

Chapter NR 405

PREVENTION OF SIGNIFICANT DETERIORATION

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NR 405.01 Applicability; purpose. (1) **APPLICABILITY.** The provisions of this chapter apply to all new major stationary sources and all major modifications to major sources located in areas designated as attainment or unclassified.

(2) **PURPOSE.** The purpose of this chapter is to establish, pursuant to s. 144.391, Stats., the requirements and procedures for reviewing and issuing air pollution control permits to all new major stationary sources and all major modifications to major sources located in areas designated as attainment or unclassified.

Note: Throughout the proposed rule, changes have been made which result in the provisions of this PSD rule differing from 40 CFR s. 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 the term "administrator of U.S. EPA" for "administrator", "federal clean air act" for "act" 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. NR 440 and 445 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 U.S. EPA approval of plan revisions).

History: Cr. Register, January, 1987, No. 373, eff. 2-1-87.

NR 405.02 Definitions. In addition to the definitions in this section, the definitions contained in ch. NR 400 apply to the terms used in this chapter.

(1) "Actual emissions" means the actual rate of emissions of an air contaminant from an emissions unit, as determined in accordance with pars. (a) through (c).

(a) In general, actual emissions as of a particular date shall equal the average rate, in tons per year, at which the unit actually emitted the air contaminant during a 2-year period which precedes the particular date and which is representative of normal source operation. The department may allow the use of a different time period upon a determination that it is more representative of normal source operation. Actual emissions shall be calculated using the unit's actual operating hours, production rates, and types of materials processed, stored, or combusted during the selected time period.

(b) The department may presume that source-specific allowable emissions for the unit are equivalent to the actual emissions of the unit.

(c) For any emissions unit which has not begun normal operations on the particular date, actual emissions shall equal the potential to emit of the unit on that date.

(2) "Allowable emissions" means the emissions rate of a stationary source calculated using the maximum rated capacity of the source (unless the source is subject to federally enforceable limits which restrict the operating rate, or hours of operation, or both) and the most stringent of the following:

(a) The applicable standards as set forth in chs. NR 440 and 445 to 449.

(b) The applicable emissions limitations, as set forth in chs. NR 400 to 499; or

(c) The emissions rate specified as a federally enforceable permit condition.

(3) "Baseline area" means any intrastate area (and every part thereof) designated as attainment or unclassifiable under section 107 (d) (1) (D) or (E) of the federal clean air act in which the major source or major modification establishing the baseline date would construct or would have an air quality impact equal to or greater than 1 ug/m^3 (annual average) of the air contaminant for which the baseline date is established. Area redesignations under section 107 (d) (1) (D) or (E) of the federal clean air act cannot intersect or be smaller than the area of impact of any major stationary source or major modification which:

(a) Establishes a baseline date; or

(b) Is subject to this chapter.

(4) (a) "Baseline concentration" means that ambient concentration level which exists in the baseline area at the time of the applicable baseline date. A baseline concentration is determined for each air contaminant for which a baseline date is established and shall include:

1. The actual emissions representative of sources in existence on the applicable baseline date, except as provided in par. (b).

2. The allowable emissions of major stationary sources which commenced construction before January 6, 1975, but were not in operation by the applicable baseline date.

(b) The following will not be included in the baseline concentration and will affect the applicable maximum allowable increases:

1. Actual emissions from any major stationary source on which construction commenced after January 6, 1975; and

2. Actual emissions increases and decreases at any stationary source occurring after the baseline date.

(5) (a) "Baseline date" means the earliest date after August 7, 1977, that a major stationary source or major modification subject to this chapter submits a complete application.

(b) The baseline date is established for each air contaminant for which increments or other equivalent measures have been established if:

1. The area in which the proposed major source or major modification would construct is designated as attainment or unclassifiable under section 107 (d) (1) (D) or (E) of the clean air act for the air contaminant on the date of its complete application under this chapter; and

2. In the case of a major stationary source, the air contaminant would be emitted in significant amounts or, in the case of a major modification, there would be a significant net emissions increase of the air contaminant.

(6) "Begin actual construction" means, in general, initiation of physical on-site construction activities on an emissions unit which are of a permanent nature. Such activities include, but are not limited to, installation of building supports and foundations, laying of underground pipework and construction of permanent storage structures. With respect to a change in method of operation, this term refers to those on-site activities, other than preparatory activities, which mark the initiation of the change.

(7) "Best available control technology" 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 federal clean air act which would be emitted from any proposed major stationary 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 fuel cleaning or treatment or innovative fuel combination techniques for control of such pollutant. 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. NR 440 and 445 to 449. 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. Such standard shall, to the degree possible, set forth the emissions reduction achievable by implementation of such design, equipment, work practice or operation, and shall provide for compliance by means which achieve equivalent results.

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(8) "Building, structure, facility, or installation" and "facility, building, structure, equipment, vehicle or action" means all of the air contaminant emitting activities which belong to the same industrial grouping, are located on one or more contiguous or adjacent properties, and are under the control of the same person (or persons under common control) except the activities of any vessel. Air contaminant emitting activities shall be considered as part of the same industrial grouping if they belong to the same "major group" (i.e., which have the same 2-digit code) as described in the Standard Industrial Classification Manual, 1972, as amended by the 1977 Supplement (U.S. Government Printing Office stock numbers 4101-0066 and 033-005-00176-0, respectively).

(9) "Commence" as applied to construction of a major stationary source or major modification means that the owner or operator has all necessary preconstruction approvals or permits and either has:

(a) Begun, or caused to begin, a continuous program of actual on-site construction of the source, to be completed within a reasonable time; or

(b) Entered into binding agreements or contractual obligations, which cannot be cancelled or modified without substantial loss to the owner or operator, to undertake a program of actual construction of the source to be completed within a reasonable time.

(10) "Complete" means, in reference to an application for a permit, that the application contains all the information necessary for processing the application. Designating an application complete for purposes of permit processing does not preclude the department from requesting or accepting any additional information.

(11) "Construction" means any physical change or change in the method of operation (including fabrication, erection, installation, demolition, or modification of an emissions unit) which would result in a change in actual emissions.

(12) "Emissions unit" means any part of a stationary source which emits or would have the potential to emit any air contaminant subject to regulation under the federal clean air act.

(13) "Federal land manager" means, with respect to any lands in the United States, the secretary of the department with authority over such lands.

(14) "Federally enforceable" means all limitations and conditions which are enforceable by the administrator of U.S. EPA, including those requirements set forth in chs. NR 440 and 445 to 449, and any permit requirements established pursuant to this chapter.

(15) "Fugitive emissions" means those emissions which could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening.

(16) "High terrain" means any area having an elevation 900 feet or more above the base of the stack of a source.

(17) "Indian governing body" means the governing body of any tribe, band, or group of Indians subject to the jurisdiction of the United States and recognized by the United States as possessing power of self-government.

(18) "Indian reservation" means any federally recognized reservation established by treaty, agreement, executive order, or act of congress.

(19) "Innovative control technology" means any system of air pollution control that has not been adequately demonstrated in practice, but would have a substantial likelihood of achieving greater continuous emissions reduction than any control system in current practice or of achieving at least comparable reductions at lower cost in terms of energy, economics, or nonair quality environmental impacts.

(20) "Low terrain" means any area other than high terrain.

(21) "Major modification" means any physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any air contaminant subject to regulation under the federal clean air act.

(a) Any net emissions increase that is significant for volatile organic compounds shall be considered significant for ozone.

(b) A physical change or change in the method of operation may not include:

1. Routine maintenance, repair, and replacement;
2. Use of an alternative fuel or raw material by reason of any order under sections 2 (a) and (b) of the energy supply and environmental coordination act of 1974 (or any superseding legislation) or by reason of a natural gas curtailment plan pursuant to the federal power act;
3. Use of an alternative fuel by reason of an order or rule under section 125 of the federal clean air act;
4. Use of an alternative fuel at a steam generating unit to the extent that the fuel is generated from municipal solid waste;
5. Use of an alternative fuel or raw material by a stationary source which:
 - a. The source was capable of accommodating before January 6, 1975, unless such change would be prohibited under any federally enforceable permit condition which was established after January 6, 1975 pursuant to this chapter or ch. NR 406; or
 - b. The source is approved to use under any permit issued under this chapter or ch. NR 406;
6. An increase in the hours of operation or in the production rate, unless such change would be prohibited under any federally enforceable permit condition which was established after January 6, 1975, pursuant to this chapter.
7. Any change in ownership at a stationary source.

(22) (a) "Major stationary source" means:

1. Any of the following stationary sources of air contaminants which emits, or has the potential to emit, 100 tons per year or more of any air contaminant subject to regulation under the federal clean air act: Fossil fuel fired steam electric plants of more than 250 million British thermal units per hour heat input, coal cleaning plants (with thermal dryers), kraft pulp mills, portland cement plants, primary zinc smelters, iron and steel mill plants, primary aluminum ore reduction plants, primary copper smelters, municipal incinerators capable of charging more than 250 tons of refuse per day, hydrofluoric, sulfuric, and nitric acid plants, petroleum refineries, lime plants, phosphate rock processing plants, coke oven batteries, sulfur recovery plants, carbon black plants (furnace process), primary lead smelters, fuel conversion plants, sintering plants, secondary metal production plants, chemical process plants, fossil fuel boilers (or combinations thereof) totaling more than 250 million British thermal units per hour heat input, petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels, taconite ore

processing plants, glass fiber processing plants, and charcoal production plants;

2. Notwithstanding the stationary source size specified in subd. 1, any stationary source which emits, or has the potential to emit, 250 tons per year or more of any air contaminant subject to regulation under the federal clean air act; or

3. Any physical change that would occur at a stationary source not otherwise qualifying under this subsection as a major stationary source, if the change would constitute a major stationary source by itself.

(b) A major source that is major for volatile organic compounds shall be considered major for ozone.

(c) Volatile organic compounds exclude the compounds listed under s. NR 400.02 (100) unless the compound is subject to an emission limitation under ch. NR 440 or chs. NR 446 to 449.

(d) Mobile source emissions indirectly caused by a source which attracts mobile source activity may not be considered in determining whether the source is a major stationary source for the purposes of this chapter.

(23) "Necessary preconstruction approvals or permits" means those permits or approvals required under chs. NR 400 to 499.

(24) (a) "Net emissions increase" means the amount by which the sum of the following exceeds zero:

1. Any increase in actual emissions from a particular physical change or change in the method of operation at a stationary source; and

2. Any other increases and decreases in actual emissions at the source that are contemporaneous with the particular change and are otherwise creditable.

(b) An increase or decrease in actual emissions is contemporaneous with the increase from the particular change only if it occurs between:

1. The date 5 years before construction on the particular change commences and

2. The date that the increase from the particular change occurs.

(c) An increase or decrease in actual emissions is creditable only if the reviewing authority has not relied on it in issuing a permit for the source under this chapter, which permit is in effect when the increase in actual emissions from the particular change occurs.

(d) An increase or decrease in actual emissions of sulfur dioxide, nitrogen dioxide or particulate matter which occurs before the applicable baseline date is creditable only if it is required to be considered in calculating the amount of maximum allowable increases remaining available.

(e) An increase in actual emissions is creditable only to the extent that the new level of actual emissions exceeds the old level.

(f) A decrease in actual emissions is creditable only to the extent that:

1. The old level of actual emissions or the old level of allowable emissions, whichever is lower, exceeds the new level of actual emissions.

2. It is federally enforceable at and after the time that actual construction on the particular change begins; and

3. It has approximately the same qualitative significance for public health and welfare as that attributed to the increase from the particular change.

(g) An increase that results from a physical change at a source occurs when the emissions unit on which construction occurred becomes operational and begins to emit a particular pollutant. Any replacement unit that requires shakedown becomes operational only after a reasonable shakedown period, not to exceed 180 days.

(25) "Potential to emit" means the maximum capacity of a stationary source to emit an air contaminant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit an air contaminant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable. Secondary emissions do not count in determining the potential to emit of a stationary source.

(26) "Secondary emissions" means emissions which occur as a result of the construction or operation of a major stationary source or major modification, but do not come from the major stationary source or major modification itself. For the purposes of this chapter, secondary emissions must be specific, well defined, quantifiable, and impact the same general areas as the stationary source or modification which causes the secondary emissions. Secondary emissions include emissions from any offsite support facility which would not be constructed or increase its emissions except as a result of the construction or operation of the major stationary source or major modification. Secondary emissions do not include any emissions which come directly from a mobile source, such as emissions from the tailpipe of a motor vehicle, from a train, or from a vessel.

(27) (a) "Significant" means, in reference to a net emissions increase or the potential of a source to emit any of the air contaminants in Table A, a rate of emissions that would equal or exceed any of the rates in Table A.

Table A
Pollutant and Emissions Rate

1. Carbon monoxide: 100 tons per year (tpy)
2. Nitrogen oxides: 40 tpy
3. Sulfur dioxide: 40 tpy
4. Particulate matter: 25 tpy
5. PM₁₀: 15 tpy
6. Ozone: 40 tpy of volatile organic compounds
7. Lead: 0.6 tpy
8. Asbestos: 0.007 tpy
9. Beryllium: 0.0004 tpy

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10. Mercury: 0.1 tpy
11. Vinyl chloride: 1 tpy
12. Fluorides: 3 tpy
13. Sulfuric acid mist: 7 tpy
14. Hydrogen sulfide (H₂S): 10 tpy
15. Total reduced sulfur (including H₂S): 10 tpy
16. Reduced sulfur compounds (including H₂S): 10 tpy

(b) Volatile organic compounds exclude the compounds listed under s. NR 400.02 (100) unless the compound is subject to an emission limitation under ch. NR 440 or chs. NR 446 to 449.

(c) "Significant" means, in reference to a net emissions increase or the potential of a source to emit an air contaminant subject to regulation under the federal clean air act that par. (a) does not list, any emissions rate.

(d) Notwithstanding par. (a), "significant" means any emissions rate or any net emissions increase associated with a major stationary source or major modification, which would construct within 10 kilometers of a Class I area, and have an impact on such area equal to or greater than 1 ug/m³ (24-hour average).

(28) "Stationary source" means any building, structure, facility or installation which emits or may emit any air contaminant subject to regulation under the federal clean air act.

History: Cr. Register, January, 1987, No. 373, eff. 2-1-87; am. (27) (a) Register, December, 1988, No. 396, eff. 1-1-89; am. (intro.), (22) (c), (24) (d), (27) (b) and (28), cr. (22) (d), Register, May, 1992, No. 437, eff. 6-1-92.

NR 405.03 Restrictions on area classifications. (1) All of the following areas which were in existence on August 7, 1977, shall be Class I areas and may not be redesignated by the department:

- (a) International parks,
- (b) National wilderness areas which exceed 5,000 acres in size,
- (c) National memorial parks which exceed 5,000 acres in size, and
- (d) National parks which exceed 6,000 acres in size.

(2) Any other area, unless otherwise specified in the legislation creating such an area, is initially designated Class II, but may be redesignated as provided in this chapter.

(3) The following areas may be redesignated only as Class I or II:

(a) An area which as of August 7, 1977, exceeded 10,000 acres in size and was a national monument, a national primitive area, a national preserve, a national recreational area, a national wild and scenic river, a national wildlife refuge, a national lakeshore or seashore; and

(b) A national park or national wilderness area established after August 7, 1977, which exceeds 10,000 acres in size.

History: Cr. Register, January, 1987, No. 373, eff. 2-1-87.
Register, May, 1992, No. 437

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