

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

The Wisconsin Natural Resources Board adopts an order to renumber NR 446.02(1), 446.03(2) and (3), 446.04 and 446.05; to renumber and amend NR 446.03 (intro.) and (1); to amend NR 400.02(64), 405.01(2) Note, 405.02(22)(c), 406.04 (intro.), 408.02(2)(a) and (4), 408.04(1), 439.075(2)(b)1., 445.01(1)(a), 446.01(2) and Note and 484.05(9); and to create NR 446 Subchapter I (title), 446.02 (1), (1c), (1n), (1r), (1w), (6e), (6m), (6s), (8m) and (10s), 446.027, 446 Subchapter II, 446 Subchapter III (title), 446.14 (title) and (intro.), 484.04(20m) and (26m) and 484.10(47m) relating to the control of mercury emissions to address the atmospheric deposition of mercury.

AM-27-01

Analysis Prepared by the Department of Natural Resources

Authorizing Statutes: ss. 227.11(2)(a) and 285.11(9), Stats.

Statutes interpreted: s. 285.11(9), Stats.

The proposed order will establish requirements that would reduce mercury emissions from major electric utilities, set procedures for calculating annual mercury emissions from other large stationary sources, and require new or modified stationary sources of mercury emissions to install best available control technology for mercury emissions. The goal of these actions is to reduce the atmospheric mercury deposition to Wisconsin's environment and ultimately achieve a lowering of mercury concentrations in fish and wildlife.

The order includes provisions for major electric utilities and large stationary sources to calculate their annual mercury emissions based on procedures in the rule. Major utilities will be subject to an emission cap on their mercury emissions as of January 1, 2008; and major utilities will be required to reduce their mercury emissions from their baseline amount by 40% beginning January 1, 2010 and by 80% beginning January 1, 2015. The baseline mercury level is determined assuming uncontrolled mercury emissions from calendar years 2002, 2003 and 2004.

The rule allows major utilities to comply with the emission limitations on a system-wide basis or through agreements with other utilities. In addition, the Department may approve a multi-pollutant reduction plan for a major utility as an alternative to compliance with the 40% emission reduction requirement.

The Department staff is required to submit periodic reports to the Natural Resources Board on the implementation of the rule in consideration of the scientific and technological developments related to control of mercury emissions. In addition, the Department staff must report to the Natural Resources Board within 6 months of the adoption of federal legislation or rules regulating mercury emissions. The reports must include recommendations for changes to the state's mercury control rules based on these developments and federal changes.

The consent of the Attorney General and the Revisor of Statutes will be requested for the incorporation by reference of new test methods in ch. NR 484.

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SECTION 1. NR 400.02(64) is amended to read:

NR 400.02 (64) "Federally enforceable" means all limitations and conditions which are enforceable by the administrator, including those requirements developed pursuant to ~~chs. ch. NR 440, subch. III of ch. NR 446 and 446 chs. NR 447~~ to 449, and under sections 111 and 112 of the act (42 USC 7411 and 7412), requirements within

any applicable state implementation plan, any permit requirements established pursuant to ch. NR 405, requirements in construction permits issued under ch. NR 406 or 408 and requirements in operation permits issued pursuant to ch. NR 407 and title V of the act which are designated as federally enforceable.

SECTION 2. NR 405.01(2) Note is amended to read:

NR 405.01(2) Note: Throughout the proposed rule, changes have been made which result in the provisions of this PSD rule differing from 40 CFR 51.166, the federal regulation on which it is based. In this rule, the term "air contaminant" is substituted for the term "pollutant" in the federal regulation and "department" for "the State", "the Governor" and "reviewing authority". The federal definition for "building, structure, facility or installation" is applied to the phrase "facility, building, structure, equipment, vehicle or action" – a similar term which appears in Wisconsin's statutory provisions on air pollution. In addition, cross references in the federal regulation have been changed in the rule to comparable provisions in Wisconsin's rule (e.g., "40 CFR Parts 60 and 61" has been changed to "~~chs. ch. NR 440, subch. III of ch. NR 446 and 446 chs. NR 447~~ to 449"). Eliminated from the rule are provisions of the federal regulations which do not apply to the state's PSD program (i.e., provisions governing EPA approval of plan revisions).

SECTION 3. NR 405.02(22)(c) is amended to read:

NR 405.02(22)(c) Volatile organic compounds exclude the compounds listed under s. NR 400.02(162) unless the compound is subject to an emission limitation under ch. NR 440, subch. III of ch. NR 446 or chs. NR 446 447 to 449.

SECTION 4. NR 406.04 (intro.) is amended to read:

**NR 406.04 Direct sources exempt from construction permit requirements.** This section does not provide an exemption from construction permit requirements for a source that is required to obtain a permit under ch. NR 405 or 408 or s. NR 446.05. For any direct source not required to obtain a permit under ch. NR 405 or 408 or s. NR 446.05, no construction permit is required prior to commencing construction, reconstruction, replacement, relocation or modification if the following conditions are met:

SECTION 5. NR 408.02(2)(a) and (4) are amended to read:

NR 408.02(2)(a) Any applicable standards in ~~chs. ch. NR 440, subch. III of ch. NR 446 and 446 chs. NR 447~~ to 449.

(4) "Best available control technology" or "BACT" means an emissions limitation, including a visible emissions standard, based on the maximum degree of reduction for each air contaminant subject to regulation under the act (42 USC 7401 to 7671q) which would be emitted from any proposed major source or major modification which the department, on a case-by-case basis, taking into account energy, environmental and economic impacts and other costs, determines is achievable for such source or modification through application of production processes or available methods, systems and techniques, including clean fuels, fuel cleaning or treatment or innovative fuel combination techniques for control of the air contaminant. In no event may application of best available control technology result in emissions of any air contaminant which would exceed the emissions allowed by any applicable standard under ~~chs. ch.~~ NR 440, subch. III of ch. NR 446 and ~~446 chs.~~ NR 447 to 449. Emissions from any source utilizing clean fuels or any other means to comply with this subsection may not be allowed to increase above the levels that would have been required prior to enactment of the 1990 clean air act amendments on November 15, 1990. If the department determines that technological or economic limitations on the application of measurement methodology to a particular emissions unit would make the imposition of an emissions standard infeasible, a design, equipment, work practice, operational standard or combination thereof, may be prescribed instead to satisfy the requirement for the application of best available control technology. The standard shall, to the degree possible, set forth the emissions reduction achievable by implementation of a design, equipment, work practice or operation, and shall provide for compliance by means which achieve equivalent results.

SECTION 6. NR 408.04(1) is amended to read:

NR 408.04(1) A major source or major modification shall meet each applicable emission limitation under this chapter and each applicable emission standard or standard of performance under ~~chs. ch.~~ NR 440, subch. III of ch. NR 446 and ~~446 chs.~~ NR 447 to 449.

SECTION 7. NR 439.075(2)(b)1. is amended to read:

NR 439.075(2)(b)1. Compliance emission testing for mercury is required for an emission point ~~identified~~ in subject to s. NR 446.04(1), (2) or (3) 446.06(1)(b), 446.09(1) or 446.15(1), (2) or (3).

SECTION 9. NR 446 Subchapter I (title) preceding s. NR 446.01 is created to read:

NR 446 (title) **Subchapter I - General Provisions.**

SECTION 10. NR 446.01(2) and Note are amended to read:

NR 446.01(2) PURPOSE. This chapter is adopted under ss. 285.11, 285.13, 285.17 and 285.27, Stats., to establish emission limitations, stack sampling procedures and emission monitoring requirements for mercury emissions from air contaminant sources in order to protect air quality and reduce atmospheric mercury deposition.

Note: ~~Except for s. NR 446.03(1), this Subchapter III~~ of this chapter is based on the federal regulations contained in 40 CFR part 61, Subpart E, created October 14, 1975, as last revised September 23, 1988.

SECTION 11. NR 446.02(1) is renumbered 446.02(1g).

SECTION 12. NR 446.02 (1), (1c), (1n), (1r), (1w), (6e), (6m), (6s), (8m) and (10s) are created to read:

NR 446.02 (1) “Allowable emissions” means the annual mercury emissions of a stationary source, calculated using the maximum rated capacity of the source, and by accounting for enforceable limits which restrict the operating rate or hours of operation or both.

(1c) “Baseline mercury emissions” means the calculated level of annual mercury emissions from a major utility as determined under s. NR 446.04.

(1n) “Certified emission reduction” means a reduction of mercury emissions that has been certified by the department and made enforceable through a construction permit, operation permit or other appropriate means.

(1r) “Commission” means the public service commission.

(1w) “Controlled mercury emissions” means the calculated level of annual mercury emissions from a major utility as determined under s. NR 446.06(1)(b).

(6e) “Major stationary source” means a stationary source whose mercury emissions are 10 pounds per year or greater.

(6m) “Major utility” means a Class A utility, as defined under s. 199.03(4), Stats., that generates electricity or an electrical cooperative association organized under ch. 185, Stats., whose mercury emissions from all stationary sources under the common ownership and control of the utility or the association are 100 pounds per year or greater.

(6s) “Mercury” has the meaning given in s. NR 445.02 (9).

SECTION 13. NR 446.027 is created to read:

**NR 446.027 Procedures for determining annual mercury emissions.** Except as provided in s. NR 446.09, beginning on January 1, 2005, the owner or operator of a major stationary source shall calculate annual mercury emissions using the procedures and methods in this section.

(1) STATIONARY SOURCE COMBUSTION UNIT. (a) The owner or operator of a combustion unit at the source which is not subject to s. NR 446.09 shall calculate annual mercury emissions using the procedures of this subsection for each emissions unit and shall provide all associated data to the department.

(b) The owner or operator shall determine the mass mercury content of each fuel by multiplying the mercury content of the fuel times the amount of the fuel consumed. The mercury content of the fuel shall be determined either through testing according to the procedures in ASTM D3684-01, incorporated by reference in s. NR 484.10(47m), or an equivalent method approved by the department, or from published data which lists the mercury content of the specific fuel.

(c) The owner or operator shall calculate the removal efficiency of mercury by air pollution control equipment for each fuel used in one of the following ways:

1. Based on source performance tests on the equipment following the testing procedures in s. NR 446.09(3).

2. Based on information derived from performance testing of other combustion units which are similar in terms of the type of combustion unit, particulate control equipment, fuel characteristics, and operating parameters.

(d) The owner or operator shall determine the annual mercury emissions by subtracting the mass mercury removed by air pollution control equipment from the mass mercury in the fuel.

(e) Nothing in this section shall prohibit the department from requiring other methods of determining annual mercury emissions.

(f) The owner or operator of a combustion source subject to this subsection may request that the department approve alternative methods for determining annual mercury emissions

(2) STATIONARY SOURCE PROCESS UNIT. The owner or operator of a process unit at the source shall calculate and report annual mercury emissions from the process unit using the procedures and methods of this subsection and shall provide all associated data to the department. The calculations shall apply a mass balance

approach, emission test data, or both, as follows:

(a) A separate mass balance shall be used to calculate the mercury contained in each applicable process stream by accounting for:

1. All process streams including: process raw materials, products and by-products; and pollution control equipment and control by-products.

2. The mercury concentration and throughput rate for each process stream.

3. The annual mass mercury content input and output of each process stream.

(b) Mercury emission test data and emission factors obtained during source performance testing for any applicable process stream may also be used.

(c) The owner or operator of the process units subject to this subsection may request that the department approve alternative methods for determining annual mercury emissions.

SECTION 14. NR 446.03 (title), (intro.) and (1) are renumbered 446.025 and amended to read:

**NR 446.025 (title) Mercury ~~emission limits~~ ambient concentration limit.** No person may cause, allow or permit emissions of mercury:

(1) ~~In~~ in such quantity and duration as to cause the ambient air concentration to exceed  $1 \mu\text{g}/\text{m}^3$ , averaged over a 30-day period.

SECTION 15. NR 446.03(2) and (3) are renumbered 446.14(1) and (2).

SECTION 16. NR 446.04 and 446.05 are renumbered 446.15 and 446.16.

SECTION 17. NR 446 Subchapter II is created to read:

NR 446 (title) **Subchapter II - Control of the Atmospheric Deposition of Mercury.**

**NR 446.029 Adoption of federal mercury standard.** If a federal emission standard limiting mercury emissions from a major utility is promulgated under section 111 or 112 of the federal Clean Air Act (42 USC 7411 or 7412), the department shall adopt a similar standard, including administrative requirements that are consistent

with the federal administrative requirements. The standard adopted by the department may not be more restrictive in terms of emission limitations than the federal standard. The administrative requirements of the standard adopted by the department relating to baseline calculations, monitoring, recordkeeping and reporting shall be the same as the federal standard. No later than 18 months after the promulgation of a federal emission standard limiting mercury emissions from a major utility, the department shall revise this subchapter under the provisions of s. 227.10 or 227.24, Stats., as appropriate, to comply with the provisions of this section and s. NR 446.06(4).

**NR 446.03 Baseline mercury emissions for major utilities.** This section applies to the determination of baseline mercury emissions for major utilities.

(1) No later than October 1, 2005, the owner or operator of a major utility shall submit a report to the department that includes information to calculate the baseline mercury emissions of each combustion unit owned or operated by the major utility for calendar years 2002, 2003 and 2004, using the procedures in s. NR 446.04.

(2) After reviewing the report provided in sub. (1), the department shall determine the baseline mercury emissions for each combustion unit of the major utility. The baseline mercury emissions shall be the arithmetic average of the baseline emissions for 2002, 2003 and 2004, unless the department approves an alternative baseline requested by the major utility.

(3) In the report required under sub. (1), an owner or operator may request that the department determine an alternative baseline if the 3 years are not representative of the source's normal operations and maintenance schedule. This request shall include sufficient information to demonstrate that an alternative baseline is appropriate, a proposed alternative baseline, and information sufficient to document how the proposed alternative baseline was determined.

(4) No later than January 1, 2007, the department shall provide written notification to each owner or operator who submitted a report under sub. (1) of the department's determination of the baseline mercury emissions for each combustion unit of the major utility.

**NR 446.04 Procedures for determining baseline mercury emissions for major utilities.** The owner or operator of a major utility shall calculate baseline mercury emissions of the combustion units of the major utility using the procedures of this section for each emissions unit and provide all associated data to the department in the

report required under s. NR 446.03(1).

(1) No later than the first day of the 2<sup>nd</sup> month beginning after the effective date of the rule ... [revisor inserts date] and continuing for a calendar 12 month period, a representative sample shall be collected weekly for each solid fossil fuel used in the emissions unit in that week. Each weekly sample of a fuel collected under this subsection shall be composited into a monthly sample that shall be analyzed for mercury content using ASTM D3684-01, incorporated by reference in s. NR 484.10(47m), or an equivalent method approved by the department.

(2) The mercury content of each non-solid fossil fuel shall be determined either through testing according to the procedures in ASTM D3684-01, incorporated by reference in s. NR 484.10 (47m), or an equivalent method approved by the department or from published data which lists the mercury content of the fuel.

(3) The major utility shall determine the monthly consumption of each fuel in million British thermal units (mmBtu), using methods and procedures specified in Appendices A, B, C and F of 40 CFR part 75, incorporated by reference in s. NR 484.04(26m)(a) to (d). The major utility may apportion the fuel mmBtu to individual fuels for which the mercury content is determined under sub. (1) or (2), using consumption and delivery records for the fuels.

(4) The information gathered in subs. (1) and (2) shall be multiplied by the corresponding fuel consumption rates determined under sub. (3) to determine the total annual mercury contained in each fuel.

(5) The mercury content for each fuel, on a mmBtu-basis, shall be computed by dividing the results of sub. (4) by the amount of each fuel burned, in mmBtus, during the 12 month sampling period.

(6) The mercury emissions for 2002, 2003 and the 12 months identified in sub. (1) shall be calculated by multiplying the results of sub. (5) times the annual fuel consumption for each of those years.

(7) The baseline mercury emissions shall be the 3-year arithmetic average of the mercury emissions determined under subs. (4) and (6) for 2002, 2003 and the 12 months identified in sub. (1).

(8) The major utility shall record and report the baseline determination data and calculations for each combustion unit, including the type or types of fuel, the monthly consumption of each fuel in mmBtus, and the mercury concentration in each fuel .

(9) The owner or operator of a major utility may request that alternative procedures for determining baseline mercury emissions be approved by the department.



**NR 446.05 Mercury emission limits for new or modified sources.** (1) No person may commence construction or modification of a stationary source that results in an increase in annual allowable emissions of mercury of 10 pounds or more from the new or modified source unless the person has obtained a permit under ch. NR 406. The department may not issue a permit under ch. NR 406 for the source unless the department finds that emissions of mercury will be controlled to a level which is best available control technology.

(2) New or modified stationary sources that are subject to an emission limit for mercury required under section 112 of the Act are exempt from the requirements of this section.

(3) Except as provided in sub. (2), this section applies to all new or modified sources for which an air permit application was submitted or should have been submitted to the department under sub. (1) on or after the first day of the calendar month following the effective date of this section...[revisor inserts date].

**NR 446.055 Mercury emission reduction goal.** It is the goal of the department to encourage the major utilities to achieve the maximum amount of mercury emission reductions reasonably achievable from all stationary sources of the major utilities in the state. Specifically, the department's objective is to work with the major utilities to achieve an 80% reduction in mercury emissions by 2018, as measured from the baseline mercury emissions for the major utilities' stationary sources, as determined by the department under s. NR 446.03.

**NR 446.06 Mercury emission limits for major utilities.** (1) (a) Except as provided in sub. (4), beginning January 1, 2008, no owner or operator of a major utility may cause, allow or permit mercury emissions from stationary sources of 25 megawatts or greater of the major utility on an annual basis in an amount which exceeds the controlled mercury emissions for those units, determined by the department under par. (b).

(b) No later than October 1, 2005, the owner or operator of a major utility shall conduct a source performance test on each combustion unit to determine the control efficiency of any control equipment or emission reduction activity on the mercury emissions from the combustion unit. This control efficiency shall be applied to the baseline mercury emissions calculated under s. NR 446.03 for the unit, using the procedures in s. NR 446.09, to determine the controlled mercury emissions of the combustion unit.

(2) Except as provided in sub. (4) or (5), beginning January 1, 2010, no owner or operator of a major utility may cause, allow or permit mercury emissions from stationary sources of 25 megawatts or greater of the major

utility on an annual basis in an amount which exceeds 60% of the baseline mercury emissions for those units, determined by the department under s. NR 446.03.

(3) Except as provided in sub. (4) or (5), beginning January 1, 2015, no owner or operator of a major utility may cause, allow or permit mercury emissions from stationary sources of 25 megawatts or greater of the major utility on an annual basis in an amount which exceeds 25% of the baseline mercury emissions for those units, determined by the department under s. NR 446.03.

(4) Stationary sources of less than 25 megawatts owned or operated by a major utility for which baseline emissions have been determined by the department under s. NR 446.03 and for which controlled emissions are determined by the department under sub. (1) (b), may be included by the major utility in meeting the emission limit requirements of subs. (1), (2), and (3). Mercury emissions for units included under this subsection shall be computed in the determination of controlled mercury emissions under sub. (1) and the baseline emissions subject to the emissions limits under subs. (2) and (3) and shall be subject to the compliance and reporting requirements of s. NR 446.08.

(5) The mercury emissions from a facility owned or operated by a major utility may be exempt from the emission reduction requirements of sub. (2) or (3) if the total annual mercury emissions from all stationary sources of 25 megawatts or greater at the facility are 25 pounds or less.

(6) Pursuant to s. 285.27 (1)(a) and (2)(a), Stats., if an emission standard regulating mercury emissions from a major utility is promulgated under section 111 or 112 of the federal Clean Air Act (42 USC 7411 or 7412), the department shall promulgate a similar standard, including administrative requirements that are consistent with the federal administrative requirements. The department's standard shall have the same mercury emission reductions as the federal standard.

**NR 446.07 Multi-pollutant reduction alternative.** (1) The owner or operator of a major utility may request the department to approve a multi-pollutant alternative that provides relief from meeting the mercury reduction requirement specified in s. NR 446.06(2).

(2) Requests for consideration of a multi-pollutant reduction alternative shall be submitted to the department by the date compliance plans to meet the mercury reduction requirement specified in s. NR 446.06(2) are required. Requests shall be in writing and include the following:

(a) The annual mercury emission reductions that will be achieved in each year from the compliance date in s. NR 446.06(2) to the compliance date in s. NR 446.06(3).

(b) The schedule and reductions levels for other air contaminants that will be achieved in the multi-pollutant alternative and explanation of how the reduction levels proposed will be greater than applicable requirements as listed in s. NR 400.02(26).

(3) In order to qualify for department approval, a multi-pollutant reduction alternative shall include:

(a) A commitment by the major utility to achieve and maintain mercury reductions from the baseline set in s. NR 446.06(1) during the period identified in sub. (2)(a).

(b) A commitment by the major utility to reduce system-wide emissions beyond applicable requirements for at least 2 of the following air contaminants: fine particulate matter, nitrogen oxides, sulfur dioxide or carbon dioxide.

(4) Within 60 days of the filing of a completed request, the department shall publish a public notice on each multi-pollutant reduction alternative and the department's preliminary determination to grant or deny the request. The public notice shall provide the opportunity for public comments including, where requested, a public hearing on the request. Following the public comment period, the department shall notify the applicant in writing of the reasons for denying, granting or for granting in a modified form any request for a multi-pollutant reduction alternative.

(5) Owners and operators of major utilities receiving approval for a multi-pollutant reduction alternative shall still be required to meet the mercury reduction requirements in s. NR 446.06(3).

(6) Owners and operators of major utilities that receive approval for a multi-pollutant reduction alternative are not allowed to provide emission reduction credits to another major utility to meet the mercury reduction requirement in s. NR 446.06(2) or to trade the excess reduction increment of the pollutants identified in sub. (3)(b).

(7) Owners and operators may be required to meet any future applicable requirement for the pollutants identified in sub. (3)(b).

Note: Any environmental cooperative agreement that the department has signed with a major utility prior to the effective date of this rule ... [revisor inserts date] and that includes multi-pollutant emission reductions may be used by the major utility as the basis of a request for a multi-pollutant reduction alternative under s. NR 446.07.

**NR 446.075 Early emission reduction credits.** The owner or operator of a major utility that reduces mercury emissions from a stationary source of the major utility on or after the effective date of

this rule [revisor inserts date] and prior to January 1, 2015, may request that the department certify the emission reductions as early emission reduction credits. The department shall certify the emission reductions, in terms of pounds of mercury emissions reduced, as early emission reduction credits if the owner or operator demonstrates to the department that the reductions are actual, permanent mercury emission reductions that are not required under any state or federal law or air permit condition. Any mercury emission reduction credits may be used by the owner or operator of the major utility to meet the annual emission limitations in s. NR 446.06(2) and (3) during calendar years 2010 through 2017.

**NR 446.08 Compliance and reporting requirements for major utilities.** (1) The owner or operator of a major utility shall include mercury emissions from all combustion units under the ownership or control of the major utility in the calculation of compliance with the emission limits of s. NR 446.06.

(2) Nothing in this section precludes the owner or operator of a major utility from achieving compliance with the emission limits of s. NR 446.06(2) and (3) by obtaining excess mercury emission reduction credits generated by another major utility.

(3) By October 1, 2007, the owner or operator of a major utility shall submit a compliance plan to the department demonstrating how the combustion units of the major utility are going to meet the mercury reduction requirements of s. NR 446.06(2). The plan shall include, at a minimum, the following information:

(a) A detailed listing of the combustion units on which mercury pollution control equipment will be installed.

(b) A detailed listing of the combustion units which will switch to a lower mercury content fuel.

(c) A detailed description of any plans to improve the combustion efficiency of individual emissions units to meet the requirements of s. NR 446.06(2).

(4) By October 1, 2011, the owner or operator of a major utility shall submit an update to the compliance plan submitted under sub. (3) to demonstrate how the combustion units of the major utility are going to meet the emission reduction requirement of s. NR 446.06(3).

(5) By March 1, 2009 and no later than March 1<sup>st</sup> of each following year, the owner or operator of a major utility shall submit a compliance certification report to the department certifying that the mercury emissions from

the major utility during the preceding calendar year were in compliance with the emission limit requirements of s. NR 446.06, based on the determination made under s. NR 446.09. If the mercury emissions from the major utility from the previous year exceeded the emission limit requirements of s. NR 446.06, the compliance certification report shall include all of the following information:

1. An identification of the amount and cause of the excess mercury emissions.
2. A demonstration of how the major utility will achieve additional emission reductions in the current year equivalent to the excess mercury emissions.
3. A demonstration of how the major utility will comply with the emission limit requirements in subsequent years.

**NR 446.09 Annual mercury emissions determination and reporting.** (1) The owner or operator of an emissions unit subject to the requirements of s. NR 446.06 shall determine and report to the department by March 1, annual mercury emissions for each emissions unit, beginning with calendar year 2008 emissions, using the following formula:

Annual Mercury Emissions = Fuel Use X Mercury Content of Fuel X Reduction of Mercury Prior to its Release to the Atmosphere

where:

(a) Fuel use is the amount of fuel combusted in the combustion unit, as measured by the procedures specified in Appendices A, B, C and F of 40 CFR part 75, incorporated by reference in s. NR 484.04(26m)(a) to (d). The total amount of the fuel combusted in mmBtus may be apportioned to individual fuels, using consumption and delivery records for the fuels

(b) Mercury content of the fuel is determined according to ASTM D3684-01, incorporated by reference in s. NR 484.10(47m), or an equivalent method approved by the department, following the procedures in s. NR 446.04 (1), (2) and (3).

(c) Reduction of mercury is calculated through source performance tests which follow the procedures in this paragraph. A value of one is assumed for natural gas fired combustion units that are exempt from performance testing under sub. (6).

1. The source performance test shall be conducted according to EPA Method 101A in Appendix B of 40 CFR part 61, incorporated by reference in s. NR 484.04(23), or EPA Method 29 in Appendix A of 40 CFR part 60,

incorporated by reference in s. NR 484.04(20m).

2. A sample of the fuel burned during the test shall be analyzed for mercury content, using ASTM D3684-01, incorporated by reference in s. NR 484.10 (47m), or an equivalent method approved by the department. During each of the 3 runs of the performance test, a separate sample of the fuel being burned during the run shall be collected and analyzed.

3. During the source performance testing, the consumption of fuel shall be monitored and recorded.

4. The major utility shall submit to the department the information obtained in subds. 1. to 3. and the calculations for the percent removal efficiency of mercury.

(d) The department may require that more than one source performance test be conducted if a single test is determined to be non-representative of conditions at the combustion unit.

(2) Nothing in this section shall prohibit the department from requiring major utilities to use other methods of determining annual mercury emissions.

(3) The owner or operator of a major utility may request that alternative methods for determining annual mercury emissions be approved by the department.

(4) In addition to the performance test required under s. NR 446.06(1)(b), the owner or operator a major utility shall conduct source performance tests of the utility's combustion units according to the following schedules:

(a) All units subject to s. NR 446.06, with an electrical generating capacity equal to or greater than 200 MW, and all units that undergo process changes or change control equipment after January 1, 2006, shall have source performance tests conducted during calendar years 2010, 2013, 2015 and biennially thereafter.

(b) All units subject to s. NR 446.06, with an electrical generating capacity of less than 200 MW, and which do not undergo process changes or changes to control equipment after January 1, 2006, shall have source performance tests conducted during calendar year 2015 and every 4 years thereafter.

(5) The owner or operator of a major utility shall use the results of the most recently conducted source performance test for calculating the reduction efficiency under sub. (1)(c).

(6) Combustion units subject to s. NR 446.06 that exclusively combust natural gas are not subject to the source performance testing requirements of this section.

**NR 446.10 Variance for major utilities.** (1) The owner or operator of a major utility may request a variance from the emission reduction requirements of s. NR 446.06 (2) or (3) by submitting a written request to the department and the commission. The request shall provide sufficient information concerning the conditions or special circumstances on which the variance request is based to demonstrate to the department's satisfaction that a variance from the applicable requirements is necessary. In addition, the request shall include the following:

(a) Where an alternative compliance schedule is sought, the owner or operator shall submit a proposed schedule which demonstrates reasonable further progress and contains a date for final compliance as soon as practicable.

(b) Where an alternative reduction requirement is sought, the owner or operator shall submit a proposed reduction requirement.

(c) Requests for variances shall contain relevant information on the costs and technological feasibility of meeting the reduction requirements as required by the department.

(2) Requests for a variance from the reduction requirements in s. NR 446.06(2) shall be received by October 1, 2007.

(3) Requests for a variance from the reduction requirements in s. NR 446.06(3) shall be received by October 1, 2011.

(4) The department may grant a variance that sets an alternative reduction requirement or schedule, or both.

(5) The department may grant a variance if the owner or operator demonstrates to the department's satisfaction that the reduction requirements in s. NR 446.06 are technologically or economically infeasible.

(6) The department may grant a variance that sets an alternative schedule if the owner or operator demonstrates to the department's satisfaction that the delay is needed to complete installation and place into operation control technology to achieve compliance with a reduction requirement in s. NR 446.06.

(7) Within 90 days of the receipt of a completed request, the department shall publish a public notice on each variance request and the department's preliminary determination to grant or deny the request, to provide the opportunity for public comments including, where requested, a public hearing on the variance request. Following the public comment period, the department shall notify the variance applicant in writing of the reasons for denying, granting or for granting in a modified form any request for a variance.

(8) The department may, after notice and opportunity for hearing, revoke or modify any variance when any term or condition of the variance has been violated.

**NR 446.11 Electrical supply reliability waiver.** (1) The owner or operator of a major utility may request that the department grant a waiver from meeting the mercury emission cap in s. NR 446.06(1) or an emission reduction requirement in s. NR 446.06(2) or (3) if the major utility demonstrates that the failure was due to one of the following:

- (a) A major electrical supply emergency within or outside this state that affected the major utility.
- (b) A major fuel supply disruption that affected the major utility.
- (c) An unanticipated and unavoidable disruption in the operation of a fossil fuel fired unit at the major utility.

(2) The owner or operator of a major utility shall submit a written request for waiver within 60 days after the date that the annual compliance report required in s. NR 446.09 is due.

(3) The request shall provide sufficient information concerning the conditions on which the waiver request is based to demonstrate to the department's satisfaction that a waiver from the applicable requirements is warranted.

In addition, the request shall include the following:

- (a) The duration of the conditions during the calendar year.
- (b) The specific measures taken to mitigate mercury emissions during the duration of the conditions or to limit annual mercury emissions after the condition has ended.
- (c) The reasons why the major utility was unable to achieve compliance with a baseline mercury emission requirement or an emission reduction requirement.

(4) The department may grant a waiver under this section if, in consultation with the commission, the department determines that the major utility's failure to meet a requirement under s. NR 406.06 was due to a condition listed in sub. (1).

(5) Within 60 days after the receipt of a completed request, the department shall publish a public notice on each waiver request and the department's preliminary determination to grant or deny the request, to provide the opportunity for public comments including, where requested, a public hearing on the waiver request. Following the public comment period, the department shall notify the applicant in writing of the reasons for denying, granting or



granting in a modified form any request for a waiver.

**NR 446.12 Periodic evaluation and reconciliation reports.** (1) The department staff shall submit reports to the natural resources board and the presiding officer of each house of the legislature for referral to the appropriate legislative standing committees by January 1, 2006, by January 1, 2009 and by January 1, 2013. Each report shall include:

(a) An evaluation of the scientific and technology developments in relation to the control or reduction of mercury emissions.

(b) An evaluation of whether the requirements of s. NR 446.06 are achievable, given the scientific and technological developments.

(c) Recommendations for revisions to this subchapter or other actions based on the scientific and technological developments.

(d) An assessment of the impact of the compliance alternatives on mercury concentrations in locally affected water bodies.

(2) In addition to the reports required under sub. (1), the department staff shall report to the natural resources board and the presiding officer of each house of the legislature for referral to the appropriate legislative standing committees within 6 months of the date of the promulgation of a federal regulation under section 111 or section 112 of the Act (42 USC 7411 or 7412) or the enactment of a federal law that has mercury reduction requirements for mercury emission sources affected by this subchapter. The report shall include:

(a) A comparison of the requirements.

(b) Recommendations for revisions to this subchapter or other actions to reconcile the requirements.

(3) The natural resources board shall review these reports and, if they include recommendations for rule revisions or other actions, determine whether the department should proceed with actions based on the recommendations.

SECTION 18. NR 446 Subchapter III (title) preceding s. NR 446.14 is created to read:

NR 446 (title) **Subchapter III - Emission Standards for Mercury.**

SECTION 19. NR 446.14 (title) and (intro.) are created to read:

NR 446.14 (title) **Mercury emission limits.** (intro.) No person may cause, allow or permit emissions of mercury:

SECTION 20. NR 484.04(20m) and (26m) are created to read:

CFR Appendix Referenced	Title	Incorporated by Reference For
NR 484.04 (20m)40 CFR part 60 Appendix A, Method 29	Determination of Metals Emissions from Stationary Sources	NR 446.09(1)(c)1.
(26m)(a) 40 CFR part 75 Appendix A	Specifications and Test Procedures	NR 446.04(3) NR 446.09(1)(a)
(b) 40 CFR part 75, Appendix B	Quality Assurance and Quality Control Procedures	NR 446.04(3) NR 446.09(1)(a)
(c) 40 CFR part 75, Appendix C	Missing Data Estimation Procedures	NR 446.04(3) NR 446.09(1)(a)
(d) 40 CFR part 75 Appendix F	Conversion Procedures	NR 446.04(3) NR 446.09(1)(a)

SECTION 21. NR 484.05(9) is amended to read:

Document Reference	Document Title	Incorporated by Reference For
NR 484.05 (9) EPA-450/3-84-014, December 1984	Review of National Emission Standards for Mercury	NR <del>446.04</del> <u>446.15</u> (3)(d)Note

SECTION 22. NR 484.10(47m) is created to read:

Standard Number	Standard Title	Incorporated by Reference For
NR 484.10 (47m) ASTM D3684-01	Standard Test Method for Total Mercury in Coal by Oxygen Bomb Combustion/Atomic Absorption Method	NR 446.027(1)(b) NR 446.04(1) NR 446.04(2) NR 446.09(1)(b) NR 446.09(1)(c)2.

SECTION 23. EFFECTIVE DATE. This rule shall take effect on the first day of the month following publication in the Wisconsin administrative register as provided in s. 227.22 (2) (intro.), Stats.

SECTION 24. BOARD ADOPTION. This rule was approved and adopted by the State of Wisconsin Natural Resources Board on June 25, 2003 and June 25, 2004..

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

STATE OF WISCONSIN  
DEPARTMENT OF NATURAL RESOURCES

By \_\_\_\_\_  
Scott Hassett, Secretary

(SEAL)