)(1) of the CAA. Subchapter IV of this rule was added in July 2007 to include CAA Section 182(f) Reasonably Available Control Technology (RACT) requirements for major sources of NO<sub>x</sub> located in ozone nonattainment areas classified as Moderate (or above).

Since the promulgation of the 2001 and 2007 revisions to ch. NR 428, Wis. Adm. Code, the department has identified several implementation issues associated with certain parts of the chapter. The department is proposing revisions to the chapter to ensure clear and consistent implementation of this rule. The proposed changes include clarifying exemption applicability, emission limits for units using more than one type of fuel, and emissions averaging requirements. The proposed rule also revises and clarifies existing compliance and monitoring requirements, corrects an emission limit for a specific type of unit, incorporates procedures for approving a source-specific emission limit alternative to ensure that limits are achievable in practice, and updates cross references. The specific proposed rule changes are described below:

#### Revised NO<sub>x</sub> emission limit

SECTION 3 corrects the emission limit under s. NR 428.04(2)(g)1.d., Wis. Adm. Code, for combined cycle combustion turbines with maximum design power output of 25 MWe or greater because, as written, the existing limit is not achievable in practice at all times of operation (e.g., during periods of startup or shutdown). The proposed change revises the NO<sub>x</sub> emission limit from 3 parts per million, dry volume (ppmdv), corrected to 15% oxygen on a 30-day rolling average basis to 9 ppmdv, corrected to 15% oxygen on a 30-day rolling average basis. Because the proposed emission limit is reflective of current operations, including periods of startup and shutdown, the proposed rule change is not expected to result in an increase in actual emissions. Additionally, the proposed revision aligns the NO<sub>x</sub> emission limit under s. NR 428.04(2)(g)1.d., Wis. Adm. Code, with the NO<sub>x</sub> RACT emission limit under s. NR 428.22(1)(h)1., Wis. Adm. Code, for the same type of unit.

SECTION 11 provides procedures allowing facilities to demonstrate that an emission limit listed in s. NR 428.04, Wis. Adm. Code, is technologically or economically infeasible and, the opportunity to request a site-specific emission limit alternative. Emission limits set under this proposed provision must be approved by the department and approved into the Wisconsin SIP by EPA.

#### Clarify NO<sub>x</sub> emission limits during secondary fuel usage

SECTIONS 4, 6, 7, 8, 10, 15, 16, and 17 clarify emission limits and monitoring requirements that apply when a facility uses more than one type of fuel. The proposed revisions clarify that a unit firing secondary fuel is not subject to certain emission limits when utilizing the secondary fuel(s). Applicable instances of secondary fuel use include:

- When emissions unit heat input capacity or maximum design power output while utilizing the secondary fuel is less than the corresponding applicability thresholds.
- The emissions unit burns the secondary fuel only: during periods of curtailment or supply interruption of other fuel(s); or periodic testing, maintenance, or operator training.
- The emissions unit utilizes the secondary fuel only for startup or the fuel constitutes less than 1% of the unit's fuel consumption within a 12 consecutive month time period.

#### Streamline and align monitoring requirements

SECTIONS 5 and 9 combine and streamline redundant monitoring requirements in s. NR 428.04(3)(a) and (b), NR 428.05(4)(a) and (b), Wis. Adm. Code.

#### Clarify monitoring requirements for specific categories of emissions units

SECTION 13 incorporates an alternative to operating a continuous emissions monitoring system (CEMS) by meeting operational and performance testing requirements for: kilns, furnaces, asphalt plants, process heating units, engines, and other units under s. NR 428.08(2) Wis. Adm. Code. Currently there are no monitoring requirements specified for these types of units under s. NR 428.08(2), Wis. Adm. Code.

Revise compliance monitoring plan submittal deadline

SECTION 12 revises the deadline for compliance monitoring plan submittals from “at least 180 days prior to initial operation” to “at least 180 days prior to initial operation, or an alternative date less than 180 days approved by the department.” The previous rule language required plans to be submitted 180 days before initial operation. This means a source would have been required to wait for the 180-day period to end prior to operating, even if the source was permitted and physically capable of operation prior to that date. The revised rule language allows the source to request an alternative date to avoid the waiting period if necessary.

Clarify exception

SECTION 14 clarifies that the unit exception in s. NR 428.21(3), Wis. Adm. Code, applies only to units constructed before August 1, 2007, as originally intended.

Definitions

SECTION 1 incorporates an abbreviation for state implementation plan (SIP). SECTION 2 incorporates definitions related to secondary fuel usage scenarios and specific types of emissions units.

Cross references

SECTION 18 ensures consistent cross references between s. NR 428.08(2)(g)4.a., Wis. Adm. Code, and federal methods for determining NOx emissions from stationary sources (s. NR 484.04 Table 2).

**6. Summary of, and Comparison with, Existing or Proposed Federal Statutes and Regulations:**

Sections 172(c)(2) and 182(b)(1) of the federal CAA require states with a Moderate (and above) ozone nonattainment area to develop and implement “Reasonable Further Progress” plans to help the area reach attainment. Subchapters I through III of ch. NR 428, Wis. Adm. Code, were promulgated as part of Wisconsin’s Reasonable Further Progress demonstration to reduce NOx emissions in the state’s ozone nonattainment areas. Section 182(f) of the CAA requires states to implement Reasonably Available Control Technology (RACT) requirements for sources with high emissions of NOx in Moderate (and above) ozone nonattainment areas. Subchapter IV of ch. NR 428, Wis. Adm. Code, was promulgated to meet NOx RACT requirements for areas classified as Moderate nonattainment under the 1997 ozone NAAQS. The proposed rule changes are intended to clarify ambiguities in ch. NR 428, Wis. Adm. Code, and ensure implementation of this rule is consistent with CAA requirements.

**7. If Held, Summary of Comments Received During Preliminary Comment Period**

**and at Public Hearing on the Statement of Scope:** The department held an online preliminary public hearing on the statement of scope on November 5, 2021. Nine members of the public attended the hearing. Two attendees registered in support of the proposed scope statement; one of these members provided a verbal comment reiterating their support. No other verbal comments were provided.

The public comment period ended on November 5, 2021. The department received no written comments on the proposed statement of scope.

## **8. Comparison with Similar Rules in Adjacent States:**

Wisconsin's NO<sub>x</sub> emission limits in ch. NR 428, Wis. Adm. Code, were compared to similar rules in the adjacent states of Michigan, Illinois, Iowa and Minnesota, as well as Indiana. Portions of Wisconsin, Illinois, and Indiana comprise a tri-state area currently designated by EPA as nonattainment for the 2015 ozone NAAQS. This same tri-state area was previously designated as nonattainment for the 2008 ozone NAAQS until being redesignated to attainment in 2022. As such, the three states are federally required to limit emissions of ozone precursors, including NO<sub>x</sub> (e.g., CAA Section 182(f) NO<sub>x</sub> RACT requirements).

Unlike Wisconsin, Illinois's and Indiana's administrative rules limiting NO<sub>x</sub> emissions have not been approved by EPA as meeting CAA section 182(f) NO<sub>x</sub> RACT requirements. Illinois has promulgated administrative rules limiting NO<sub>x</sub> emissions under Title 35 Part 217 of the Illinois Administrative Code. Overall, ch. NR 428, Wis. Adm. Code, establishes NO<sub>x</sub> emission limits based on emissions unit size and fuel type while the Illinois rules generally set NO<sub>x</sub> emission limits for broad categories of units (e.g., one emission limit for all solid fuel boilers above a certain maximum heat input). As a result, ch. NR 428, Wis. Adm. Code, sets many more emission limits relative to Illinois. For categories of emissions units that are directly comparable, the limits in ch. NR 428, Wis. Adm. Code, are similar to or slightly more stringent than the NO<sub>x</sub> emission limits in Illinois. Indiana has promulgated NO<sub>x</sub> emission limits under Title 326 Article 10 of the Indiana Administrative Code only for certain types of cement kilns and for a specific energy utility company.

Michigan's NO<sub>x</sub> emissions limits are incorporated under Michigan Administrative Rules 336.1801-336.1834 and are similar to the NO<sub>x</sub> rules promulgated by Illinois in that emission limits are set for broad emissions unit categories and are similar to or slightly less stringent than Wisconsin's rules (when direct comparison is possible). Michigan, however, only became subject to CAA Section 182(f) NO<sub>x</sub> RACT requirements in November 2022, whereas Illinois, Indiana, and Wisconsin became subject to NO<sub>x</sub> RACT requirements in 2004.

Minnesota and Iowa do not have ozone nonattainment areas classified Moderate, and as such, are not required to implement Reasonable Further Progress and NO<sub>x</sub> RACT requirements under the Clean Air Act like those in ch. NR 428, Wis. Adm. Code.

**9. Summary of Factual Data and Analytical Methodologies Used and How Any Related Findings Support the Regulatory Approach Chosen:** The proposed rule changes address known implementation issues with ch. NR 428, Wis. Adm. Code, rule language promulgated in 2001 and 2007. With the exception of one revised emission limit which is being proposed because the existing limit is not achievable in practice, this rulemaking primarily clarifies and streamlines the rule chapter.

The department is proposing to revise the NO<sub>x</sub> emission limit for gaseous fuel-fired, combined cycle combustion turbines with maximum design power output of 25 MWe or greater under s. NR 428.04(2)(g)1.d., Wis. Adm. Code, because the current limit is not achievable in practice at all times of operation by combined cycle turbines in this category (e.g., during startup and shutdown). The proposed modification would change the NO<sub>x</sub> emission limit from 3 ppm<sub>dv</sub> corrected to 15% oxygen on a 30-day rolling average basis to 9 ppm<sub>dv</sub>, corrected to 15% oxygen on a 30-day rolling average basis. This change would align the NO<sub>x</sub> emission limit under s. NR 428.04(2)(g)1.d., Wis. Adm. Code, which was promulgated in 2001, with the NO<sub>x</sub> emission limit incorporated in 2007 under s. NR 428.22(1)(h)1., Wis. Adm. Code, and approved by EPA as RACT, for the same type of unit.

The technical basis for the NO<sub>x</sub> RACT limits set in subchapter IV of ch. NR 428, Wis. Adm. Code, were described in detail in Attachment A of the green sheet adoption package for Board Order AM-17-05

(<https://p.widencdn.net/zplhxb/04-07-3A1>). The NO<sub>x</sub> RACT limits promulgated under Board Order AM-17-05/Clearinghouse Rule 07-016 were based on the department's review of available control technologies and their cost-effectiveness in dollars per ton of controlled NO<sub>x</sub>. The department's evaluation followed the methods established in EPA's Alternative Control Technology documents for NO<sub>x</sub> source categories ([https://www3.epa.gov/airquality/ctg\\_act/](https://www3.epa.gov/airquality/ctg_act/)).

The NO<sub>x</sub> emissions limits under s. NR 428.04, Wis. Adm. Code, were promulgated in 2001. At that time, state and federal regulations set emissions limits under the assumption that emissions during periods of startup and shutdown would be excluded. After a court decision found this practice to be inconsistent with the CAA (*Sierra Club v. Johnson*, 551 F.3d 1019 (D.C. Cir. 2008)), regulators began specifying that emission limits apply at all times of operation. The department is proposing to change the emission limit under s. NR 428.04(2)(g)1.d., Wis. Adm. Code, from 3 ppm<sub>dv</sub> to 9 ppm<sub>dv</sub> for combined cycle combustion turbines with maximum design power output of 25 MWe or greater because it has found that the 3 ppm<sub>dv</sub> limit is not achievable in practice at all times of operation (e.g., during periods of startup and shutdown). Because the proposed emission limit is reflective of current operations, the proposed rule change is not expected to result in an increase in actual emissions.

**10. Analysis and Supporting Documents Used to Determine the Effect on Small Business or in Preparation of an Economic Impact Report:** The only proposed change which may economically impact businesses is the incorporation of s. NR 428.08(2)(g), Wis. Adm. Code. The proposed language clarifies monitoring requirements for kilns, furnaces, asphalt plants, process heating units, engines, and other units. Currently there are no monitoring requirements explicitly defined for these types of units under s. NR 428.08(2), Wis. Adm. Code, leading some to potentially conclude that either no compliance methods are required for these units or that continuous emissions monitoring systems (CEMS) are the only approvable compliance method for these units. This is an oversight from previous rulemakings. The proposed changes will improve clarity for businesses by ensuring that applicable monitoring requirements are clearly defined. Additionally, the proposed changes may reduce emissions of NO<sub>x</sub> to the environment by ensuring the department is able to enforce NO<sub>x</sub> emission limits by way of requiring emissions monitoring at all applicable units. The proposed remedy under s. NR 428.08(2)(g), Wis. Adm. Code, offers facilities the flexibility to either operate a CEMS or meet specific operational and performance testing requirements. The department estimates that the potential annual cost of the rulemaking is \$109,200 based on assumptions made as part of its analysis. The department's analysis is described below.

The department estimates that 21 units may be subject to s. NR 428.08(2)(g), Wis. Adm. Code. The number of potentially affected units was determined by conducting a search of facilities with kilns, furnaces, asphalt plants, process heating units, or engine units and whose permits reference the sections of ch. NR 428, Wis. Adm. Code, that could make them subject to s. NR 428.08(2)(g), Wis. Adm. Code (i.e., ss. NR 428.04, 428.05, and 428.20, Wis. Adm. Code).

Based on cost estimates gathered from CEMS manufacturers, initial costs for the purchase of a NO<sub>x</sub> CEMS, installation, and training are \$53,500 to \$150,000, depending on the system and facility, or \$101,750 on average. Annualized costs to maintain a NO<sub>x</sub> CEMS are approximately \$7,500 to \$15,000 (\$11,250 on average). The total annualized cost for the 21 potentially affected emissions units to comply with s. NR 428.08(2)(g), Wis. Adm. Code, over a 10-year period by operating a CEMS is \$449,925. Because CEMS are relatively expensive to operate and maintain, the department's proposed rule language also provides a more economical alternative to operating a CEMS in order to meet the requirements of s. NR 428.08(2)(g), Wis. Adm. Code.

Instead of operating a CEMS to comply with s. NR 428.08(2)(g), Wis. Adm. Code, facilities are given the flexibility to alternatively meet specific operational and performance testing requirements. The latter would require sources to meet a testing requirement every two years. The department estimates that the annualized cost of the biennial performance tests is \$3,500 to \$5,700, or \$4,600 on average, for each affected emissions unit based on cost information gathered from companies that offer stack testing services. A small percentage of the identified 21 emissions units may have an initial one-time cost if the unit needs to be modified to allow for tests to be conducted. The cost of modification is expected to vary widely depending on unit material type (e.g., if the unit is designed to withstand extreme temperatures), unit location (e.g., if scaffolding or a lift is required), and mechanical modification (e.g., installation of sampling ports). The department estimates this potential one-time modification expense could be \$2,000 to \$10,000 (\$6,000 average), and notes that outliers could exist. To be conservative, the department assumed all 21 units would have a \$6,000 one-time modification cost to accommodate stack testing. The department expects that in reality, only a few emissions units may incur an initial modification cost. The total annualized cost, including the potential initial modification costs and biennial performance test costs, over a 10-year period to comply with the operational and performance testing option in s. NR 428.08(2)(g), Wis. Adm. Code, is \$109,200.

In estimating the cost associated with this revision, the department assumes a facility would opt for the less expensive performance testing approach to meet the proposed s. NR 428.08(2)(g), Wis. Adm. Code, requirements because the testing approach is approximately a quarter of the cost of operating a CEMS. The department also notes that the \$109,200 is likely overestimated due to four factors. First, the number of affected emissions units is likely overestimated because some of the 21 identified emissions units may not be subject to the compliance requirements, based on the rule's emissions unit capacity thresholds. Second, the department expects that some sources would only be required to conduct tests every four years, instead of the standard two-year testing schedule, because some emissions units will meet the exception under s. NR 428.08(3)(a)1.b., Wis. Adm. Code. The department is not able to estimate how many units may be eligible for this exception as it is dependent on future emissions tests. Third, the department's analysis assumes none of the 21 emissions units are currently operating a CEMS, which could also be used to comply with s. NR 428.08(2)(g), Wis. Adm. Code. Fourth, some facilities may request and receive approval to use an alternative monitoring approach.

The department does not expect any other changes proposed as part of this rulemaking to have an economic impact on businesses. While the creation of additional exemption criteria in s. NR 428.21(3)(d), Wis. Adm. Code, (SECTION 14) is necessary to ensure NO<sub>x</sub> RACT requirements are appropriately applied, the department is not aware of any facility currently exempt, that would no longer be exempt after finalization of this proposed change. Additionally, the proposed NO<sub>x</sub> emission limit revision under s. NR 428.04(2)(g)1.d., Wis. Adm. Code, will not result in an economic impact because the revised limit is equivalent to the NO<sub>x</sub> RACT emission limit under s. NR 428.22(1)(h)1., Wis. Adm. Code, for the same type of unit.

**11. Effect on Small Business (initial regulatory flexibility analysis):** Chapter NR 428, Wis. Adm. Code, primarily applies to facilities with high NO<sub>x</sub> emissions, and those facilities in Wisconsin have tended to not meet the definition of small business. However, the proposed revisions are intended to clarify existing requirements and to ensure clear and consistent implementation of ch. NR 428, Wis. Adm. Code. The proposed changes to ch. NR 428, Wis. Adm. Code, will not result in any existing facility, small business or otherwise, becoming newly subject to NO<sub>x</sub> RACT emission limits upon promulgation of this rule.

**12. Agency Contact Person:** Olivia Salmon, Department of Natural Resources, P.O. Box 7921, Madison, WI 53707-7921; [Olivia.Salmon@wisconsin.gov](mailto:Olivia.Salmon@wisconsin.gov); (608) 630-5264

**13. Place where comments are to be submitted and deadline for submission:**

Written comments may be submitted at the public hearings, by regular mail, or email to:

Olivia Salmon – AM/7  
Bureau of Air Management  
Wisconsin Department of Natural Resources  
PO Box 7921  
Madison, WI 53703  
[Olivia.Salmon@wisconsin.gov](mailto:Olivia.Salmon@wisconsin.gov)

Comments may be submitted to the department contact person listed above or to [DNRAdministrativeRulesComments@wisconsin.gov](mailto:DNRAdministrativeRulesComments@wisconsin.gov) until the deadline given in the upcoming notice of public hearing. The notice of public hearing and deadline for submitting comments will be published in the Wisconsin Administrative Register and on the department’s website, at <https://dnr.wi.gov/calendar/hearings/>. Comments may also be submitted through the Wisconsin Administrative Rules Website at <https://docs.legis.wisconsin.gov/code/chr/active>.

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**RULE TEXT**

**SECTION 1. NR 400.03 (4) (mf) is created to read:**

**NR 400.03 (4) (mf)** “SIP” – state implementation plan

**SECTION 2. NR 428.02 (7i), (7p), (7u) and (7w) are created to read:**

**NR 428.02 (7i)** "Primary fuel" means the fuel types that provide the predominant heat input, in terms of MMBtu, to a combustion unit. A combustion unit may have more than one primary fuel.

**(7p)** “Secondary fuel” means any fuel that is not a primary fuel.

**(7u)** “Simple cycle stationary combustion turbine” means any stationary combustion turbine that does not recover heat from the stationary combustion turbine exhaust gases.

**(7w) (a)** “Supply interruption” or “curtailment” means a period of time during which the supply of primary fuel to an emissions unit is halted for reasons beyond the control of the facility.

**(b)** “Supply interruption” or “curtailment” may not result from an increase in the cost or unit price of the primary fuel.

**SECTION 3. NR 428.04 (2) (g) 1. d. is amended to read:**

**NR 428.04 (2) (g) 1. d.** ~~3.9~~ parts per million dry volume (ppmdv), corrected to 15% percent oxygen, on a 30-day rolling average basis for a combined cycle combustion turbine with a maximum design power output of 25 MWe or greater.

**SECTION 4. NR 428.04 (2) (i) is created to read:**

**NR 428.04 (2) (i)** *Emissions units using secondary fuels.* An emissions unit that is capable of firing secondary fuels is not subject to the requirements under this subsection when utilizing a secondary fuel if any of the following apply:

1. The emissions unit heat input capacity or maximum design power output while utilizing the fuel is less than the applicability thresholds under this subsection.

2. The emissions unit burns the secondary fuel only during the following periods:

a. Supply interruption or curtailment of primary fuels or chemical additives for the purpose of controlling NO<sub>x</sub> emissions. The secondary fuel or chemical additives usage under this paragraph may not exceed 500 hours within a 12 consecutive month time period unless the owner or operator obtains a fuel variance under s. NR 436.06.

b. Periodic testing, maintenance, or operator training of the secondary fuel when the periodic testing, maintenance or operator training does not exceed a combined total of 48 hours during any calendar year.

3. The emissions unit utilizes the secondary fuel only for startup or the fuel constitutes less than 1 percent on an energy equivalent basis of the unit's fuel consumption within a 12 consecutive month time period.

**SECTION 5. NR 428.04 (3) is repealed and recreated to read:**

**NR 428.04 (3) MONITORING REQUIREMENTS.** The owner or operator of each NO<sub>x</sub> emissions unit subject to the requirements under sub. (2) shall comply with one of the following requirements:

(a) Meet the monitoring requirements under subch. III and use the emissions measurements recorded and reported under subch. III to determine compliance by the unit with the applicable NO<sub>x</sub> emissions performance standard under sub. (2). When continuous monitoring of NO<sub>x</sub> emissions is

required, determine the unit's average NOx emissions rate using methods and procedures under 40 CFR part 60, Appendix B, incorporated by reference under s. NR 484.04 (21).

(b) Site-specific emissions monitoring methods approved by the department.

**SECTION 6. NR 428.04 (4) (c) is created to read:**

**NR 428.04 (4) (c)** The owner or operator claiming exemption from the requirements under sub. (2) pursuant to sub. (2) (i) shall keep a record of all of the following:

1. Each occurrence when a secondary fuel was burned in accordance with the provisions under sub. (2) (i).

2. The reason for each occurrence when a secondary fuel was burned in accordance with the provisions under sub. (2) (i).

3. The monthly and 12-calendar month total hours for each occurrence when a secondary fuel was burned in accordance with the provisions under sub. (2) (i).

4. Any other information necessary to show the exemption applies.

**SECTION 7. NR 428.05 (2) (b) is amended to read:**

**NR 428.05 (2) (b)** Except as provided in par. (a), (c), or (f) the following categories of NOx emissions units listed in under this subsection shall complete a combustion optimization to minimize NOx emissions in accordance with s. NR 439.096 by December 31, 2002:

**SECTION 8. NR 428.05 (2) (f) and (3) (f) are created to read:**

**NR 428.05 (2) (f)** An emissions unit that is capable of firing secondary fuels is not subject to the requirements under this subsection when utilizing a secondary fuel, if any of the following apply:

1. The emissions unit heat input capacity or maximum design power output while utilizing the fuel is less than the applicability thresholds under this subsection .

2. The emissions unit burns the secondary fuel only during any of the following periods:

a. Supply interruption or curtailment of primary fuels or chemical additives for the purpose of controlling NOx emissions. The secondary fuel or chemical additives usage under this paragraph may not

exceed 500 hours within a 12 consecutive month time period unless the owner or operator obtains a fuel variance under s. NR 436.06.

b. Periodic testing, maintenance, or operator training of the secondary fuel when the periodic testing, maintenance, or operator training does not exceed a combined total of 48 hours during any calendar year.

3. The emissions unit utilizes the secondary fuel only for startup or the fuel constitutes less than 1 percent on an energy equivalent basis of the unit's fuel consumption within a 12 consecutive month time period.

**(3) (f) *Emissions units using secondary fuels.*** An emissions unit that is capable of firing secondary fuels is not subject to the requirements under this subsection when utilizing a secondary fuel if any of the following apply:

1. The emissions unit heat input capacity or maximum design power output while utilizing the fuel is less than the applicability thresholds under this subsection.

2. The emissions unit burns the secondary fuel only during any of the following periods:

a. Supply interruption or curtailment of primary fuels or chemical additives for the purpose of controlling NOx emissions. The secondary fuel or chemical additives usage under this paragraph may not exceed 500 hours within a 12 consecutive month time period unless the owner or operator obtains a fuel variance under s. NR 436.06.

b. Periodic testing, maintenance, or operator training of the secondary fuel when the periodic testing, maintenance, or operator training does not exceed a combined total of 48 hours during any calendar year.

3. The emissions unit utilizes the secondary fuel only for startup or the fuel constitutes less than 1 percent on an energy equivalent basis of the unit's fuel consumption within a 12 consecutive month time period.

**SECTION 9. NR 428.05 (4) is repealed and recreated to read:**

**NR 428.05 (4) MONITORING REQUIREMENTS.** The owner or operator of each NO<sub>x</sub> emissions unit subject to the requirements under sub. (3) shall comply with all of the following requirements unless alternate site-specific emissions monitoring methods are approved by the department:

(a) Meet the monitoring requirements under subch. III and use the emissions measurements recorded and reported under subch. III to determine compliance by the unit with the NO<sub>x</sub> emissions performance standard under sub. (3).

(b) When continuous monitoring of NO<sub>x</sub> emissions is required and the owner or operator of an emissions unit is subject to the requirements under sub. (3) (a), determine the average NO<sub>x</sub> emission rate, in pound per million Btu, using the methods and procedures specified under 40 CFR part 75, Appendices A through I, incorporated by reference under s. NR 484.04 (27).

(c) The owner or operator of an emissions unit subject to any of the requirements under sub. (3) (b) to (e) shall determine the unit's average NO<sub>x</sub> emission rate using methods and procedures specified under 40 CFR part 60, Appendix B, incorporated by reference under s. NR 484.04 (21).

**SECTION 10. NR 428.05 (5) (c) is created to read:**

**NR 428.05 (5) (c)** The owner or operator claiming exemption to the requirements under subs. (2) and (3) pursuant to subs. (2) (f) and (3) (f) shall keep a record of all of the following:

1. Each occurrence when the fuel denoted under subs. (2) (f) and (3) (f) was burned.
2. The reason for each occurrence when fuel denoted under subs. (2) (f) and (3) (f) was burned.
3. The monthly and 12-calendar month total hours of operation for each fuel used as specified under subs. (2) (f) and (3) (f).
4. Other information necessary to show the exemption applies.

**SECTION 11. NR 428.055 is created to read:**

**NR 428.055 Alternatives.**

**(1) ALTERNATIVE AUTHORITY.** The owner or operator of a NO<sub>x</sub> emissions source may submit a request to the department requesting approval to establish an alternative site-specific emission limitation to one or more of the requirements under s. NR 428.04 or 428.05. The owner or operator shall

demonstrate that compliance with requirements under s. NR 428.04 or 428.05 are technologically or economically infeasible. Application for an alternative to any emission limitation under this subchapter does not become effective until approved by the department and the administrator as a site-specific SIP revision and shall be subject to all of the following requirements:

**(2) ALTERNATIVE CRITERIA.** An alternative site-specific emission limitation under sub. (1) may not be approved unless:

(a) The alternative will not delay attainment or prevent maintenance of any ambient air quality standard, as determined by methods acceptable to the department.

(b) The owner or operator of the air contaminant source for which an alternative is requested demonstrates that all other direct or portable sources that it owns or operates in the state are in compliance with all applicable requirements under chs. NR 400 to 499 or are on a schedule for compliance with the requirements.

(c) The owner or operator submits to the department information concerning the conditions or special circumstances that demonstrate, to the department's satisfaction, that the applicable requirements from which variance is sought are technologically or economically infeasible. In addition, all of the following conditions are applicable:

1. The owner or operator shall submit proposed emission limitations to the department.

2. The responsible official shall sign the request for alternatives on behalf of the owner or operator

3. The owner or operator shall submit other relevant information as required by the department.

**(3) PROCEDURES FOR ISSUANCE OF ALTERNATIVES.** The department, in acting upon any request for an alternative site-specific emission limitation under this section, shall do all of the following:

(a) Act on requests for alternatives within 3 months of the filing of a completed request.

(b) Offer, through public notice, the opportunity for public comments including, where requested, a public hearing.

(c) State in writing the reasons for denying, granting, or for granting in modified form any request.

**(4) REVOCATION AND MODIFICATION OF ALTERNATIVES.** The department may, after notice and opportunity for hearing, revoke or modify any alternative site-specific emission limitation when any of the following applies:

(a) Any term or condition of the alternative has been violated.

(b) Changes in ambient air quality indicate that the source has a significant adverse impact on the attainment or maintenance of any ambient air quality standard.

(c) The owner or operator did not act in good faith in demonstrating the technological or economic infeasibility of compliance with the limitations or in submitting other relevant information in support of the alternative request.

**(5) EFFECTIVE DATE OF ALTERNATIVES.** When the department grants, modifies, or revokes a site-specific alternative to a limitation that has been approved by the EPA administrator as part of the SIP, the alternative will not become effective until all of the following conditions have been met:

(a) The department has submitted the alternative to the administrator pursuant to applicable law, including 42 USC 7410 and 40 CFR parts 51 and 52, and all such requirements have been met.

(b) The alternative has been approved by the administrator or designee as a site-specific SIP revision.

**SECTION 12. NR 428.07 (1) (a) 2. is amended to read:**

**NR 428.07 (1) (a) 2.** For an emissions unit subject to emission limitations ~~in~~ under s. NR 428.04 (2), at least 180 days prior to initial operation, or an alternative date approved by the department.

**SECTION 13. NR 428.08 (2) (g) and (3) are created to read:**

**428.08 (2) (g)** An owner or operator of an emissions unit not listed under pars. (a) to (e) shall either install and operate a continuous NOx emissions monitoring system according to the requirements under 40 CFR part 75, or do all of the following to satisfy the requirements under this subsection:

1. Keep the emissions unit manufacturer's specifications and emissions factor information for the emissions unit on-site and available for review.

2. Comply with any applicable standards under sections 111 or 112 of the Clean Air Act (42 USC 7411 or 7412).

3. Maintain the emissions unit in accordance with the manufacturer's operation and maintenance instructions.

4. Conduct an initial performance test within 180 days after initial operation and subsequent performance tests every 2 years thereafter, within 90 days of the anniversary date of the initial performance test, according to all of the following requirements, as applicable, to determine the emissions unit's NO<sub>x</sub> emissions rate for each fuel fired in the emissions unit:

a. The emissions performance test shall be conducted according to one of the following methods as applicable: Method 7, 7A, 7B, 7C, 7D or 7E under 40 CFR part 60, Appendix A, incorporated by reference under s. NR 484.04 (15m), or another method approved by the department in advance.

b. The initial emissions performance test shall include a determination of the capacity load point of the emissions unit's maximum NO<sub>x</sub> emissions rate based on one 30 minute test run at each capacity load point for which the unit is operated, other than for startup and shutdown, in the load ranges of 25 to 50 percent, 50 to 75 percent, 75 to 100 percent or other load ranges approved by or required by the department in advance.

c. The emissions performance test shall determine compliance based on the average of three 60-minute test runs performed at the capacity load specified under subd. 4. b.

d. An additional performance test shall be conducted according to subd. 4. b. within 90 days of completing an equipment modification or change in fuel that causes an increase of the hourly potential to emit of the NO<sub>x</sub> emissions rate.

(g) A performance test is not required for a fuel used only for startup or for a fuel constituting less than 1 percent on an energy equivalent basis of the emissions unit's fuel consumption within a 12 consecutive month time period.

**(3) EXCEPTIONS.** (a) Notwithstanding the exceptions under s. NR 439.075 (4), all of the following exceptions apply to the testing required under sub. (2) (g):

1. The department may grant a written waiver of a scheduled test if any of the following apply:

a. The direct stationary source associated with the emissions point subject to the testing requirement will be ceasing operation within one year of a scheduled test.

b. The most recently completed results from a test conducted according to the methods and procedures specified under s. NR 439.07 for the direct stationary source demonstrate that the emissions of the air contaminant for which compliance emissions testing is required under this section are 50 percent or less of the applicable emission limitation. If a waiver from a test is granted, the owner or operator shall then conduct the next test according to the schedule under sub. (2) (g) 4.

c. The direct stationary source associated with the emissions point subject to the testing requirement has not operated more than 360 hours in the 12-month period prior to the scheduled test date.

d. The most recently completed test, conducted according to the methods and procedures specified under s. NR 439.07, was conducted less than 12 months prior to the date that testing would be required under par. (b).

e. For each fuel used, the emissions unit is certified to meet emissions standards under 40 CFR part 60 that are equal to or more restrictive than the applicable emission limitation under s. NR 428.04 or 428.05.

2. The department may grant an extension of up to 180 days for compliance emissions testing if the owner or operator of a direct stationary source requests an extension, in writing, and can demonstrate that a representative emissions test cannot be performed within the time frame specified under sub. (2) (g) 4.

3. Any emissions unit operated only to restart electric generation in the event of a complete loss of facility power.

4. Any emissions unit that is operated no more than 500 hours per year and no more than 200 hours during the ozone season and whose only purpose is to provide electricity to a facility if normal electricity service is interrupted or to replace normal critical operations at a facility.

5. Any emissions unit whose only function is to pump water in the case of a fire emergency.

6. Any emissions unit whose utilization is less than 10 percent of its capacity factor on an annual average basis over a 3-year rolling period and less than 20 percent of its capacity factor in any year of the 3-year rolling period and that is owned or operated by an electric generation utility or gas transmission

utility.

7. A research or development unit.

8. An engine testing operation or process line.

9. Any gaseous fuel fired unit used to control VOC emissions from a commercial or industrial process.

(b) The owner or operator shall submit a request for a waiver under par. (a) in writing for department review and approval at least 60 days prior to the required test date.

**SECTION 14. NR 428.21 (3) (d) is created to read:**

**NR 428.21 (3) (d)** The emissions unit was constructed prior to August 1, 2007.

**SECTION 15. NR 428.22 (1) is amended to read:**

**NR 428.22 (1) EMISSIONS LIMITS.** Except as provided ~~in sub.~~ under subs. (2) and (3), on or after May 1, 2009, no person may cause, allow, or permit NO<sub>x</sub> to be emitted in excess of the following emission limitations on a 30-day rolling average basis:

**SECTION 16. NR 428.22 (3) is created to read:**

**NR 428.22 (3) EMISSIONS UNITS USING SECONDARY FUELS.** An emissions unit that is capable of firing secondary fuels is not subject to the requirements under sub. (1) or (2) when utilizing a secondary fuel if any of the following apply:

(a) The emissions unit heat input capacity or maximum design power output while utilizing the fuel is less than the applicability thresholds under sub. (1) or (2).

(b) The emissions unit burns the fuel denoted under this subsection only during the following periods:

1. Supply interruption or curtailment of primary fuels or chemical additives for the purpose of controlling NO<sub>x</sub>. The secondary fuel or chemical additives usage under this subsection may not exceed 500 hours within a 12 consecutive month time period unless the owner or operator obtains a fuel variance under s. NR 436.06.

2. Periodic testing, maintenance, or operator training of the secondary fuel when the periodic testing, maintenance, or operator training does not exceed a combined total of 48 hours during any calendar year.

(c). The emissions unit utilizes the secondary fuel only for startup or the fuel constitutes less than 1 percent on an energy equivalent basis of the unit’s fuel consumption within a 12 consecutive month time period.

**SECTION 17. NR 428.24 (1) (c) is created to read:**

**NR 428.24 (1) (c) *Secondary fuel usage recordkeeping.*** The owner or operator claiming exemption from the requirements under s. NR 428.22 pursuant to s. NR 428.22 (3) shall keep a record of all of the following:

1. Each occurrence when the fuel denoted under s. NR 428.22 (3) was burned.
2. The reason for each occurrence when the fuel denoted under s. NR 428.22 (3) was burned.
3. The monthly and 12-calendar month total hours of operation for each fuel used as specified under s. NR 428.22 (3).
4. Other information necessary to show the exemption applies.

**SECTION 18. NR 484.04 Table 2 Row (15m) is amended to read:**

<b>Table 2</b>		
<b>CFR Appendix References</b>		
<b>CFR Appendix Referenced</b>	<b>Title</b>	<b>Incorporated by Reference For</b>
<b>(15m)</b> 40 CFR part 60 Appendix A, Method 7, 7A, 7B, 7C, 7D and 7E	Determination of nitrogen oxide emissions from stationary sources	NR 428.23 (1) (b) 3. a. <u>NR 428.08 (2) (g) 4. a.</u>

**SECTION 19. EFFECTIVE DATE.** This rule takes 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 20. BOARD ADOPTION.** This rule was approved and adopted by the State of Wisconsin Natural Resources Board on [DATE].

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

STATE OF WISCONSIN  
DEPARTMENT OF NATURAL RESOURCES

BY \_\_\_\_\_

For Adam N. Payne, Secretary