Clearinghouse Rule 99-021

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor
George E. Meyer, Secretary

Box 7921
101 South Webster Street
Madison, Wisconsin 53707-7921
TELEPHONE 608-266-2621
FAX 608-267-3579
TDD 608-267-6897

STATE OF WISCONSIN)
) ss
DEPARTMENT OF NATURAL RESOURCES)

TO ALL TO WHOM THESE PRESENTS SHALL COME, GREETINGS:

I, George E. Meyer, Secretary of the Department of Natural Resources and custodian of the official records of said Department, do hereby certify that the annexed copy of Natural Resources Board Order No. AM-58-98 was duly approved and adopted by this Department on June 30, 1999. I further certify that said copy has been compared by me with the original on file in this Department and that the same is a true copy thereof, and of the whole of such original.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the official seal of the Department at the Natural Resources Building in the City of Madison, this 7th day of October, 1999

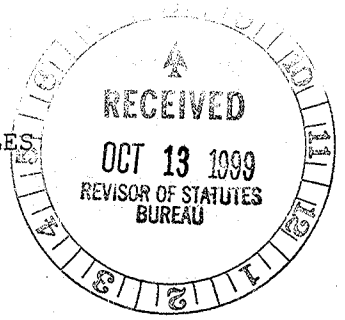
George E. Meyer

George E. Meyer, Secretary

(SEAL)

99-021

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



The Wisconsin Natural Resources Board adopts an order to repeal NR 409.02(2)(a)2.c. Note and (3) Note, 409.06(2)(c) Note and (3)(g) Note, 409.09(1)(a) Note, (b)(intro.) Note, (c)(intro.) Note and (d)4. Note and (2)(g)1.b. Note and 409.11(1)(c) and (2)(d); to renumber NR 409.06(5)(b), 409.08(1)(a), (c) and (d), 409.09(1)(a) and 484.11(1) to (5); to renumber and amend NR 409.12(4)(a)11. and 12.; to amend NR 400.02(3), 409.01(1)(c), 409.02(4), (12), (20), (59)(c) and (77)(b) and (c), 409.06(2)(a), (b) and (c), (3)(f), (6)(a)2., (7)(a) and (f) and (8)(intro.), 409.08(2)(b), (3)(b) and (c) and (4)(a), 409.09(1)(b)(intro.), (c)(intro.) and 1. and (d)1., (2)(f)1. and 3.(intro.) and (g)1.b., 409.10(2), 409.11(1)(a)2. and 3. and (2)(a) and (f), 409.12(1)(a), (c), (d) and (e), (3)(c), (4)(a)10. and (6)(a)2. and 484.10(44); to repeal and recreate NR 409.04, 409.05, 409.12(4)(b) and (6)(a)1.; and to create NR 409.01(1)(b)9.and (d), 409.02(2)(b), (12g), (12m), (12s), (17m), (20m), (21m), (32g), (32m), (32s), (35h), (35p), (39m), (43h), (43p), (46h), (46p), (49m), (51g), (51m), (51s), (56m), (61m), (67m), (74h), (74p), (76m), (79m), (81m), (88), (89) and (90), 409.055, 409.06(5)(b), 409.065, 409.08(1)(a)2., (b)8. Note, (c)2., (d)2. and (e), and (2)(f), 409.09(1)(a)2., 409.12(1)(g), (4)(a)11. and 12., (c) and (d), 439.098, 484.10(41m) and 484.11(6) and (7) relating to incorporating federal nitrogen oxides (NO_x) emission requirements into the department=s air pollution control rules.

AM-58-98

Analysis Prepared by the Department of Natural Resources

Authorizing statutes: ss. 227.11(2)(a) and 285.11(1), Stats.

Statutes interpreted: s. 285.11(6), Stats. The State Implementation Plan developed under that provision is revised.

Following finalization of the federal acid rain rules with respect to nitrogen oxides (NO_x) emission limitations and related requirements, U.S. EPA required states to adopt these new federal regulations into state regulations. The proposed revisions to the state acid rain permitting program incorporate the NO_x provisions as well as additional revisions to the sulfur dioxide (SO_2) provisions of primarily 40 CFR Parts 72 and 76 into the Wisconsin Administrative Code. Except for the conversion of the federal text into state numbering and writing style (including terminology), federal formating is followed pursuant to s. 227.14(1m), Stats., and the proposed provisions of the state acid rain program are identical to the corresponding federal rule language. In this way the state version of the acid rain program is neither more stringent nor less stringent than the federal acid rain program.

The most significant change to the existing state acid rain rules is the proposed creation of a new section, NR 409.065 NITROGEN OXIDES REQUIREMENTS, to incorporate the new NO_x provisions of the federal acid rain program into ch. NR 409. The proposed s. NR 409.065 includes all of the elements of and is identical to U.S. EPA=s model state rule for 40 CFR part 76 (the federal NO_x regulation for the federal acid rain program), except that test methods and procedures are proposed to be included in a created s. NR 439.098.

SECTION 1. NR 400.02(3), as affected by Clearinghouse Rule 98-181, is amended to read:

NR 400.02(3) "Acid rain program" means the national sulfur dioxide and nitrogen oxides air pollution control and emissions reduction program established in accordance with title IV of the act (42 USC 7651 to 7651o)~~,~~ and 40 CFR parts 72~~, 73, 75, 77 and~~ to 78~~, and regulations implementing sections 407 and 410 of the act (42 USC 7651f and 7651i)~~.

SECTION 2. NR 409.01(1)(b)9. is created to read:

NR 409.01(1)(b)9. A unit for which an exemption under s. NR 409.04, 409.05 or 409.055 is in effect. Although the unit is not an affected unit, the unit shall be subject to the requirements of s. NR 409.04, 409.05 or 409.055, as applicable to the exemption.

SECTION 3. NR 409.01(1)(c) is amended to read:

NR 409.01(1)(c) For a determination of applicability, a ~~responsible~~ certifying official of an owner or operator of any unit may petition the administrator under 40 CFR 72.6(c). The administrator's determination of applicability shall be binding upon the department, unless the petition is found to have contained significant errors or omissions.

SECTION 4. NR 409.01(1)(d) is created to read:

NR 409.01(1)(d) All references to 40 CFR part 72, 40 CFR part 73, 40 CFR part 74, 40 CFR part 75, 40 CFR part 76, 40 CFR part 77 and 40 CFR part 78 in this chapter mean those parts of the code of federal regulations as in effect on July 1, 1998, except that in the case of CFR appendices incorporated by reference in ch. NR 484, if a more recent date is specified in the applicable section of ch. NR 484, that date shall apply.

SECTION 5. NR 409.02(2)(b) is created to read:

NR 409.02(2)(b) For purposes of nitrogen oxides emissions, the applicable limitation under s. NR 409.065.

SECTION 6. NR 409.02(2)(a)2.c. Note and (3) Note are repealed.

SECTION 7. NR 409.02(4) and (12) are amended to read:

NR 409.02(4) "Acid rain portion of an operation permit" means the legally binding written document, or portion of an operation permit, issued by the department ~~following opportunity for appeal pursuant to 40 CFR part 78, s. NR 409.11(2) or procedures in ss. 285.13, 285.81 and 227.40 to 227.60, Stats., including any permit revisions, specifying~~ which specifies the acid rain program requirements applicable to an affected source~~, to each affected unit at an affected source,~~ and to the owners and operators and the designated representative of the affected source or the affected unit.

(12) "Allowance transfer deadline" means midnight of ~~January 30~~ March 1 (or February 29 in a leap year) or, if ~~January 30~~ March 1 (or February 29 in a leap year) is not a business day, midnight of the first business day thereafter and is the deadline by which allowances may be submitted for recordation in an affected unit's compliance subaccount for the purposes of meeting the unit's acid rain emissions limitation requirements for sulfur dioxide for the previous calendar year.

SECTION 8. NR 409.02 (12g), (12m), (12s) and (17m) are created to read:

NR 409.02(12g) AAlternative contemporaneous annual emission limitation≅ means the maximum allowable NO_x emission rate (on a pound per million BTU, annual average basis) assigned to an individual unit in a NO_x emissions averaging plan pursuant to s. NR 409.065(7).

(12m) AAlternative technology≅ means a control technology for reducing NO_x emissions that is outside the scope of the definition of low NO_x burner technology. Alternative technology does not include overfire air as applied to wall-fired boilers or separated overfire air as applied to tangentially fired boilers.

(12s) AArch-fired boiler≅ means a dry bottom boiler with circular burners, or coal and air pipes, oriented downward and mounted on waterwalls that are at an angle significantly different from the horizontal axis and the vertical axis. This definition shall include only the following units: Holtwood unit 17, Hunlock unit 6, and Sunbury units 1A, 1B, 2A, and 2B. This definition shall exclude dry bottom turbo-fired boilers.

Note: Arch-fired boilers that are wet bottom boilers are specifically excluded from this definition.

(17m) ACell burner boiler≅ means a wall-fired boiler that utilizes 2 or 3 circular burners combined into a single vertically oriented assembly that results in a compact, intense flame.

Note: Any low NO_x retrofit of a cell burner boiler that reuses the existing cell burner, close-coupled wall opening configuration would not change the designation of the unit as a cell burner boiler.

SECTION 9. NR 409.02(20) is amended to read:

NR 409.02(20) ACoal-fired≅ means<u>, except for the purposes of applying s. NR 409.065,</u> the combustion of fuel consisting of coal or any coal-derived fuel, except a coal-derived gaseous fuel with a sulfur content no greater than

natural gas, alone or in combination with any other fuel, where a unit is coal-fired if it uses coal or coal-derived fuel as its primary fuel, expressed in mmBtu; provided that, if the unit is listed in the NADB, the primary fuel is the fuel listed in the NADB under the data field "PRIMEFUEL".

SECTION 10. NR 409.02(20m), (21m), (32g), (32m), (32s), (35h), (35p), (39m), (43h), (43p), (44m), (46h), (46p), (49m), (51g), (51m), (51s) and (56m) are created to read:

NR 409.02(20m) ACoal-fired utility unit≅ means a utility unit in which the combustion of coal (or any coal-derived fuel) on a Btu basis exceeds 50.0% of its annual heat input during the following calendar year: for Phase I units, in calendar year 1990; and, for Phase II units, in calendar year 1995 or, for a Phase II unit that did not combust any fuel that resulted in the generation of electricity in calendar year 1995, in any calendar year during the period 1990-1995. For the purposes of s. NR 409.065, this definition shall apply notwithstanding the definition of Acoal-fired≅ in sub. (20).

(21m) ACombustion controls≅ means technology that minimizes NO_x formation by staging fuel and combustion air flows in a boiler. This definition shall include low NO_x burners, overfire air or low NO_x burners with overfire air.

(32g) ACustomer≅ means a purchaser of electricity not for purposes of transmission or resale.

(32m) ACyclone boiler≅ means a boiler with one or more water-cooled horizontal cylindrical chambers in which coal combustion takes place. The horizontal cylindrical chamber or chambers are attached to the bottom of the furnace. One or more cylindrical chambers are arranged either on one furnace wall or on 2 opposed furnace walls. Gaseous combustion products exiting from the chamber or chambers turn 90° to go up through the boiler while coal ash exits the bottom of the boiler as a molten slag.

(32s) ADemonstration period≅ means a period of time of not less than 15 months, approved under s. NR 409.065(6), for demonstrating that the affected unit cannot meet the applicable emission limitation under s. NR 409.065(2), (3) or (4) and establishing the minimum NO_x emission rate that the unit can achieve during long-term load dispatch operation.

(35h) ADry bottom≅ means having a furnace bottom temperature below the ash melting point and bottom ash removal as a solid.

(35p) AEconomizer≅ means the lowest temperature heat exchange section of a utility boiler where boiler feed water is heated by the flue gas.

(39m) AFlue gas≅ means the gaseous combustion products arising from the combustion of fossil fuel in a utility boiler.

(43h) AGroup 1 boiler≅ means a tangentially-fired boiler or a dry bottom wall-fired boiler that is not a cell burner boiler.

(43p) AGroup 2 boiler≅ means a wet bottom wall-fired boiler, a cyclone boiler, a boiler applying cell burner technology, a vertically fired boiler, an arch-fired boiler, or any other type of utility boiler, such as a fluidized bed or stoker boiler, that is not a Group 1 boiler.

(44m) AIncidental electricity sales≅ means the total annual sales of electricity produced by a generator that do not exceed 10% of the nameplate capacity of that generator times 8,760 hours per year and do not exceed 10% of the actual annual electric output of that generator.

(46h) ALow NO_x burners≅ or Alow NO_x burner technology≅ means commercially available combustion modification NO_x controls that minimize NO_x formation by introducing coal and its associated combustion air into a boiler such that initial combustion occurs in a manner that promotes rapid coal devolatilization in a fuel-rich, i.e., oxygen deficient, environment and introduces additional air to achieve a final fuel-lean, i.e., oxygen rich, environment to complete the combustion process. This definition shall include

the staging of any portion of the combustion air using air nozzles or registers located inside any waterwall hole that includes a burner. This definition shall exclude the staging of any portion of the combustion air using air nozzles or ports located outside any waterwall hole that includes a burner, commonly referred to as NO_x ports or separated overfire air ports.

(46p) AMaximum continuous steam flow at 100% of load≅ means the maximum capacity of a boiler as reported in item 3 (Maximum Continuous Steam Flow at 100% Load in thousand pounds per hour), Section C (design parameters), Part III (boiler information) of the U.S. department of energy=s Form EIA-767 for 1995.

Note: Copies of DOE=s Form EIA-767 may be obtained for personal use from:

DOE/EIA
Office of Coal, Nuclear, Electric and Alternative Fuels
Electric Power Division
1000 Independence Avenue SW
Washington, DC 20585-0650

(49m) ANon-plug-in combustion controls≅ means the replacement, in a cell burner boiler, of the portions of the waterwalls containing the cell burners by new portions of the waterwalls containing low NO_x burners or low NO_x burners with overfire air.

(51g) AOperating period≅ means a period of time of not less than 3 consecutive months and that occurs not more than one month prior to applying for an alternative emission limitation demonstration period under s. NR 409.065(6), during which the owner or operator of an affected unit that cannot meet the applicable emission limitation:

(a) Operates the installed NO_x emission controls in accordance with primary vendor specifications and procedures, with the unit operating under normal conditions; and

(b) Records and reports quality-assured continuous emission monitoring (CEM) and unit operating data according to the methods and procedures in 40 CFR part 75.

(51m) AOpt-in permit≅ means the legally binding written document that is contained within the acid rain portion of an operation permit and sets forth the requirements under 40 CFR part 74 for a combustion source or a process source that opts into the acid rain program.

(51s) AOpt-in source≅ means a combustion source or a process source that has elected to become an affected unit under the acid rain program and whose opt-in permit has been issued and is in effect.

(56m) APlug-in combustion controls≅ means the replacement, in a cell burner boiler, of existing cell burners by low NO_x burners or low NO_x burners with overfire air.

SECTION 11. NR 409.02(59)(c) is amended to read:

NR 409.02(59)(c) A letter of intent or similar instrument committing to purchase power, either actual electrical output or generator output capacity, from the source at a previously offered or lower price and a power sales agreement applicable to the source executed within the time frame established by the terms of the letter of intent but no later than November 15, ~~1992~~ 1993 or, where the letter of intent does not specify a time frame, a power sales agreement applicable to the source executed on or before November 15, ~~1992~~ 1993.

SECTION 12. NR 409.02(61m), (67m), (74h), (74p), and (76m) are created to read:

NR 409.02(61m) APrimary vendor≅ means the vendor of the NO_x emission control system who has primary responsibility for providing the equipment, service and technical expertise necessary for detailed design, installation and operation of the controls, including process data, mechanical drawings, operating manuals or any combination thereof.

(67m) AReburning≅ means reducing the coal and combustion air to the main burners and injecting a reburn fuel, such as gas or oil, to create a fuel-rich secondary combustion zone above the main burner zone and final combustion air to create a fuel-lean burnout zone; the formation of NO_x is inhibited in the main burner zone due to the reduced combustion intensity, and NO_x is destroyed in the fuel-rich secondary combustion zone by conversion to molecular nitrogen.

(74h) ASelective catalytic reduction≅ means a noncombustion control technology that destroys NO_x by injecting a reducing agent, e.g., ammonia, into the flue gas that, in the presence of a catalyst, e.g., vanadium, titanium or zeolite, converts NO_x into molecular nitrogen and water.

(74p) ASelective noncatalytic reduction≅ means a noncombustion control technology that destroys NO_x by injecting a reducing agent, e.g., ammonia, urea or cyanuric acid, into the flue gas, downstream of the combustion zone that converts NO_x to molecular nitrogen, water and, when urea or cyanuric acid are used, to carbon dioxide (CO_2).

(76m) AStoker boiler≅ means a boiler that burns solid fuel in a bed, on a stationary or moving grate, that is located at the bottom of the furnace.

SECTION 13. NR 409.02(77)(b)and (c) are amended to read:

NR 409.02(77)(b) By the United States postal service ~~certified mail with the official postmark or, if service is by the administrator or the department, by any other mail service by the United States postal service~~.

(c) By other equivalent means ~~with an equivalent time and date mark used in the regular course of business to indicate the date~~ of dispatch, or transmission, and ~~a record of prompt~~ delivery. Compliance with any "submission", "service" or "mailing" deadline shall be determined by the date of dispatch, transmission or mailing and not the date of receipt.

SECTION 14. NR 409.02(79m), (81m), (88), (89), and (90) are created to read:

NR 409.02(79m) ATangentially fired boiler≅ means a boiler that has coal and air nozzles mounted in each corner of the furnace where the vertical furnace walls meet. Both pulverized coal and air are directed from the furnace corners along a line tangential to a circle lying in a horizontal plane of the furnace.

(81m) ATurbo-fired boiler≅ means a pulverized coal, wall-fired boiler with burners arranged on walls so that the individual flames extend down toward the furnace bottom and then turn back up through the center of the furnace.

(88) AVertically fired boiler≅ means a dry bottom boiler with circular burners, or coal and air pipes, oriented downward and mounted on waterwalls that are horizontal or at an angle. This definition shall include dry bottom roof-fired boilers and dry bottom top-fired boilers, and shall exclude dry bottom arch-fired boilers and dry bottom turbo-fired boilers.

(89) AWall-fired boiler≅ means a boiler that has pulverized coal burners arranged on the walls of the furnace. The burners have discrete, individual flames that extend perpendicularly into the furnace area.

(90) AWet bottom≅ means having ash removal from the furnace in a molten state. The term "wet bottom boiler" shall include: wet bottom wall-fired boilers, including wet bottom turbo-fired boilers; and wet bottom boilers otherwise meeting the definition of vertically fired boilers, including wet bottom arch-fired boilers, wet bottom roof-fired boilers, and wet bottom top-fired boilers. The term "wet bottom boiler" shall exclude cyclone boilers and tangentially fired boilers.

SECTION 15. NR 409.04 is repealed and recreated to read:

NR 409.04 NEW UNITS EXEMPTION. (1) APPLICABILITY. This section applies to any new utility unit that has not previously lost an exemption under sub. (6)(d) and that, in each year starting with the first year for which the unit is to be exempt, satisfies all of the following:

(a) Serves during the entire year, except for any period before the unit commenced commercial operation, one or more generators with total nameplate capacity of 25 MWe or less.

(b) Burns fuel that does not include any coal or coal-derived fuel, except coal-derived gaseous fuel with a total sulfur content no greater than natural gas.

(c) Burns gaseous fuel with an annual average sulfur content of 0.05% or less by weight, as determined under sub. (4) and nongaseous fuel with an annual average sulfur content of 0.05% or less by weight, as determined under sub. (4).

(2) EXEMPTIONS FOR NON-ALLOCATED UNITS. (a) Any new utility unit that meets the requirements of sub. (1) and that is not allocated any allowances under 40 CFR part 73 shall be exempt from this chapter, except for the provisions of this section, 40 CFR 72.2 to 72.6, and 40 CFR 72.10 to 72.13.

(b) The exemption under par. (a) shall be effective on January 1 of the first full calendar year for which the unit meets the requirements of sub. (1). By December 31 of the first year for which the unit is to be exempt under this section, a statement signed by the designated representative, or, if no designated representative has been authorized, a certifying official of each owner of the unit shall be submitted to the department, and a copy of the statement shall be submitted to the administrator. The statement shall be submitted in a format prescribed by the administrator, shall identify the unit, state the nameplate capacity of each generator served by the unit and the fuels currently burned or expected to be burned by the unit and their sulfur content by weight, and state that the owners and operators of the unit will comply with sub. (6).

(c) After receipt of the statement under par. (b), the department shall revise under s. NR 409.12(4) the operation permit covering the source at which the unit is located, if the source has an operation permit, to add the provisions and requirements of the exemption under sub. (1), par. (a), and subs. (4) and (6).

(3) EXEMPTIONS FOR ALLOCATED UNITS. (a) Any new utility unit that meets the requirements of sub. (1) and that is allocated one or more allowances under 40 CFR part 73 shall be exempt from this chapter, except for the provisions of this section, 40 CFR 72.2 to 72.6, and 40 CFR 72.10 to 72.13, if the designated representative, or, if no designated representative has been authorized, a certifying official of each owner of the unit submits to the department and the administrator a statement, in a format prescribed by the administrator, that does all of the following:

1. Identifies the unit and states the nameplate capacity of each generator served by the unit and the fuels currently burned or expected to be burned by the unit and their sulfur content by weight.

2. States that the owners and operators of the unit will comply with sub. (6).

3. Surrenders allowances equal in number to, and with the same or earlier compliance use date as, all of those allocated to the unit under 40 CFR part 73 for the first year that the unit is to be exempt under this section and for each subsequent year.

4. Surrenders any proceeds for allowances under subd. 3. withheld from the unit under 40 CFR 73.10.

(b) The administrator deducts from the unit=s allowance tracking system account allowances under 40 CFR 72.7(c)(1)(i)(C) and receives proceeds under 40 CFR 72.7(c)(1)(i)(D). Upon completion of any deductions and receipt of any proceeds, the administrator will close the unit=s allowance tracking system account and notify the designated representative, or certifying official, and the department.

(c) The exemption under par. (a) shall be effective on January 1 of the first full calendar year for which the requirements of sub. (1) and par. (a) are met. After notification by the administrator under 40 CFR 72.7(c)(1)(ii) the department shall revise under s. NR 409.12(4) the operation permit covering the source at which the unit is located, if the source has such a permit, to add the provisions and requirements of the exemption under sub. (1), par. (a), and subs. (4) and (6).

(4) COMPLIANCE DEMONSTRATION. Compliance with the requirement that fuel burned during the year have an annual average sulfur content of 0.05% by weight or less shall be determined using a method of determining sulfur

content that provides information with reasonable precision, reliability, accessibility and timeliness, in accordance with one of the following:

(a) For gaseous fuel burned during the year, if natural gas is the only gaseous fuel burned, the requirement is assumed to be met.

(b) For gaseous fuel burned during the year where other gas in addition to or besides natural gas is burned, the requirement is met if the annual average sulfur content is equal to or less than 0.05% by weight. The annual average sulfur content, as a percentage by weight, for the gaseous fuel burned shall be calculated as follows:

$$\%S_{annual} = \frac{\sum_{n=1}^{last} \%S_n \, V_n \, d_n}{\sum_{n=1}^{last} V_n \, d_n}$$

where:

$\%S_{annual}$ is the annual average sulfur content of the fuel burned during the year by the unit, as a percentage by weight

$\%S_n$ is the sulfur content of the nth sample of the fuel delivered during the year to the unit, as a percentage by weight

V_n is the volume of the fuel in a delivery during the year to the unit of which the nth sample is taken, in standard cubic feet; or, for fuel delivered during the year to the unit continuously by pipeline, volume of the fuel delivered starting from when the nth sample of the fuel is taken until the next sample of the fuel is taken, in standard cubic feet

d_n is the density of the nth sample of the fuel delivered during the year to the unit, in lb per standard cubic foot

n is each sample taken of the fuel delivered during the year to the unit, taken at least once for each delivery; or, for fuel that is delivered during the year to the unit continuously by pipeline, at least once each quarter during which the fuel is delivered

(c) For nongaseous fuel burned during the year, the requirement is met if the annual average sulfur content is equal to or less than 0.05% by weight. The annual average sulfur content, as a percentage by weight, shall be calculated using the equation in par. (b). In lieu of the factor, volume times density, $V_n d_n$, in the equation, the factor, mass M_n, may be used, where M_n is: mass of the nongaseous fuel in a delivery during the year to the unit of which the nth sample is taken, in pounds; or, for fuel delivered during the year to the unit continuously by pipeline, mass of the nongaseous fuel delivered starting from when the nth sample of the fuel is taken until the next sample of the fuel is taken, in pounds.

(5) WRITTEN EXEMPTIONS. (a) A utility unit that was issued a written exemption under this section and that meets the requirements of sub. (1) shall be exempt from this chapter, except for the provisions of this section, 40 CFR 72.2 to 72.6 and 40 CFR 72.10 to 72.13, and shall be subject to the requirements of subs. (1) and (4), par. (b), and sub. (6) in lieu of the requirements in the written exemption. The department shall revise under s. NR 409.12(4) the operation permit covering the source at which the unit is located, if the source has an operation permit, to add the provisions and requirements of the exemption under this paragraph and subs. (1) and (4), par. (b) and sub. (6).

(b) If a utility unit under par. (a) is allocated one or more allowances under 40 CFR part 73, the designated representative, or, if no designated representative has been authorized, a certifying official of each owner of the unit shall submit to the permitting authority that issued the written

exemption a statement, in a format prescribed by the administrator, meeting the requirements of sub. (3)(a)3. and 4.

Note: The statement was to have been submitted to the permitting authority by June 30, 1998 and, if the administrator was not the permitting authority, a copy was to have been submitted to the administrator.

(6) SPECIAL PROVISIONS. (a) Duty to comply. The owners and operators and, to the extent applicable, the designated representative of a unit exempt under this section shall comply with both of the following:

1. The requirements of sub. (1) for all periods for which the unit is exempt under this section.

2. The requirements of this chapter concerning all periods for which the exemption is not in effect, even if the requirements arise, or must be complied with, after the exemption takes effect.

(b) Scope of exemption. For any period for which a unit is exempt under this section, the unit is not an affected unit under this chapter and ch. NR 407 and is not eligible under 40 CFR part 74. As an unaffected unit, the unit shall continue to be subject to any other applicable requirements in ch. NR 407.

(c) Recordkeeping. For a period of 5 years from the date the records are created, the owners and operators of a unit exempt under this section shall retain at the source that includes the unit records demonstrating that the requirements of sub. (1) are met. The 5-year period for keeping records may be extended for cause, at any time prior to the end of the period, in writing by the administrator or the department.

1. Records shall include, for each delivery of fuel to the unit or for fuel delivered to the unit continuously by pipeline, the type of fuel, the sulfur content and the sulfur content of each sample taken.

2. The owners and operators bear the burden of proof that the requirements of sub. (1) are met.

(d) Loss of exemption. 1. On the earliest of the following dates, a unit exempt under sub. (2), (3) or (5) shall lose its exemption and become an affected unit under this chapter and ch. NR 407:

a. The date on which the unit first serves one or more generators with total nameplate capacity in excess of 25 MWe.

b. The date on which the unit burns any coal or coal-derived fuel except for coal-derived gaseous fuel with a total sulfur content no greater than natural gas.

c. January 1 of the year following the year in which the annual average sulfur content for gaseous fuel burned at the unit exceeds 0.05% by weight, as determined under sub. (4), or for nongaseous fuel burned at the unit exceeds 0.05% by weight, as determined under sub. (4).

2. Notwithstanding s. NR 409.08(1)(b) and (c), the designated representative for a unit that loses its exemption under this section shall submit a complete acid rain portion of an operation permit application no later than 60 days after the first date on which the unit is no longer exempt.

3. For the purpose of applying monitoring requirements under 40 CFR part 75, a unit that loses its exemption under this section shall be treated as a new unit that commenced commercial operation on the first date on which the unit is no longer exempt.

SECTION 16. NR 409.05 is repealed and recreated to read:

NR 409.05 RETIRED UNITS EXEMPTION. (1) APPLICABILITY. This section applies to any affected unit, except for an opt-in source, that is permanently retired.

(2) SOURCE OBLIGATIONS. (a) Scope of exemption. Any affected unit, except for an opt-in source, that is permanently retired shall be exempt from the acid rain program, except for the provisions of this section, 40 CFR 72.2 to 72.6, 72.10 to 72.13, and subpart B of 40 CFR part 73.

(b) Submissions. The exemption under par.(a) shall become effective on January 1 of the first full calendar year during which that the unit is permanently retired. By December 31 of the first year that the unit is to be exempt under this section, the designated representative, authorized in accordance with subpart B of 40 CFR part 72, or, if no designated representative has been authorized, a certifying official of each owner of the unit, shall submit a statement to the department. A copy of the statement shall also be submitted to the administrator. The statement shall state, in a format prescribed by the administrator, that the unit is permanently retired and will comply with the requirements of sub. (4).

(3) DEPARTMENT=S ACTION. (a) After receipt of the notice under sub. (2)(b), the department shall amend under s. NR 409.12(4) the operation permit covering the source at which the unit is located, if the source has an operation permit, to add the provisions and requirements of the exemption under subs. (2)(a) and (4).

(b) A unit that was issued a written exemption under this section and that is permanently retired shall be exempt from the acid rain program, except for the provisions of this section, 40 CFR 72.2 to 72.6 and 72.10 to 72.13, and subpart B of 40 CFR part 73, and shall be subject to the requirements of sub. (4) in lieu of the requirements in the written exemption. The department shall amend under s. NR 409.12(4) the operation permit covering the source at which the unit is located, if the source has such a permit, to add the provisions and requirements of the exemption under this subsection and sub. (4).

(4) SPECIAL PROVISIONS. (a) Allowance allocations. A unit exempt under this section may not emit any sulfur dioxide or nitrogen oxides starting on the date that the exemption takes effect. The owners and operators of the unit will be allocated allowances in accordance with subpart B of 40 CFR part 73.

(b) Resumption of operation. A unit exempt under this section may not resume operation unless the designated representative of the source that includes the unit submits a complete acid rain portion of an operation permit application under s. NR 409.08(2) for the unit not less than 24 months prior to the later of January 1, 2000 or the date on which the unit is first to resume operation.

(c) Duty to comply. The owners and operators and, to the extent applicable, the designated representative of a unit exempt under this section shall comply with the requirements of the acid rain program concerning all periods for which the exemption is not in effect, even if the requirements arise, or must be complied with, after the exemption takes effect.

(d) Scope of exemption. For any period for which a unit is exempt under this section, the unit is not an affected unit under this chapter and ch. NR 407 and is not eligible to be an opt-in source under 40 CFR part 74. As an unaffected unit, the unit shall continue to be subject to any other applicable requirements under 40 CFR parts 70 and 72.

(e) Recordkeeping. For a period of 5 years from the date the records are created, the owners and operators of a unit exempt under this section shall retain at the source that includes the unit records demonstrating that the unit is permanently retired. The 5-year period for keeping records may be extended for cause, at any time prior to the end of the period, in writing by the administrator or the department. The owners and operators bear the burden of proof that the unit is permanently retired.

(f) Loss of exemption. 1. On the earlier of the following dates, a unit exempt under sub. (2) or (3) shall lose its exemption and become an affected unit under this chapter and ch. NR 407:

a. The date on which the designated representative submits an acid rain portion of an operation permit application under par. (b).

b. The date on which the designated representative is required under par. (b) to submit an acid rain portion of an operation permit application.

2. For the purpose of applying monitoring requirements under 40 CFR part 75, a unit that loses its exemption under this section shall be treated as a new unit that commenced commercial operation on the first date on which the unit resumes operation.

SECTION 17. NR 409.055 is created to read:

NR 409.055 NON-COGENERATION INDUSTRIAL UTILITY UNITS EXEMPTION. (1) APPLICABILITY. This section applies to any non-cogeneration, industrial utility unit that has not previously lost an exemption under sub. (4)(d) and that meets all of the following criteria:

(a) Starting on the date of the signing of the interconnection agreement under par. (b) and thereafter there has been no owner or operator of the unit, division or subsidiary or affiliate or parent company of an owner or operator of the unit, or combination thereof, whose principal business is the sale, transmission or distribution of electricity or that is a public utility under the jurisdiction of a state or local utility regulatory authority.

(b) On or before March 23, 1993, the owners or operators of the unit entered into an interconnection agreement and any related power purchase agreement with a person whose principal business is the sale, transmission or distribution of electricity or that is a public utility under the jurisdiction

of a state or local utility regulatory authority, requiring the generator or generators served by the unit to produce electricity for sale only for incidental electricity sales to the person.

(c) The unit served or serves one or more generators that, in 1985 or any year thereafter, actually produced electricity for sale only for incidental electricity sales required under the interconnection agreement and any related power purchase agreement under par. (b) or a successor agreement under sub. (4)(d)2.

(2) PETITION FOR EXEMPTION. The designated representative, authorized in accordance with subpart B of 40 CFR part 72, of a unit under sub. (1) may submit to the department a complete petition for an exemption for the unit from the requirements of the acid rain program, except for the provisions of this section, 40 CFR 72.2 to 72.6, and 40 CFR 72.10 to 72.13. A copy of the petition shall also be submitted to the administrator. A complete petition shall include all of the following elements in a format prescribed by the administrator:

(a) Identification of the unit.

(b) A statement that the unit is not a cogeneration unit.

(c) A list of the current owners and operators of the unit and any other owners and operators of the unit, starting on the date of the signing of the interconnection agreement under sub. (1)(b), and a statement that, starting on that date, there has been no owner or operator of the unit, division or subsidiary or affiliate or parent company of an owner or operator of the unit, or combination thereof whose principal business is the sale, transmission or distribution of electricity or that is a public utility under the jurisdiction of a state or local utility regulatory authority.

(d) A summary of the terms of the interconnection agreement and any related power purchase agreement under sub. (1)(b) and any successor agreement

under sub. (4)(d)2., including the date on which the agreement was signed, the amount of electricity that may be required to be produced for sale by each generator served by the unit and the provisions for expiration or termination of the agreement.

(e) A copy of the interconnection agreement and any related power purchase agreement under sub. (1)(b) and any successor agreement under sub. (4)(d)2.

(f) The nameplate capacity of each generator served by the unit.

(g) For each year starting in 1985, the actual annual electrical output of each generator served by the unit, the total amount of electricity produced for sales to any customer by each generator, and the total amount of electricity produced and sold as required by the interconnection agreement and any related power purchase agreement under sub. (1)(b) or any successor agreement under sub. (4)(d)2.

(h) A statement that each generator served by the unit actually produced electricity for sale only for incidental electricity sales, in accordance with sub. (1)(d), required under the interconnection agreement and any related power purchase agreement under sub. (1)(b) or any successor agreement under sub. (4)(d)2.

(i) The special provisions of sub. (4).

(3) DEPARTMENT'S ACTION. (a) 1. For any unit meeting the requirements of subs. (1) and (2), the department shall issue an exemption from the requirements of the acid rain program, except for the provisions of this section, 40 CFR 72.2 to 72.6, and 40 CFR 72.10 to 72.13.

2. If a petition for exemption is submitted for a unit but the designated representative fails to demonstrate that the requirements of sub. (1) are met, the department shall deny an exemption under this section.

(b) In issuing or denying an exemption under par. (a), the department shall treat the petition for exemption as a permit application and apply the procedures used for issuing or denying the draft, proposed and final acid rain portion of operation permits.

(c) An exemption issued under par. (a)1. shall become effective on January 1 of the first full year the unit meets the requirements of sub. (1).

(d) An exemption issued under par. (a)1. shall be effective until the date on which the unit loses the exemption under sub. (4)(d).

(e) After issuance of the exemption under pars. (a) and (b), the department shall amend under s. NR 409.12(4) the operation permit covering the source at which the unit is located, if the source has an operation permit, to add the provisions and requirements of the exemption under par. (a)1. and sub. (4).

(4) SPECIAL PROVISIONS. (a) Duty to comply. The owners and operators and, to the extent applicable, the designated representative of a unit exempt under this section shall comply with the requirements of the acid rain program concerning all periods for which the exemption is not in effect, even if the requirements arise, or must be complied with, after the exemption takes effect.

(b) Scope of exemption. For any period for which a unit is exempt under this section, the unit is not an affected unit under this chapter and ch. NR 407 and is not eligible to be an opt-in source under 40 CFR part 74. As an unaffected unit, the unit shall continue to be subject to any other applicable requirements under ch. NR 407.

(c) Recordkeeping. For a period of 5 years from the date the records are created, the owners and operators of a unit exempt under this section shall retain at the source that includes the unit records demonstrating that the requirements of sub. (1) are met. The owners and operators bear the burden

of proof that the requirements of this section are met. The 5-year period for keeping records may be extended for cause, at any time prior to the end of the period, in writing by the administrator or the department. Records shall include all of the following information:

1. A copy of the interconnection agreement and any related power purchase agreement under sub. (1)(b) and any successor agreement under par. (d)2.

2. The nameplate capacity of each generator served by the unit.

3. For each year starting in 1985, the actual annual electrical output of each generator served by the unit, the total amount of electricity produced for sales to any customer by each generator, and the total amount of electricity produced and sold as required by the interconnection agreement and any related power purchase agreement under sub. (1)(b) or any successor agreement under par. (d)2.

(d) Loss of exemption. 1. A Asuccessor agreement≅ is an agreement that satisfies all of the following:

a. Modifies, replaces or supersedes the interconnection agreement or related power purchase agreement under sub. (1)(b).

b. Is between the owners and operators of the unit and a person that is contractually obligated to sell electricity to the owners and operators of the unit and either whose principal business is the sale, transmission or distribution of electricity or that is a public utility under the jurisdiction of a state or local utility regulatory authority.

c. Requires the generator served by the unit to produce electricity for sale to the person under subd. 2.b. and only for incidental electricity sales, so that the total amount of electricity that the generator is required to produce for sale under the interconnection agreement or related power purchase

agreement, to the extent they are still in effect, and the successor agreement may not exceed the total amount of electricity that the generator was required to produce for sale under the interconnection agreement or related power purchase agreement under sub. (1)(b).

2. On the earliest of the following dates, a unit exempt under this section shall lose its exemption and become an affected unit under this chapter and ch. NR 407:

a. The first date on which there is an owner or operator of the unit, division or subsidiary or affiliate or parent company of an owner or operator of the unit, or combination thereof, whose principal business is the sale, transmission or distribution of electricity or that is a public utility under the jurisdiction of a state or local utility regulatory authority.

b. If any generator served by the unit actually produces any electricity for sale other than for sale to the person specified as the purchaser in the interconnection agreement or any related power purchase agreement under sub. (1)(b) or a successor agreement under subd. 2., then the day after the date on which the electricity is sold.

c. If any generator served by the unit actually produces any electricity for sale to the person specified as the purchaser in the interconnection agreement or any related power purchase agreement under sub. (1)(b) or a successor agreement under subd. 2. where the sale is not required under that interconnection agreement or related power purchase agreement or successor agreement or where the sale will result in total sales for a calendar year exceeding 10% of the nameplate capacity of that generator times 8,769 hours per year, then the day after the date on which the sale is made.

d. If any generator served by the unit actually produces any electricity for sale to the person specified as the purchaser in the interconnection agreement or related power purchase agreement under sub.

(1)(b) or a successor agreement under subd. 2. where the sale results in total sales for a calendar year exceeding 10% of the actual electric output of the generator for that year, then January 1 of the year after that year.

e. If the interconnection agreement or related power purchase agreement under sub. (1)(b) expires or is terminated, no successor agreement under subd. 2. is in effect, and any generator served by the unit actually produces any electricity for sale, then the day after the date on which the electricity is sold.

3. Notwithstanding s. NR 409.08(1)(b) and (c), the designated representative for a unit that loses its exemption under this section shall submit a complete acid rain portion of an operation permit application no later than 60 days after the first date on which the unit is no longer exempt.

4. For the purpose of applying monitoring requirements under 40 CFR part 75, a unit that loses its exemption under this section shall be treated as a new unit that commenced commercial operation on the first date on which the unit is no longer exempt.

SECTION 18. NR 409.06(2)(a), (b) and (c), (3)(f), (6)(a)2., (7)(a) and (f) and (8)(intro.) are amended to read:

NR 409.06(2)(a) The owners and operators and, to the extent applicable, designated representative of each affected source and each affected unit at the source shall comply with the monitoring requirements as provided in 40 CFR part 75~~ and section 407 of the act (42 USC 7651f) and regulations implementing section 407 of the act~~.

(b) The emissions measurements recorded and reported in accordance with 40 CFR part 75~~ and section 407 of the act (42 USC 7651f) and regulations implementing section 407 of the act~~ shall be used to determine compliance by

the unit with the acid rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the acid rain program.

(c) The requirements of 40 CFR part 75 ~~and regulations implementing section 407 of the act (42 USC 7651f)~~ do not affect the responsibility of the owners and operators to monitor emissions of other pollutants or other emissions characteristics at the unit under other applicable requirements of the act and other provisions of the operation permit for the source.

(3)(f) An allowance allocated by the administrator under the acid rain program is a limited authorization to emit sulfur dioxide in accordance with the acid rain program. No provision of the acid rain program, the acid rain portion of an operation permit application, the acid rain portion of an operation permit or ~~the written~~ an exemption under ~~ss.~~s. 409.04 ~~and~~, 409.05 or 409.055 and no provision of law may be construed to limit the authority of the United States to terminate or limit the authorization.

(6)(a)2. All emissions monitoring information, in accordance with 40 CFR part 75; *provided* that to the extent that 40 CFR part 75 provides for a 3-year period for recordkeeping, the 3-year period shall apply.

(7)(a) Any person who knowingly violates any requirement or prohibition of the acid rain program, a complete acid rain portion of an operation permit application, an acid rain portion of an operation permit or ~~a written~~ an exemption under s. NR 409.04 ~~or~~, 409.05 or 409.055, shall be subject to enforcement by the department pursuant to ch. NR 494 and ss. 285.83 and 285.87, Stats.

(f) Any provision of the acid rain program that applies to an affected unit, including a provision applicable to the designated representative of an affected unit, shall also apply to the owners and operators of the unit. Except as provided under s. NR 409.09(2), ~~section 407 of the act (42 USC~~

~~7651f) and regulations implementing section 407 of the act~~ 40 CFR 72.41, 72.42, 72.43, 74.47 and 76.11, and except with regard to the requirements applicable to units with a common stack under 40 CFR part 75, including 40 CFR 75.16, 75.17 and 75.18, the owners and operators and the designated representative of one affected unit are not liable for any violation by any other affected unit of which they are not owners or operators or the designated representative and that is located at a source of which they are not owners or operators or the designated representative.

(8) EFFECT ON OTHER AUTHORITIES. (intro.) No provision of the acid rain program, an acid rain portion of an operation permit application, an acid rain portion of an operation permit or ~~a written~~ an exemption under s. NR 409.04 ~~or~~, 409.05 or 409.055 may be construed as doing any of the following:

SECTION 19. NR 409.06(2)(c) Note and (3)(g) Note are repealed.

SECTION 20. NR 409.06(4) is created to read:

NR 409.06(4) NITROGEN OXIDES REQUIREMENTS. The owners and operators of the source and each affected unit at the source shall comply with the applicable acid rain emissions limitation for nitrogen oxides.

SECTION 21. NR 409.06(5)(b) is renumbered NR 409.06(5)(c).

SECTION 22. NR 409.06(5)(b) is created to read:

NR 409.06(5)(b) If one or more affected units governed by an approved NO_x averaging plan under s. NR 409.065(7) fail, after applying s. NR 409.065(7)(d)2.c., to meet their respective alternative contemporaneous emission limitations or annual heat input limits, then excess emissions of

nitrogen oxides occur during the year at each unit. The sum of the excess emissions of nitrogen oxides of these units shall equal the amount determined under s. NR 409.065(8)(b). The owners and operators of these units shall pay an excess emissions penalty based on the sum of the excess emissions of nitrogen oxides of the units.

SECTION 23. NR 409.065 is created to read:

NR 409.065 NITROGEN OXIDES REQUIREMENTS. (1) APPLICABILITY. (a) Except as provided in pars. (b) to (d), this section applies to each coal-fired utility unit that is subject to an acid rain emissions limitation or reduction requirement for SO_2 under Phase I or Phase II pursuant to section 404, 405 or 409 of the act (42 USC 7651c, 7651d or 7651h).

(b) The emission limitations for NO_x under this section apply to each affected coal-fired utility unit subject to section 404(d) or 409(b) of the act on the date the unit is required to meet the acid rain emissions reduction requirement for SO_2.

(c) The provisions of this section apply to each coal-fired substitution unit or compensating unit, designated and approved by U.S. EPA as a Phase I unit pursuant to 40 CFR 72.41 or 72.43 as follows:

1. A coal-fired substitution unit that is designated in a substitution plan that is approved by U.S. EPA and active as of January 1, 1995 shall be treated as a Phase I coal-fired utility unit for purposes of this section. In the event the designation of the unit as a substitution unit is terminated after December 31, 1995, pursuant to 40 CFR 72.41 and the unit is no longer required to meet Phase I SO_2 emissions limitations, the provisions of this section will continue to apply.

2. A coal-fired substitution unit that is designated in a substitution plan that is not approved by U.S. EPA or not active as of January 1, 1995, or a coal-fired compensating unit, shall be treated as a Phase II coal-fired utility unit for purposes of this section.

(2) NITROGEN OXIDES EMISSION LIMITATIONS FOR GROUP 1, PHASE I BOILERS. (a) Beginning January 1, 1996, or for a unit subject to section 404(d) of the act, the date on which the unit is required to meet acid rain emission reduction requirements for SO_2, the owner or operator of a Phase I coal-fired utility unit with a tangentially fired boiler or a dry bottom wall-fired boiler, other than units applying cell burner technology, may not discharge, or allow to be discharged, emissions of NO_x to the atmosphere in excess of the following limits, except as provided in par. (c) or (e) or in sub. (6) or (7):

1. 0.45 pound per million Btu of heat input on an annual average basis for tangentially fired boilers.

2. 0.50 pound per million Btu of heat input on an annual average basis for dry bottom wall-fired boilers other than units applying cell burner technology.

(b) The owner or operator shall determine the annual average NO_x emission rate, in pound per million Btu, using the methods and procedures specified in 40 CFR part 75.

(c) Unless the unit meets the early election requirement of sub. (5), the owner or operator of a coal-fired substitution unit with a tangentially fired boiler or a dry bottom wall-fired boiler, other than units applying cell burner technology, that satisfies the requirements of sub. (1)(c)2., shall comply with the NO_x emission limitations that apply to Group 1, Phase II boilers.

(d) The owner or operator of a Phase I unit with a cell burner boiler that converts to a conventional wall-fired boiler on or before January 1, 1995 or, for a unit subject to section 404(d) of the act, the date the unit is required to meet acid rain emissions reduction requirements for SO_2 shall comply, by the respective date or January 1, 1996, whichever is later, with the NO_x emissions limitation applicable to dry bottom wall-fired boilers under par. (a), except as provided in par. (c) or (e) or in sub. (6) or (7).

(e) The owner or operator of a Phase I unit with a Group 1 boiler that converts to a fluidized bed or other type of utility boiler not included in Group 1 boilers on or before January 1, 1995 or, for a unit subject to section 404(d) of the act, the date the unit is required to meet acid rain emissions reduction requirements for SO_2, is exempt from the NO_x emissions limitations specified in par. (a), but shall comply with the NO_x emission limitations for Group 2 boilers under sub. (3).

(f) Except as provided in sub. (5) and in par. (c), each unit subject to the requirements of this section is not subject to the requirements of sub. (4).

(3) NITROGEN OXIDES EMISSION LIMITATIONS FOR GROUP 2 BOILERS. (a) Beginning January 1, 2000 or, for a unit subject to section 409(b) of the act, the date on which the unit is required to meet acid rain emission reduction requirements for SO_2, the owner or operator of a Group 2 coal-fired boiler with a cell burner boiler, cyclone boiler, a wet bottom boiler or a vertically fired boiler may not discharge, or allow to be discharged, emissions of NO_x to the atmosphere in excess of the following limits, except as provided in sub. (6) or (7):

1. 0.68 pound per million Btu of heat input on an annual average basis for cell burner boilers. The NO_x emission control technology on which the emission limitation is based is plug-in combustion controls or non-plug-in

combustion controls. Except as provided in sub. (2)(d), the owner or operator of a unit with a cell burner boiler that installs non-plug-in combustion controls after November 15, 1990 shall comply with the emission limitation applicable to cell burner boilers. The owner or operator of a unit with a cell burner that installs non-plug-in combustion controls on or before November 15, 1990 shall comply with the applicable emission limitation for dry bottom wall-fired boilers.

2. 0.86 pound per million Btu of heat input on an annual average basis for cyclone boilers with a maximum continuous steam flow at 100% of load of greater than 1060, in thousands of pounds per hour. The NO_x emission control technology on which the emission limitation is based is natural gas reburning or selective catalytic reduction.

3. 0.84 pound per million Btu of heat input on an annual average basis for wet bottom boilers, with a maximum continuous steam flow at 100% of load of greater than 450, in thousands of pounds per hour. The NO_x emission control technology on which the emission limitation is based is natural gas reburning or selective catalytic reduction.

4. 0.80 pound per million Btu of heat input on an annual average basis for vertically-fired boilers. The NO_x emission control technology on which the emission limitation is based is combustion controls.

(b) The owner or operator shall determine the annual average NO_x emission rate, in pounds per million Btu, using the methods and procedures specified in 40 CFR part 75.

(4) NITROGEN OXIDES EMISSION LIMITATIONS FOR GROUP 1, PHASE II BOILERS. (a) Beginning January 1, 2000, the owner or operator of a Group 1, Phase II coal-fired utility unit with a tangentially-fired boiler or a dry bottom wall-fired boiler mayl not discharge, or allow to be discharged, emissions of NO_x

to the atmosphere in excess of the following limits, except as provided in sub. (5), (6) or (7):

1. 0.40 pound per million Btu of heat input on an annual average basis for tangentially-fired boilers.

2. 0.46 pound per million Btu of heat input on an annual average basis for dry bottom wall-fired boilers other than units applying cell burner technology.

(b) The owner or operator shall determine the annual average NO_x emission rate, in pounds per million Btu, using the methods and procedures specified in 40 CFR part 75.

(5) EARLY ELECTION FOR GROUP 1, PHASE II BOILERS. (a) General provisions. 1. The owner or operator of a Phase II coal-fired utility unit with a Group 1 boiler may elect to have the unit become subject to the applicable emissions limitation for NO_x under sub. (2), starting no later than January 1, 1997.

2. The owner or operator of a Phase II coal-fired utility unit with a Group 1 boiler that elects to become subject to the applicable emission limitation under sub. (2) may not be subject to sub. (4) until January 1, 2008, provided the designated representative demonstrates that the unit is in compliance with the limitation under sub. (2), using the methods and procedures specified in 40 CFR part 75, for the period beginning January 1 of the year in which the early election takes effect, but not later than January 1, 1997, and ending December 31, 2007.

3. The owner or operator of any Phase II unit with a cell burner boiler that converts to conventional burner technology may elect to become subject to the applicable emissions limitation under sub. (2) for dry bottom wall-fired boilers, provided the owner or operator complies with the provisions in subd. 2.

4. The owner or operator of a Phase II unit approved for early election may not submit an application for an alternative emissions limitation demonstration period under sub. (6) until the earlier of the following:

a. January 1, 2008.

b. Early election is terminated pursuant to par. (d)3.

5. The owner or operator of a Phase II unit approved for early election may not incorporate the unit into an averaging plan prior to January 1, 2000. On or after January 1, 2000, for purposes of the averaging plan, the early election unit will be treated as subject to the applicable emissions limitation for NO_x for Phase II units with Group 1 boilers under sub. (4).

(b) Submission of plan. In order to obtain early election status, the designated representative of a Phase II unit with a Group 1 boiler shall have submitted an early election plan to U.S. EPA by January 1, 1997, and U.S. EPA shall have approved the plan.

(c) Department=s action. Beginning January 1, 2000, the department shall approve any early election plan previously approved by U.S. EPA during Phase I, unless the plan is terminated pursuant to par. (d)3.

(d) Special provisions. 1. >Nitrogen oxides.= A unit that is governed by an approved early election plan shall be subject to an emissions limitation for NO_x as provided under par. (a)2. except as provided under subd. 3.c.

2. >Liability.= The owners and operators of a unit governed by an approved early election plan shall be liable for any violation of the plan or this section at that unit. The owners and operators shall be liable, beginning January 1, 2000, for fulfilling the obligations specified in 40 CFR part 77.

3. >Termination.= a. An approved early election plan shall be in effect only until the earlier of January 1, 2008 or January 1 of the calendar year for which a termination of the plan takes effect.

b. If the designated representative of the unit under an approved early election plan fails to demonstrate compliance with the applicable emissions limitation under sub. (2) for any year during the period beginning January 1 of the first year the early election takes effect and ending December 31, 2007, the department shall terminate the plan. The termination shall take effect beginning January 1 of the year after the year for which there is a failure to demonstrate compliance, and the designated representative may not submit a new early election plan.

c. The designated representative of the unit under an approved early election plan may terminate the plan any year prior to 2008 but may not submit a new early election plan. In order to terminate the plan, the designated representative shall submit a notice under s. NR 409.09(1)(d) by January 1 of the year for which the termination is to take effect.

d. If an early election plan is terminated any year prior to 2000, the unit shall meet, beginning January 1, 2000, the applicable emissions limitation for NO_x for Phase II units with Group 1 boilers under sub. (4).

e. If an early election plan is terminated in or after 2000, the unit shall meet, beginning on the effective date of the termination, the applicable emissions limitation for NO_x for Phase II units with Group 1 boilers under sub. (4).

(6) ALTERNATIVE EMISSION LIMITATIONS. (a) General provisions. The designated representative of an affected unit that is not an early election unit pursuant to sub. (5) and cannot meet the applicable emission limitation in sub. (2), (3) or (4) using, for Group 1 boilers, either low NO_x burner technology or an alternative technology in accordance with par. (e)11., or,

for tangentially-fired boilers, separated overfire air, or, for Group 2 boilers, the technology on which the applicable emission limitation is based may petition the department for an alternative emission limitation less stringent than the applicable emission limitation. In order for the unit to qualify for an alternative emission limitation, the designated representative shall demonstrate that the affected unit cannot meet the applicable emission limitation in sub. (2), (3) or (4) based on a showing, to the satisfaction of U.S. EPA, that all of the following apply:

1. One of the following:

a. For a tangentially-fired boiler, the owner or operator has either properly installed low NO_x burner technology or properly installed separated overfire air.

b. For a dry bottom wall-fired boiler, other than a unit applying cell burner technology, the owner or operator has properly installed low NO_x burner technology.

c. For a Group 1 boiler, the owner or operator has properly installed an alternative technology, including but not limited to reburning, selective noncatalytic reduction or selective catalytic reduction, that achieves NO_x emission reductions demonstrated in accordance with par. (e)11.

d. For a Group 2 boiler, the owner or operator has properly installed the appropriate NO_x emission control technology on which the applicable emission limitation in sub. (3) is based.

2. The installed NO_x emission control system has been designed to meet the applicable emission limitation in sub. (2), (3) or (4).

3. For a demonstration period of at least 15 months or other period of time, as provided in par. (f)1., all of the following:

a. The NO_x emission control system has been properly installed and properly operated according to specifications and procedures designed to minimize the emissions of NO_x to the atmosphere.

b. Unit operating data as specified in this section show that the unit and NO_x emission control system were operated in accordance with the bid and design specifications on which the design of the NO_x emission control system was based.

c. Unit operating data as specified in this section, continuous emission monitoring data obtained pursuant to 40 CFR part 75, and the test data specific to the NO_x emission control system show that the unit could not meet the applicable emission limitation in sub. (2), (3) or (4).

(b) Petitioning process. The petitioning process for an alternative emission limitation shall consist of the following steps:

1. The owner or operator establishes, through unit operation during a period of at least 3 months following the installation of the NO_x emission control system, that the specific unit and its NO_x emission control system were unable to meet the applicable emissions limitation under sub. (2), (3) or (4) while operated in accordance with the design operating conditions and with vendor specifications and procedures.

2. The owner or operator submits a petition for an alternative emission limitation demonstration period as specified in par. (d).

3. The owner or operator demonstrates, during a demonstration period of at least 15 months or other period of time as provided in par. (f)1., that the specific unit is able to meet neither the applicable emissions limitation under sub. (2), (3) or (4) nor the minimum NO_x emissions rate that the specific unit can achieve during long-term load dispatch operation.

4. The owner or operator submits a petition for a final alternative emission limitation as specified in par. (e).

(c) Deadlines. 1. >Petition for an alternative emission limitation demonstration period.= The designated representative of the unit shall submit a petition for an alternative emission limitation demonstration period to the department after the unit has been operated for at least 3 months after installation of the NO_x emission control system required under par. (a) and not later than either of the following:

a. 120 days after January 1 of the calendar year in which the alternative emission limitation demonstration period is to begin.

b. 120 days after startup of the NO_x emission control system if the unit is not operating at the beginning of that calendar year.

2. >Petition for a final alternative emission limitation.= Not later than 90 days after the end of an approved alternative emission limitation demonstration period for the unit, the designated representative of the unit may submit a petition for an alternative emission limitation to the department.

3. >Renewal of an alternative emission limitation.= In order to request continuation of an alternative emission limitation, the designated representative shall submit a petition to renew the alternative emission limitation on the date that the application for renewal of the source=s acid rain portion of an operation permit containing the alternative emission limitation is due.

(d) Contents of petition for an alternative emission limitation demonstration period. The designated representative of an affected unit that has met the minimum criteria under par. (a) and that has been operated for a period of at least 3 months following the installation of the required NO_x

emission control system may submit to the department a petition for an alternative emission limitation demonstration period. In the petition, the designated representative shall provide all of the following information:

1. Identification of the unit.

2. The type of NO_x control technology installed.

Note: NO_x control technologies include, but are not limited to, the following: low NO_x burner technology, selective noncatalytic reduction, selective catalytic reduction and reburning.

3. If an alternative technology is installed, the time period, not less than 6 consecutive months, prior to installation of the technology to be used for the demonstration required in par. (e)11.

4. Documentation as set forth in sub. (9)(b) showing that the installed NO_x emission control system has been designed to meet the applicable emission limitation in sub. (2), (3) or (4) and that the system has been properly installed according to procedures and specifications designed to minimize the emissions of NO_x to the atmosphere.

5. The date the unit commenced operation following the installation of the NO_x emission control system or the date the specific unit became subject to the emission limitations of sub. (2), (3) or (4), whichever is later.

6. The dates of the operating period, which shall be at least 3 months long.

7. Certification by the designated representative that the owner or owners or operator operated the unit and the NO_x emission control system during the operating period in accordance with all of the following:

a. Specifications and procedures designed to achieve the maximum NO_x reduction possible with the installed NO_x emission control system or the applicable emission limitation in sub. (2), (3) or (4).

b. The operating conditions upon which the design of the NO_x emission control system was based.

c. Vendor specifications and procedures.

8. A brief statement describing the reason or reasons why the unit cannot achieve the applicable emission limitation in sub. (2), (3) or (4).

9. A demonstration period plan, as set forth in sub. (9)(c).

10. Unit operating data and quality-assured continuous emission monitoring data, including the specific data items listed in sub. (9)(d), collected in accordance with 40 CFR part 75 during the operating period and demonstrating the inability of the specific unit to meet the applicable emission limitation in sub. (2), (3) or (4) on an annual average basis while operating as certified under subd. 7.

11. An interim alternative emission limitation, in pounds per million Btu, that the unit can achieve during a demonstration period of at least 15 months. The interim alternative emission limitation shall be derived from the data specified in subd. 10. using methods and procedures satisfactory to U.S. EPA.

12. The proposed dates of the demonstration period, which shall be at least 15 months long.

13. A report which outlines the testing and procedures to be taken during the demonstration period in order to determine the maximum NO_x emission reduction obtainable with the installed system. The report shall include the reasons for the NO_x emission control system's failure to meet the applicable emission limitation, and the tests and procedures that will be followed to optimize the NO_x emission control system's performance. Tests and procedures may include those identified in s. NR 439.098 as appropriate.

14. The special provisions at par. (g)1.

(e) Contents of petition for a final alternative emission limitation. After the approved demonstration period, the designated representative of the unit may petition the department for an alternative emission limitation. The petition shall include all of the following elements:

1. Identification of the unit.

2. Certification that the owner or owners or operator operated the affected unit and the NO_x emission control system during the demonstration period in accordance with all of the following:

a. Specifications and procedures designed to achieve the maximum NO_x reduction possible with the installed NO_x emission control system or the applicable emissions limitation in sub. (2), (3) or (4).

b. The operating conditions including load dispatch conditions upon which the design of the NO_x emission control system was based.

c. Vendor specifications and procedures.

3. Certification that the owner or owners or operator have installed in the affected unit all NO_x emission control systems, made any operational modifications, and completed any planned upgrades and maintenance to equipment specified in the approved demonstration period plan for optimizing NO_x emission reduction performance, consistent with the demonstration period plan and the proper operation of the installed NO_x emission control system. The certification shall explain any differences between the installed NO_x emission control system and the equipment configuration described in the approved demonstration period plan.

4. A clear description of each step or modification taken during the demonstration period to improve or optimize the performance of the installed NO_x emission control system.

5. Engineering design calculations and drawings that show the technical specifications for installation of any additional operational or emission control modifications installed during the demonstration period.

6. Unit operating and quality-assured continuous emission monitoring data, including the specific data listed in sub. (9)(e), collected in accordance with 40 CFR part 75 during the demonstration period and demonstrating the inability of the specific unit to meet the applicable emission limitation in sub. (2), (3) or (4) on an annual average basis while operating in accordance with the certification under subd. 2.

7. A report, based on the parametric test requirements in the approved demonstration period plan as identified in par. (d)13., that demonstrates the unit was operated in accordance with the operating conditions upon which the design of the NO_x emission control system was based and describes the reason or reasons for the failure of the installed NO_x emission control system to meet the applicable emission limitation in sub. (2), (3) or (4) on an annual-average basis.

8. The minimum NO_x emission rate, in pounds per million Btu, that the affected unit can achieve on an annual average basis with the installed NO_x emission control system. This value, which shall be the requested alternative emission limitation, shall be derived from the data specified in this section using methods and procedures satisfactory to U.S. EPA and shall be the lowest annual emission rate the unit can achieve with the installed NO_x emission control system.

9. All supporting data and calculations documenting the determination of the requested alternative emission limitation and its conformance with the methods and procedures satisfactory to U.S. EPA.

10. The special provisions in par. (g)2.

11. In addition to the other requirements of this section, the owner or operator of an affected unit with a Group 1 boiler that has installed an alternative technology, in addition to or in lieu of low NO_x burner technology, and cannot meet the applicable emission limitation in sub. (2) shall demonstrate, to the satisfaction of U.S. EPA, that the actual percentage reduction in NO_x emissions (pounds per million Btu), on an annual average basis is greater than 65% of the average annual NO_x emissions prior to the installation of the NO_x emission control system. The percentage reduction in NO_x emissions shall be determined using continuous emissions monitoring data for NO_x taken during the time period, under par. (d)3., prior to the installation of the NO_x emission control system and during long-term load dispatch operation of the specific boiler.

(f) Department=s action. 1. >Alternative emission limitation demonstration period.= a. The department may approve an alternative emission limitation demonstration period and demonstration period plan, provided that the requirements of this section are met to the satisfaction of the department. The department shall disapprove a demonstration period if the requirements of par. (a) were not met during the operating period.

b. If the demonstration period is approved, the department shall include, as part of the demonstration period, the 4-month period prior to submission of the application in the demonstration period.

c. During the alternative emission limitation demonstration period, a unit may emit at a rate not greater than the interim alternative emission limitation on or after the applicable date established in sub. (3) or (4) and until the date that U.S. EPA approves or denies a final alternative emission limitation.

d. After an alternative emission limitation demonstration period is approved, if the designated representative requests an extension of the

demonstration period in accordance with par. (g)1.b., the department may extend the demonstration period by administrative revision under s. NR 409.12(4) to the acid rain portion of an operation permit.

e. The department shall deny the demonstration period if the designated representative cannot demonstrate that the unit met the requirements of par. (a) during the operating period. In those cases, the department shall require that the owner or operator operate the unit in compliance with the applicable emission limitation in sub. (2), (3) or (4) for the period preceding the submission of the application for an alternative emission limitation demonstration period, including the operating period, if the periods are after the date on which the unit is subject to the standard limit under sub. (2), (3) or (4).

2. >Alternative emission limitation.= a. If the department determines that the requirements in this subsection are met, the department shall approve an alternative emission limitation and issue or revise an acid rain portion of an operation permit to apply the approved limitation, in accordance with s. NR 409.11. The permit shall authorize the unit to emit at a rate not greater than the approved alternative emission limitation, starting the date the department revises an acid rain portion of an operation permit to approve an alternative emission limitation.

b. If the department disapproves an alternative emission limitation under subpar. a., the owner or operator shall operate the affected unit in compliance with the applicable emission limitation in sub. (2), (3) or (4), unless the unit is participating in an approved averaging plan under sub. (7), beginning on the date the department revises an acid rain portion of an operation permit to disapprove an alternative emission limitation.

3. >Alternative emission limitation renewal.= a. If, upon review of a petition to renew an approved alternative emission limitation, the department determines that no changes have been made to the control technology, its operation, the operating conditions on which the alternative emission limitation was based or the actual NO_x emission rate, the alternative emission limitation shall be renewed.

b. If the department determines that changes have been made to either the control technology, its operation, the fuel quality or the operating conditions on which the alternative emission limitation was based, the designated representative shall submit, in order to renew the alternative emission limitation or to obtain a new alternative emission limitation, a petition for an alternative emission limitation demonstration period that meets the requirements of par. (d) using a new demonstration period.

(g) Special provisions. 1. >Alternative emission limitation demonstration period.= a. Each unit with an approved alternative emission limitation demonstration period shall comply with the interim emission limitation specified in the unit's permit beginning on the effective date of the demonstration period specified in the permit and, if a timely petition for a final alternative emission limitation is submitted, extending until the date on which the department issues or revises an acid rain portion of an operation permit to approve or disapprove an alternative emission limitation. If a timely petition is not submitted, then the unit shall comply with the standard emission limit under sub. (2), (3) or (4) beginning on the date the petition was required to be submitted under par. (c)2.

b. When the owner or operator identifies, during the demonstration period, boiler or NO_x emission control system operating modifications or upgrades that would produce further NO_x emission reductions, enabling the affected unit to comply with or bring its emission rate closer to the

applicable emissions limitation under sub. (2), (3) or (4), the designated representative may submit a request and the department may grant, by administrative revision under s. NR 409.12(4), an extension of the demonstration period for a period of time not to exceed 12 months as may be necessary to implement the modifications or upgrades.

c. If the approved interim alternative emission limitation applies to a unit for part, but not all, of a calendar year, the unit shall determine compliance for the calendar year in accordance with the procedures in sub. (8)(a).

d. A unit with an approved alternative emission limitation demonstration period shall be operated under load dispatch conditions consistent with the operating conditions upon which the design of the NO_x emission control system and performance guarantee were based, and in accordance with the demonstration period plan.

e. A unit with an approved alternative emission limitation demonstration period shall install all NO_x emission control systems, make any operational modifications, and complete any upgrades and maintenance to equipment specified in the approved demonstration period plan for optimizing NO_x emission reduction performance.

f. When the owner or operator identifies boiler or NO_x emission control system operating modifications or upgrades that would produce further NO_x emission reductions, enabling the affected unit to comply with or bring its emission rate closer to the applicable emission limitation under sub. (2), (3) or (4), the designated representative may submit a request and the department may grant, by administrative revision under s. NR 409.12(4), a revision to the unit's acid rain portion of an operation permit and demonstration period plan to include the modifications or upgrades.

g. A unit with an approved alternative emission limitation demonstration period shall monitor in accordance with 40 CFR part 75 and shall conduct all tests required under the approved demonstration period plan.

2. >Final alternative emission limitation.= a. Each unit with an approved alternative emission limitation shall comply with the alternative emission limitation specified in the unit's permit beginning on the date specified in the permit as issued or revised by the department to apply the final alternative emission limitation.

b. If the approved interim or final alternative emission limitation applies to a unit for part, but not all, of a calendar year, the unit shall determine compliance for the calendar year in accordance with the procedures in sub. (8)(a).

(7) EMISSIONS AVERAGING. (a) General provisions. 1. In lieu of complying with the applicable emission limitation in sub. (2), (3) or (4), any affected units subject to such emission limitation, under control of the same owner or operator, and having the same designated representative may average their NO_x emissions under an averaging plan approved under this subsection.

2. Each affected unit included in an averaging plan for Phase II shall be a boiler subject to an emission limitation in sub. (2), (3) or (4) for all years for which the unit is included in the plan.

3. Each unit included in an averaging plan shall have an alternative contemporaneous annual emission limitation (pounds per million Btu) and can only be included in one averaging plan.

4. Each unit included in an averaging plan shall have a minimum allowable annual heat input value (million Btu), if it has an alternative contemporaneous annual emission limitation more stringent than that unit's applicable emission limitation under sub. (2), (3) or (4), and a maximum

allowable annual heat input value, if it has an alternative contemporaneous annual emission limitation less stringent than that unit's applicable emission limitation under sub. (2), (3) or (4).

5. The Btu-weighted annual average emission rate for the units in an averaging plan shall be less than or equal to the Btu-weighted annual average emission rate for the same units had they each been operated, during the same period of time, in compliance with the applicable emission limitations in sub. (2), (3) or (4).

6. In order to demonstrate that the proposed plan is consistent with par. (a)4., the alternative contemporaneous annual emission limitations and annual heat input values assigned to the units in the proposed averaging plan

$$\frac{\sum_{i=1}^{n}(R_{Li} \times HI_i)}{\sum_{i=1}^{n} HI_i} \leq \frac{\sum_{i=1}^{n}(R_{li} \times HI_i)}{\sum_{i=1}^{n} HI_i} \quad (Equation\ 1)$$

shall meet the following requirement:

where:

R_{Li} is the alternative contemporaneous annual emission limitation for unit i, in pounds per million Btu, as specified in the averaging plan

R_{li} is the applicable emission limitation for unit i, in pounds per million Btu, as specified in sub. (2), (3) or (4) except that for early election units, which may be included in an averaging plan only on or after January 1, 2000, R_{li} shall equal the most stringent applicable emission limitation under sub. (2) or (4); for units with an alternative emission limitation, R_{li} shall equal the applicable emissions limitation under sub. (2), (3) or (4), not the alternative emissions limitation.

HI_i is the annual heat input for unit i, in million Btu, as specified in the averaging plan

n is the number of units in the averaging plan.

7. No unit may be included in more than one averaging plan.

(b) Submission requirements. 1. The designated representative of a unit meeting the requirements of par. (a)1. and 7. may submit an averaging plan or a revision to an approved averaging plan to the department and any other applicable permitting authorities at any time up to and including January 1 (or July 1, if the plan is restricted to only units located within the department=s jurisdiction) of the calendar year for which the averaging plan is to become effective.

2. The designated representative shall submit a copy of the same averaging plan, or the same revision to an approved averaging plan, to any other permitting authority with jurisdiction over a unit in the plan, and to U:S. EPA.

3. When an averaging plan or a revision to an approved averaging plan is not approved, the owner or operator of each unit in the plan shall operate the unit in compliance with the emission limitation that would apply in the absence of the averaging plan or revision to a plan.

(c) Contents of NO_x averaging plan. A complete NO_x averaging plan shall include all of the following elements:

1. Identification of each unit in the plan.

2. Each unit's applicable emission limitation in sub. (2), (3) or (4).

3. The alternative contemporaneous annual emission limitation for each unit (in pounds per million Btu). If any of the units identified in the NO_x averaging plan utilize a common stack pursuant to 40 CFR 75.17(a)(2)(i)(B),

the same alternative contemporaneous emission limitation shall be assigned to each unit and different heat input limits may be assigned.

4. The annual heat input limit for each unit (in million Btu).

5. The calculation for Equation 1 in par. (a)5.

6. The calendar years for which the plan will be in effect.

7. The special provisions in par. (d).

(d) Special provisions. 1. >Emission limitations.= Except as provided as in subd. 2., each affected unit in an approved averaging plan is in compliance with the acid rain emission limitation for NO_x under the plan if all of the following requirements are met:

a. For each unit, the unit's actual annual average emission rate for the calendar year, in pounds per million Btu, is less than or equal to its alternative contemporaneous annual emission limitation in the averaging plan.

b. For each unit with an alternative contemporaneous emission limitation less stringent than the applicable emission limitation in sub. (2), (3) or (4), the actual annual heat input for the calendar year does not exceed the annual heat input limit in the averaging plan.

c. For each unit with an alternative contemporaneous annual emission limitation more stringent than the applicable emission limitation in sub. (2), (3) or (4), the actual annual heat input for the calendar year is not less than the annual heat input limit in the averaging plan.

2. >Group showing of compliance.= If one or more of the units does not meet the requirements under subd. 1., the designated representative shall demonstrate, in accordance with subpar. a. (i.e., Equation 2) that the actual Btu-weighted annual average emission rate for the units in the plan is less than or equal to the Btu-weighted annual average rate for the same units had

they each been operated, during the same period of time, in compliance with the applicable emission limitations in sub. (2), (3) or (4).

a. A group showing of compliance shall be made based on the following

$$\frac{\sum_{i=1}^{n}(R_{ai} \times HI_{ai})}{\sum_{i=1}^{n} HI_{ai}} \leq \frac{\sum_{i=1}^{n}(R_{li} \times HI_{ai})}{\sum_{i=1}^{n} HI_{ai}} \quad (Equation\ 2)$$

equation:

where:

R_{ai} is the actual annual average emission rate for unit i, in pounds per million Btu, as determined using the procedures in 40 CFR part 75. For units in an averaging plan utilizing a common stack pursuant to 40 CFR 75.17(a)(2)(i)(B), use the same NO_x emission rate value for each unit utilizing the common stack, and calculate this value in accordance with appendix F of 40 CFR part 75

R_{li} is the applicable annual emission limitation for unit i, in pounds per million Btu, as specified in sub. (2), (3) or (4), except that for early election units, which may be included in an averaging plan only on or after January 1, 2000, R_{li} shall equal the most stringent applicable emission limitation under sub. (2) or (4); for units with an alternative emission limitation, R_{li} shall equal the applicable emission limitation under sub. (2), (3) or (4), not the alternative emission limitation.

HI_{ai} is the actual annual heat input for unit i, in million Btu, as determined using the procedures in 40 CFR part 75

n is the number of units in the averaging plan

b. If there is a successful group showing of compliance under subpar. a. for a calendar year, then all units in the averaging plan shall be deemed to be in compliance for that year with their alternative contemporaneous emission limitations and annual heat input limits under subd. 1.

3. >Liability.= The owners and operators of a unit governed by an approved averaging plan shall be liable for any violation of the plan or this section at that unit or any other unit in the plan, including liability for fulfilling the obligations specified in 40 CFR part 77 and sections 113 and 411 of the act.

4. >Withdrawal or termination.= The designated representative may submit a notification to terminate an approved averaging plan in accordance with s. NR 409.09(1)(d), no later than October 1 of the calendar year for which the plan is to be withdrawn or terminated.

(8) COMPLIANCE AND EXCESS EMISSIONS. Excess emissions of nitrogen oxides under 40 CFR 77.6 shall be calculated as follows:

(a) For a unit that is not in an approved averaging plan:

1. Calculate EE_i for each portion of the calendar year that the unit is subject to a different NO_x emission limitation:

$$EE_i = \frac{(R_{ai} - R_{li}) \times HI_i}{2000} \quad \textit{(Equation 3)}$$

where:

EE_i is the excess emissions for NO_x for the portion of the calendar year (in tons)

R_{ai} is the actual average emission rate for the unit (in pounds per million Btu), determined according to 40 CFR part 75 for the portion of the calendar year for which the applicable emission limitation R_{li} is in effect

R_{li} is the applicable emission limitation for the unit (in pounds per million Btu), as specified in sub. (2), (3) or (4) or as determined under sub. (6)

HI_i is the actual heat input for the unit, (in million Btu), determined according to 40 CFR part 75 for the portion of the calendar year for which the applicable emission limitation, R_{li}, is in effect.

2. If EE_i is a negative number for any portion of the calendar year, the EE value for that portion of the calendar year shall be equal to zero (e.g., if $EE_i = -100$, then $EE_i = 0$).

3. Sum all EE_i values for the calendar year:

$$EE = \sum_{i=1}^{n} EE_i \quad \textit{(Equation 4)}$$

where:

EE is the excess emissions for NO_x for the year (in tons)

n is the number of time periods during which a unit is subject to different emission limitations

(b) For units participating in an approved averaging plan, when all the

$$EE = \frac{\sum_{i=1}^{n}(R_{ai} \times HI_i) - \sum_{i=1}^{n}(R_{li} \times HI_i)}{2000} \quad \textit{(Equation 5)}$$

requirements under sub. (7)(d)1. and 2. are not met:

where:

EE is the excess emissions for NO_x for the year (in tons)

R_{ai} is the actual annual average emission rate for NO_x for unit i (in pounds per million Btu), determined according to 40 CFR part 75

R_{li} is the applicable emission limitation for unit i (in pounds per million Btu), as specified in sub. (2), (3) or (4)

HI_i is the actual annual heat input for unit i (in million Btu) determined according to 40 CFR part 75

n is the number of units in the averaging plan

(9) MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS. (a) Unless otherwise provided, the owners and operators of the source and each affected unit at the source shall keep on site certain relevant documents described

below for a period of 5 years from the date the document is created. This period may be extended for cause, at any time prior to the end of 5 years, in writing by the administrator or department. The following documents shall be kept at the source:

1. The certificate of representation for the designated representative for the source and each affected unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR 72.24; provided that the certificate and documents shall be retained on site at the source beyond the 5-year period until the documents are superseded because of the submission of a new certificate of representation changing the designated representative.

2. All emissions monitoring information, in accordance with 40 CFR part 75.

3. Copies of all reports, compliance certifications and other submissions and all records made or required under the acid rain program.

4. Copies of all documents used to complete an acid rain portion of an operation permit application and any other submission under the acid rain program or to demonstrate compliance with the requirements of this chapter and the acid rain program.

(b) In accordance with sub. (6)(d)4., a petition for an alternative emission limitation demonstration period shall include the following information:

1. Documentation that the owner or operator solicited bids for a NO_x emission control system designed for application to the specific boiler and designed to achieve the applicable emission limitation in sub.(2), (3) or (4) on an annual average basis. This documentation shall include a copy of all bid specifications.

2. A copy of the performance guarantee submitted by the vendor of the installed NO_x emission control system to the owner or operator showing that the system was designed to meet the applicable emission limitation in sub. (2), (3) or (4) on an annual average basis.

3. Documentation describing the operational and combustion conditions that are the basis of the performance guarantee.

4. Certification by the primary vendor of the NO_x emission control system that the equipment and associated auxiliary equipment was properly installed according to the modifications and procedures specified by the vendor.

5. Certification by the designated representative that the owner or owners or operator installed technology that meets the requirements of sub. (6)(a).

(c) In accordance with sub. (6)(d)9., a petition for an alternative emission limitation demonstration period shall include the following information:

1. The operating conditions of the NO_x emission control system including load range, O_2 range, coal volatile matter range, and, for tangentially fired boilers, distribution of combustion air within the NO_x emission control system.

2. Certification by the designated representative that the owner or owners or operator have achieved and are following the operating conditions, boiler modifications and upgrades that formed the basis for the system design and performance guarantee.

3. Any planned equipment modifications and upgrades for the purpose of achieving the maximum NO_x reduction performance of the NO_x emission control system that were not included in the design specifications and performance

guarantee, but that were achieved prior to submission of this application and are being followed.

4. A list of any modifications or replacements of equipment that are to be done prior to the completion of the demonstration period for the purpose of reducing emissions of NO_x.

5. The parametric testing that will be conducted to determine the reason or reasons for the failure of the unit to achieve the applicable emission limitation and to verify the proper operation of the installed NO_x emission control system during the demonstration period. The tests shall include tests in s. NR 439.098, which may be modified according to the following criteria:

a. The owner or operator of the unit may add tests to those listed in s. NR 439.098, if the additions provide data relevant to the failure of the installed NO_x emission control system to meet the applicable emissions limitation in sub. (2), (3) or (4); or

b. The owner or operator of the unit may remove tests listed in s. NR 439.098 that are shown, to the satisfaction of the department, not to be relevant to NO_x emissions from the affected unit; and

c. In the event the performance guarantee or the NO_x emission control system specifications require additional tests not listed in s. NR 439.098, or specify operating conditions not verified by tests listed in s. NR 439.098, the owner or operator of the unit shall include additional tests.

(d) In accordance with sub. (6)(d)10., a petition for an alternative emission limitation demonstration period shall include all of the following information for the operating period:

1. The average NO_x emission rate (in pounds per million Btu) of the specific unit.

2. The highest hourly NO_x emission rate (in pounds per million Btu) of the specific unit.

3. Hourly NO_x emission rate (in pounds per million Btu), calculated in accordance with 40 CFR part 75.

4. Total heat input (in million Btu) for the unit for each hour of operation, calculated in accordance with the requirements of 40 CFR part 75.

5. Total integrated hourly gross unit load (in megawatts, gross, electrical).

(e) A petition for an alternative emission limitation shall include all of the following information in accordance with sub. (6)(e)6:

1. Total heat input (in million Btu) for the unit for each hour of operation, calculated in accordance with the requirements of 40 CFR part 75.

2. Hourly NO_x emission rate (in pounds per million Btu), calculated in accordance with the requirements of 40 CFR part 75.

3. Total integrated hourly gross unit load (in megawatts, gross, electrical).

SECTION 24. NR 409.08(1)(a) (excluding title) is renumbered 409.08(1)(a)1.

SECTION 25. NR 409.08(1)(a)2. and (b)8. Note are created to read:

NR 409.08(1)(a)2. The designated representative of any source with an affected unit subject to s. NR 409.065 shall submit, by the applicable deadline under par. (b)9., a complete acid rain portion of an operation permit application or, if the unit is covered by an acid rain portion of an operation permit, a complete permit revision that includes a complete compliance plan for NO_x emissions covering the unit.

(b)8. **Note:** Early election units were required to submit an application to U.S. EPA not later than January 1, 1997. For a Phase I or Phase II unit with a Group 1 or Group 2 boiler, the designated representative was required to submit a complete permit application and compliance plan for NO_x emissions covering the unit in Phase II to the department and U.S. EPA not later than January 1, 1998.

SECTION 26. NR 409.08(1)(c) (excluding title) is renumbered 409.08(1)(c)1.

SECTION 27. NR 409.08(1)(c)2. is created to read:

NR 409.08(1)(c)2. The designated representative of any source with an affected unit subject to s. NR 409.065 shall submit a complete acid rain portion of an operation permit application, including a complete compliance plan for NO_x emissions covering the unit, in accordance with par. (d) and with the deadlines in subd. 1.

SECTION 28. NR 409.08(1)(d) (excluding title) is renumbered 409.08(1)(d)1.

SECTION 29. NR 409.08(1)(d)2. and (e) are created to read:

NR 409.08(1)(d)2. The original and 3 copies of the compliance plan for NO_x emissions for Phase II shall be submitted to the department, and one copy of the compliance plan for NO_X emissions submitted to U.S. EPA headquarters, acid rain division.

(e) Multiple applications. Where 2 or more affected units are located at a source, the department may allow the designated representative of the source to submit, under par. (a) or (c), 2 or more acid rain portions of operation permit applications covering the units at the source, provided that each affected unit is covered by one and only one application.

SECTION 30. NR 409.08(1)(d) Note is renumbered NR 409.08(1)(e) Note.

SECTION 31. NR 409.08(2)(b) is amended to read:

NR 409.08(2)(b) Identification of each affected unit, except for an opt-in unit, at the source for which the acid rain portion of the permit application is submitted.

SECTION 32. NR 409.08(2)(f) is created to read:

NR 409.08(2)(f) If the unit is subject to s. NR 409.065, the following information:

1. Identification of each affected unit that is at the source and is subject to s. NR 409.065.

2. Identification of the boiler type of each unit.

3. Identification of the compliance option proposed for each unit, including meeting the applicable emissions limitation under s. NR 409.065(2), (3) or (4), (5) (early election), (6) (alternative emission limitation), or (7) (NO_x emissions averaging)), and any additional information required for the appropriate option in accordance with s. NR 409.065.

4. The compliance certification statements required of the designated representative in accordance with s. NR 409.07(1)(b) and (c).

SECTION 33. NR 409.08(3)(b) and (c) and (4)(a) are amended to read:

NR 409.08(3)(b) Prior to the date on which an acid rain portion of a permit is issued or denied ~~as a final department action subject to judicial~~

~~review~~, an affected unit governed by and operated in accordance with the terms and requirements of a timely and complete acid rain portion of an operation permit application shall be deemed to be operating in compliance with the acid rain program.

(c) A complete acid rain portion of an operation permit application shall be binding on the owners and operators and the designated representative of the affected source and the affected units covered by the permit application and shall be enforceable as an acid rain portion of an operation permit from the date of submission of the permit application until the issuance or denial of the acid rain portion of an operation permit ~~as a final department action subject to judicial review~~ covering the units.

(4)(a) The department shall act in accordance with this chapter and chs. NR 406 and 407 for the purpose of incorporating acid rain program requirements into each affected source's operation permit or for issuing written exemptions under ss. NR 409.04 ~~and~~, 409.05 and 409.055. To the extent that any requirements of this chapter are inconsistent with the requirements of ch. NR 406 or 407, this chapter shall take precedence and shall govern the issuance, denial, revision, reopening, renewal and appeal of the acid rain portion of an operation permit. For purposes of applying this subsection, the provisions of this chapter and of chs. NR 406 and 407 applicable to acid rain portions of operation permit applications and acid rain portions of operation permits shall also apply to petitions for exemption ~~and proposed and final written exemptions respectively~~ for ~~new or retired units~~ new units, retired units or non-cogeneration industrial utility units to the extent consistent with ss. NR 409.04 ~~and~~, 409.05 and 409.055.

SECTION 34. NR 409.09(1)(a) is renumbered NR 409.09(1)(a)1.

SECTION 35. NR 409.09(1)(a)2. is created to read:

NR 409.09(1)(a)2. A complete compliance plan for NO_x shall, for each affected unit included in the permit application and subject to s. NR 409.065, either certify that the unit will comply with the applicable emissions limitation under s. NR 409.065(2), (3), or (4) or specify one or more other acid rain compliance options for NO_x in accordance with the requirements of s. NR 409.065.

SECTION 36. NR 409.09(1)(a) Note is repealed.

SECTION 37. NR 409.09(1)(b)(intro.) is amended to read:

NR 409.09(1)(b)(intro.) Multi-unit compliance plan option. The compliance plan may include a multi-unit compliance option under sub. (2) or, for nitrogen oxides, under section 407 of the act (42 USC 7651f) or ~~regulations implementing s. 407~~ s. NR 409.065(7).

SECTION 38. NR 409.09(1)(b)(intro.) Note is repealed.

SECTION 39. NR 409.09(1)(c)(intro.) is amended to read:

NR 409.09(1)(c)(intro.) Conditional approval. In the compliance plan, the designated representative of an affected unit may propose, in accordance with this section, any acid rain compliance option for conditional approval; provided that an acid rain compliance option under section 407 of the act (42 USC 7651f) may be conditionally proposed only to the extent provided in ~~regulations implementing section 407 of the act~~ s. NR 409.065.

SECTION 40. NR 409.09(1)(c)(intro.) Note is repealed.

SECTION 41. NR 409.09(1)(c)1. and (d)1. are amended to read:

NR 409.09(1)(c)1. To activate a conditionally-approved acid rain compliance option, the designated representative shall notify the department in writing that the conditionally-approved compliance option shall actually be pursued beginning January 1 of a specified year. Notification shall be subject to the limitations on activation under sub. (2) and ~~regulations implementing section 407 of the act (42 USC 7651f)~~ s. NR 409.065. If the conditionally-approved compliance option includes a plan described in par. (b)1., the designated representative of each source governed by the plan shall sign and certify the notification.

(d)1. The designated representative for a unit may terminate an acid rain compliance option by notifying the department in writing that an approved compliance option shall be terminated beginning January 1 of a specified year. Notification shall be subject to the limitations on termination under sub. (2) and ~~regulations implementing section 407 of the act (42 USC 7651f)~~ s. NR 409.065. If the compliance option includes a plan described in par. (b)1., the designated representative for each source governed by the plan shall sign and certify the notification.

SECTION 42. NR 409.09(1)(d)4. Note is repealed.

SECTION 43. NR 409.09(2)(f)1. and 3.(intro.) and (g)1.b. are amended to read:

NR 409.09(2)(f)1. If, at any time before the end of the repowering extension under par. (e)2. b., the designated representative of a unit

governed by an approved repowering extension plan submits the notification under s. NR 409.13(2)(d) that the owners and operators have decided to terminate efforts to properly design, construct and test the repowering technology specified in the plan before completion of construction or startup testing, the designated representative may submit to the department a ~~proposed permit revision~~ requested significant permit revision demonstrating that the efforts were in good faith. A copy of the requested significant permit revision shall be submitted to the administrator. If the demonstration is to the satisfaction of the administrator, the unit may not be deemed in violation of the act because of a termination and the department shall revise the operation permit in accordance with subd. 2.

3.(intro.) The designated representative of a unit governed by an approved repowering extension plan may submit to the department a proposed significant permit revision demonstrating that the repowering technology specified in the plan was properly constructed and tested on the unit but was unable to achieve the emissions reduction ~~limitations~~ requirements specified in the plan and that it is economically or technologically infeasible to modify the technology to achieve the emission limits. A copy of the requested significant permit revision shall be submitted to the administrator. In order to be properly constructed and tested, the repowering technology shall be constructed at least to the extent necessary for direct testing of multiple combustion emissions, including sulfur dioxide and nitrogen oxides, from the unit while operating the technology at nameplate capacity. If the demonstration is to the satisfaction of the administrator:

(g)1.b. Any existing unit governed by an approved repowering extension plan shall be subject to the acid rain emissions limitations for nitrogen oxides in accordance with section 407 of the act (42 USC 7651f) and ~~regulations implementing section 407 of the act~~ s. NR 409.065 beginning on the

date that the unit is removed from operation to install the repowering technology or is permanently removed from service.

SECTION 44. NR 409.09(2)(g)1.b. Note is repealed.

SECTION 45. NR 409.10(2) is amended to read:

NR 409.10(2) PERMIT SHIELD. Each affected unit operated in accordance with the acid rain portion of an operation permit that governs the unit and that was issued in compliance with title IV of the act (42 USC 7651 to 7651o), as provided in this chapter, 40 CFR parts 72, 73, 74, 75, 76, 77 and 78 and the regulations implementing section 407 of the act (42 USC 7651f), shall be deemed to be operating in compliance with the acid rain program, except as provided in s. NR 409.06(7)(f).

SECTION 46. NR 409.10(2) Note is repealed.

SECTION 47. NR 409.11(1)(a) 2. and 3. and (2)(a) are amended to read:

NR 409.11(1)(a) 2. Not later than January 1, 1999, for each unit subject to an acid rain NO_x emissions limitation, the department shall ~~reopen~~ begin the process of amending the acid rain portion of an operation permit under s. NR 409.12(4) to add any NO_x early election plan that was approved by the administrator under 40 CFR 76.8 and has not been terminated and begin the process of amending the acid rain portion of the permit to add the acid rain program nitrogen oxides requirements; provided that the designated representative of the affected source submitted a timely and complete acid rain portion of an operation permit application for nitrogen oxides in

accordance with s. NR 409.07(1). The ~~reopening~~ amending may not affect the term of the acid rain portion of an operation permit.

3. Each acid rain portion of an operation permit issued in accordance with this chapter shall have a term of 5 years commencing on its effective date, provided that, at the discretion of the department, the first acid rain portion of an operation permit for Phase II may have a term of less than 5 years where necessary to coordinate the term of the permit with the term of an operation permit issued by the department to the source. Each acid rain portion of an operation permit issued in accordance with subd. 1. shall take effect by the later of January 1, 2000 or, where the permit governs a unit under s. NR 409.01(1)(a)3., the deadline for monitor certification under 40 CFR part 75.

(2)(a) Appeals of the acid rain portion of an operation permit issued by the department that do not challenge or involve decisions or actions of the administrator under 40 CFR parts 72, 73, 74, 75, 76, 77 and 78 ~~and regulations implementing sections 407 and 410 of the act (42 USC 7651f and 7651i)~~ shall be conducted according to the procedures in ch. NR 407 and ss. 285.13(1), 285.81 and 227.40 to 227.60, Stats. The permit shield under s. NR 409.10(2) shall continue to be in effect during the appeal process. Appeals of the acid rain portion of a permit that challenge or involve decisions or actions of the administrator shall follow the procedures under 40 CFR part 78 and section 307 of the act (42 USC 7607). Decisions or actions include, but are not limited to, allowance allocations, determinations concerning alternative monitoring systems and determinations of whether a technology is a qualifying repowering technology.

SECTION 48. NR 409.11(1)(c) and (2)(d) and are repealed.

SECTION 49. NR 409.11(2)(f) is amended to read:

NR 409.11(2)(f) The department shall serve written notice on the administrator of any determination or order in a state administrative or judicial proceeding that interprets, modifies, voids or otherwise relates to any portion of an acid rain portion of an operation permit. ~~Following any such determination or order, the administrator may review and veto the acid rain portion of an operation permit or revoke the permit for cause in accordance with this chapter and chs. NR 406 and 407.~~

SECTION 50. NR 409.12(1)(a), (c), (d) and (e) are amended to read:

NR 409.12(1)(a) This section governs revisions to the acid rain ~~provisions contained in~~ portion of any operation permit issued by the department under ch. NR 407. Any determination or interpretation by the department or by the state, including a state court, modifying or voiding any provision of the acid rain portion of an operation permit shall be subject to review by the administrator in accordance with 40 CFR 70.8(c) as applied to permit modifications, unless the determination or interpretation is an administrative ~~amendment~~ revision approved in accordance with 40 CFR 72.83 and sub. (4).

(c) The terms of the acid rain portion of the operation permit shall apply while the request for a permit revision is pending, except as provided in sub. (4) for administrative permit revisions.

(d) The standard requirements of ~~the acid rain program in~~ 40 CFR 72.9 may not be modified or voided by a permit revision.

(e) Any request for a permit revision to incorporate a compliance option that was not submitted for approval and comment during the permit issuance process, or involving a change in a compliance option that was

previously submitted, shall meet the requirements for applying for that compliance option under subpart D of 40 CFR ~~72.40 to 72.44 and regulations implementing section 407 of the act (42 USC 7651f)~~ part 72 and 40 CFR parts 74 and 76.

SECTION 51. NR 409.12(1)(g) is created to read:

NR 409.12(1)(g) Any designated representative who fails to submit any relevant information or who has submitted incorrect information in a permit revision shall, upon becoming aware of the failure or incorrect submittal, promptly submit the supplementary information or corrected information to the department.

SECTION 52. NR 409.12(3)(c) and (4)(a)10. are amended to read:

NR 409.12(3)(c) Within ~~30~~ 90 days of the close of the public comment period provided under par. (b), the department shall ~~review~~ consider the request for fast-track revision and the comments received on it and approve, in whole or in part or with changes or conditions as appropriate, or disapprove the request for revision. A fast-track revision shall be subject to the same provisions for review by the administrator and affected states as are applicable to a significant permit revision under sub. (2).

(4)(a)10. The addition of or change in a nitrogen oxides alternative emissions limitation demonstration period, provided that the requirements of ~~section 407 of the act (42 USC 7651f)~~ 40 CFR part 76 are met.

SECTION 53. NR 409.12(4)(a)11. and 12. are renumbered NR 409.12(4)(a)13. and 14., and NR 409.12(4)(a)14., as renumbered, is amended to read:

NR 409.12(4)(a)14. Incorporation of changes that the administrator has determined to be similar to those listed in subds. 1. to ~~10~~12.

SECTION 54 . NR 409.12(4)(a)11. and 12. are created to read:

NR 409.12(4)(a)11. The addition of a NO_x early election plan that was approved by the administrator under 40 CFR 76.8.

12. The addition of an exemption for which the requirements have been met under 40 CFR 72.7 or 72.8 or which was approved by the department under s. NR 409.055.

SECTION 55. NR 409.12(4)(b) is repealed and recreated to read:

NR 409.12(4)(b)1. Requests for administrative revisions shall be processed in accordance with s. NR 407.11(3) and (4). The department shall take final action on a request for the addition of an alternative emissions limitation demonstration period within 90 days of receipt of the requested revision and may take action without providing prior public notice.

2. The department may, on its own motion, make an administrative permit revision under par. (a)3., 4., 11. or 12. at least 30 days after providing notice to the designated representative of the revision and without providing any other public notice.

SECTION 56. NR 409.12(4)(c) and (d) are created to read:

NR 409.12(4)(c) The department shall designate the permit revision under par. (b) as having been made as an administrative permit revision. The department shall submit the revised portion of the permit to the administrator.

(d) The provisions for review by the administrator and affected states applicable to a significant permit revision under sub. (2) do not apply to an administrative permit revision.

SECTION 57 . NR 409.12(6)(a)1. is repealed and recreated to read:

NR 409.12(6)(a)1. The department, on its own motion, shall revise an acid rain provision of an operation permit whenever any of the following occurs:

a. Any additional requirement under the acid rain program becomes applicable to any affected source governed by the permit.

b. The department determines that the permit contains a material mistake or that an inaccurate statement was made in establishing the emissions standards or other terms or conditions of the permit, unless the mistake or statement is corrected in accordance with sub. (4).

c. The department determines that the permit must be revised or revoked to assure compliance with acid rain program requirements.

SECTION 58 . NR 409.12(6)(a)2. is amended to read:

NR 409.12(6)(a)2. No later than January 1, 1999, the department shall revise any permits of affected sources to add the acid rain program nitrogen oxides requirements, consistent with 40 CFR part 76, provided that the designated representative of the affected source submits a timely and complete acid rain portion of an operation permit application for nitrogen oxides, in accordance with 40 CFR 72.21. The revision may not affect the duration of the acid rain portion of an operation permit.

SECTION 59. NR 439.098 is created to read:

NR 439.098 METHODS AND PROCEDURES FOR PARAMETRIC TESTING OF NO_x EMISSIONS PURSUANT TO AN ACID RAIN PROGRAM ALTERNATIVE NO_x EMISSION LIMITATION. (1) The owner or operator of an affected unit subject to the requirements of s. NR 409.065 may use the following tests as a basis for the report required by s. NR 409.065(6)(e)7.:

(a) An ultimate analysis of coal conducted according to ASTM D 3176-89, incorporated by reference in s. NR 484.10.

(b) A proximate analysis of coal conducted according to ASTM D 3172-89, incorporated by reference in s. NR 484.10.

(c) A measurement of the coal mass flow rate to each individual burner using ASME Performance Test Code 4.2 (1991) or ISO 9931 (1991), incorporated by reference in s. NR 484.11.

(2) The owner or operator of an affected unit subject to the requirements of s. NR 409.065 may measure and record the actual NO_x emission rate in accordance with the requirements of s. NR 409.065 while varying the following parameters where possible to determine their effects on the emissions of NO_x from the affected boiler:

(a) Excess air levels.

(b) Settings of burners or coal and air nozzles, including tilt and yaw, or swirl.

(c) For tangentially fired boilers, distribution of combustion air within the NO_x emission control system.

(d) Coal mass flow rates to each individual burner.

(e) Coal-to-primary air ratio (based on pound per hour) for each burner, the average coal-to-primary air ratio for all burners, and the deviations of individual burners' coal-to-primary air ratios from the average value.

(f) If the boiler uses varying types of coal, the type of coal; in this case the owner or operator shall provide the results of proximate and ultimate analyses of each type of as-fired coal.

(3) In performing the tests specified in sub. (1), the owner or operator shall begin the tests using the equipment settings for which the NO_x emission control system was designed to meet the NO_x emission rate guaranteed by the primary NO_x emission control system vendor. These results constitute the baseline controlled condition.

(4) After establishing the baseline controlled condition under sub. (3), the owner or operator may do any of the following:

(a) Change excess air levels ∀ 5% from the baseline controlled condition to determine the effects on emissions of NO_x, by providing a minimum of 3 readings.

Note: For example, with a baseline reading of 20% excess air, excess air levels will be changed to 19% and 21%.

(b) For tangentially fired boilers, change the distribution of combustion air within the NO_x emission control system to determine the effects on NO_x emissions by providing a minimum of 3 readings, one with the minimum, one with the baseline, and one with the maximum amounts of staged combustion air.

(c) Show that the combustion process within the boiler is optimized.

Note: For example, boiler optimization can mean that the burners are balanced.

SECTION 60. NR 484.10(41m) is created to read:

Standard Number	Standard Title	Incorporated by Reference For
NR 484.10(41m) ASTM D3172-89 (1993)	Standard Practice for Proximate Analysis of Coal and Coke	NR 439.098(1)(b)

SECTION 61. NR 484.10(44) is amended to read:

Standard Number	Standard Title	Incorporated by Reference For
NR 484.10(44) ASTM D3176-89 (1993)	Standard Practice for Ultimate Analysis of Coal and Coke	40 CFR part 75 Appendices A and F NR 439.08(1)(g) NR 439.098(1)(a)

SECTION 62. NR 484.11(1) to (5) are renumbered NR 484.11(2), (3), (4), (5) and (1) and the table numbering is amended to read Table 6B, Table 6C, Table 6D, Table 6E and Table 6A, respectively.

SECTION 63. NR 484.11(6) and (7) are created to read:

NR 484.11(6) The following is a document from the American society of mechanical engineers (ASME):

Note: Copies may purchased for personal use from:

The American Society of Mechanical Engineers

22 Law Drive

Fairfield NJ 07004

TABLE 6F
ASME DOCUMENT REFERENCE

Document Number	Title	Incorporated by Reference For
PTC 4.2.69 (1997)	Test Code for Coal Pulverizers	NR 439.098(1)(c)

(7) The following is a document from the international organization for standardization (ISO):

Note: Copies may be purchased for personal use from:

American National Standards Institute

11 West 42nd Street

13th floor

New York NY 10036

TABLE 6G

ISO DOCUMENT REFERENCE

Document Number	Title	Incorporated by Reference For
ISO 9931 (1991)	Coal - Sampling of Pulverized Coal Conveyed by Gases in Direct Fired Coal Systems	NR 439.098(1)(c)

The foregoing rule was approved and adopted by the State of Wisconsin Natural Resources Board on June 30, 1999.

The rule shall take effect the first day of the month following publication in the Wisconsin administrative register as provided in s. 227.22(2)(intro.), Stats.

Dated at Madison, Wisconsin October 7, 1999.

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

By George E. Meyer
George E. Meyer, Secretary

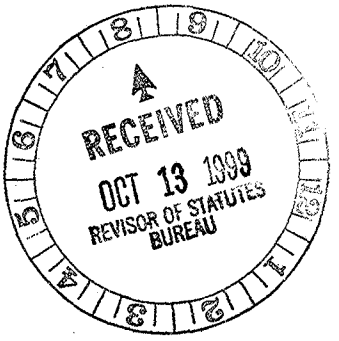
(SEAL)

WISCONSIN
DEPT. OF NATURAL RESOURCES

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor
George E. Meyer, Secretary

Box 7921
101 South Webster Street
Madison, Wisconsin 53707-7921
TELEPHONE 608-266-2621
FAX 608-267-3579
TDD 608-267-6897



October 7, 1999

Mr. Gary L. Poulson
Assistant Revisor of Statutes
131 West Wilson Street - Suite 800
Madison, WI

Dear Mr. Poulson:

Enclosed are two copies, including one certified copy, of State of Wisconsin Natural Resources Board Order No. AM-58-98. These rules were reviewed by the Assembly Committee on Environment and the Senate Committee on Agriculture, Environmental Resources and Campaign Finance Reform pursuant to s. 227.19, Stats. Summaries of the final regulatory flexibility analysis and comments of the legislative review committees are also enclosed.

You will note that this order takes effect following publication. Kindly publish it in the Administrative Code accordingly.

Sincerely,

George E. Meyer
Secretary

Enc.