



State of Wisconsin

DEPARTMENT OF NATURAL RESOURCES

CR 84-83

Carroll D. Besadny
Secretary

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STATE OF WISCONSIN)
DEPARTMENT OF NATURAL RESOURCES) ss

TO ALL TO WHOM THESE PRESENTS SHALL COME, GREETINGS:

I, Bruce B. Braun, Deputy 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. A-24-84 was duly approved and adopted by this Department on September 26, 1984. 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 General Executive Facility #2 in the City of Madison, this 7th day of December, 19 84.

SEAL:

Bruce B. Braun
Bruce B. Braun, Deputy Secretary

2-1-85

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ORDER OF THE STATE OF WISCONSIN
NATURAL RESOURCES BOARD
CREATING RULES

IN THE MATTER of creating ss. NR 154.01(164t) and
154.12(11) of the Wisconsin Administrative Code
pertaining to the establishment of emission
limitations for certain sources of sulfur
dioxide on a statewide basis

A-24-84

Analysis Prepared by Department of Natural Resources

This rule establishes emission limitations for sources of sulfur dioxide on a statewide basis. The rule was developed in response to concerns expressed by EPA about the need to control sulfur dioxide emissions from sources in Wisconsin and in response to a legislative directive (1983 Senate Bill 398, 1983 Wisconsin Act 414) that the department of natural resources prepare rules "which limit the emission of sulfur dioxide so as to ensure the attainment and maintenance of ambient air quality standards in all areas of the state". Specific emission limits are set for fuel burning units which burn solid fossil fuel or residual fuel oil, for process-related sources at kraft mills and sulfite mills and for petroleum refineries.

Sources of sulfur dioxide which are not subject to the rule include sources for which an emission limit has been or is being promulgated by rule and sources which are subject to a more restrictive emission limit than the limit set out in this rule.

The rule provides that the department may require a source to meet more restrictive emission limits for sulfur dioxide if such limits are necessary to ensure that the source will not cause or exacerbate a violation of an ambient air standard for sulfur dioxide. The compliance schedule in the rule requires that the emission limits be met no later than December 31, 1987. Recordkeeping requirements and methods for demonstrating compliance with the emission limits are also set. In addition, the rule outlines a procedure whereby a source may obtain an alternate emission limit and a procedure whereby a source may obtain a variance from an applicable emission limitation or compliance schedule.

Pursuant to the authority vested in the State of Wisconsin Natural Resources Board by ss. 144.31, 144.38 and 227.014(2)(a), Stats., and Section 4 of 1983 Wisconsin Act 414, the State of Wisconsin Natural Resources Board hereby creates rules interpreting s. 144.31(1)(f), Stats., and revising the State Implementation Plan (SIP) developed under that provision as follows:

SECTION 1. NR 154.01(164t) is created to read:

NR 154.01(164t) "Residual fuel oil" means an industrial fuel oil of grade No. 4, 5 or 6, as determined by the specifications in ASTM D396.

Note: See American Society for Testing and Materials 1983, "1983 Annual Book of ASTM Standards, Volume 05.01." Copies of this document are available for inspection at the offices of the department of natural resources, secretary of state and revisor of statutes, Madison, Wisconsin, and may be obtained for personal use from American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.

SECTION 2. NR 154.12(11) is created to read:

Note: This section creates NR 154.12(11). Sections NR 154.12(8) to (10) are in the process of being adopted by the department, but have not been promulgated as of the date of this rule draft.

(11) STATEWIDE SULFUR DIOXIDE LIMITATIONS. (a) Applicability. This subsection applies to any direct source of sulfur dioxide, with the following exceptions:

1. Any direct source which is subject to emission limitations specified in sub. (2) or subs. (4) to (10); or

2. Any direct source which is subject to an emission limitation for sulfur dioxide, imposed by statute, rule, permit, order or plan approval, which is more restrictive than an emission limitation under par. (b) or (c).

(b) Emission limits for existing sources. Except as provided under par. (e) or (h), no person may cause, allow or permit sulfur dioxide to be emitted to the ambient air from any direct source constructed on or before [the effective date of this rule], in amounts greater than those specified in this paragraph.

1. All steam generating units and other fuel burning equipment firing solid fossil fuel, alone or in combination with fuel burning equipment firing other fuels, at a facility which has a total heat input capacity on solid fossil fuel of greater than or equal to 250 million BTU per hour may not emit more than 3.2 pounds of sulfur dioxide per million BTU heat input to any stack.

2. Any steam generating unit or other fuel burning equipment firing solid fossil fuel at a facility which has a total heat input capacity on solid fossil fuel of less than 250 million BTU per hour may not emit more than 5.5 pounds of sulfur dioxide per million BTU heat input from the fuel burning equipment to any stack.

3. Any steam generating unit or other fuel burning equipment firing residual fuel oil at a facility which has a total heat input capacity on residual fuel oil of greater than or equal to 250 million BTU per hour may not emit more than 1.5 pounds of sulfur dioxide per million BTU heat input from the fuel burning equipment to any stack.

4. Any steam generating unit or other fuel burning equipment firing residual fuel oil at a facility which has a total heat input capacity on residual fuel oil of less than 250 million BTU per hour may not emit more than 3.0 pounds of sulfur dioxide per million BTU heat input from the fuel burning equipment to any stack.

5. Any kraft mill producing pulp may not emit more than 10.0 pounds of sulfur dioxide per ton of air dried unbleached pulp from all process sources

at the kraft mill. Process sources do not include equipment which is combusting fossil fuel.

6. Any sulfite mill producing pulp may not emit more than 20.0 pounds of sulfur dioxide per ton of air dried unbleached pulp from all process sources at the sulfite mill. Process sources do not include equipment which is combusting fossil fuel.

7. Any petroleum refinery shall comply with the following emission limitations:

a. The sulfur dioxide emissions from any process heater firing residual fuel oil may not exceed 0.8 pounds of sulfur dioxide per million BTU heat input from the process heater.

b. The sulfur dioxide emissions from any fuel burning equipment firing residual fuel oil may not exceed 0.8 pounds of sulfur dioxide per million BTU heat input to any stack.

c. The sulfur dioxide emissions from any Claus sulfur recovery plant may not exceed 6,743 pounds of sulfur dioxide in any 24-hour period or 843 pounds of sulfur dioxide in any 3-hour period.

d. The sulfur dioxide emissions from all other process units may not exceed 1,035 pounds of sulfur dioxide in any 1-hour period.

(c) Emission limits for new sources. No person may cause, allow or permit sulfur dioxide to be emitted to the ambient air from any direct source constructed after [the effective date of this rule] in amounts greater than those specified in this paragraph.

1. Any steam generating unit or other fuel burning equipment firing solid fossil fuel may not emit more than 3.2 pounds of sulfur dioxide per million BTU heat input from the fuel burning equipment to any stack.

2. Any steam generating unit or other fuel burning equipment firing residual fuel oil may not emit more than 1.5 pounds of sulfur dioxide per million BTU heat input from the fuel burning equipment to any stack.

3. Any kraft mill producing pulp may not emit more than 10.0 pounds of sulfur dioxide per ton of air dried unbleached pulp from all process sources at the kraft mill. Process sources do not include equipment which is combusting fossil fuel.

4. Any sulfite mill producing pulp may not emit more than 20.0 pounds of sulfur dioxide per ton of air dried unbleached pulp from all process sources at the sulfite mill. Process sources do not include equipment which is combusting fossil fuel.

5. Any petroleum refinery shall comply with the following emission limitations:

a. The sulfur dioxide emissions from any process heater firing residual fuel oil may not exceed 1.5 pounds of sulfur dioxide per million BTU heat input from the process heater.

b. The sulfur dioxide emissions from any fuel burning equipment firing residual fuel oil may not exceed 1.5 pounds of sulfur dioxide per million BTU heat input to any stack.

c. The sulfur dioxide emissions from any Claus sulfur recovery plant may not exceed:

1) 0.025% by volume of sulfur dioxide at zero percent oxygen on a dry basis, if emissions are controlled by an oxidation control system or a reduction control system followed by incineration; or

2) 0.030% by volume of reduced sulfur compounds and 0.0010% by volume of hydrogen sulfide calculated as sulfur dioxide at zero percent oxygen on a dry basis, if emissions are controlled by a reduction control system not followed by incineration.

(d) More restrictive emission limits. The department may require a source to meet a more restrictive emission limitation than an applicable emission limitation provided under par. (b) or (c) if the department determines that a more restrictive emission limitation is required to ensure that the source will not cause or exacerbate a violation of an ambient air quality standard or air increment for sulfur dioxide.

(e) Alternate emission limits. The department may grant an alternate emission limitation to a source which is subject to an emission limitation in par. (b) 1., 3., 5., 6., or 7. if the following conditions are met:

1. The owner or operator of the source submits a written request for an alternate emission limitation which outlines the specific conditions or special circumstances which prevent the source from complying with the applicable emission limitation in par. (b) and which contains a proposed alternate emission limitation for the source.

2. The owner or operator of the source demonstrates that the proposed alternate emission limitation will not delay attainment or prevent maintenance of an ambient air quality standard for sulfur dioxide, as demonstrated by air quality modeling acceptable to the department.

3. If the source is subject to the emission limitation in par. (b) 1. or 3., the proposed alternate emission limitation may not exceed 5.5 pounds of sulfur dioxide per million BTU heat input for any fuel burning equipment firing solid fossil fuel; or 3.0 pounds of sulfur dioxide per million BTU heat input for any fuel burning equipment firing residual fuel oil.

The alternate emission limitation of 5.5 pounds of sulfur dioxide per million BTU heat input for solid fossil fuel burning equipment may be calculated on a 30-day rolling average for a source, if there is one or more other sulfur dioxide emission limitations applicable to the source which would assure the attainment and maintenance of the ambient air quality standards for sulfur dioxide.

4. The owner or operator of the source demonstrates that there is a substantial cost difference between the costs required for the source's compliance with the applicable emission limitation in par. (b) and the costs required for the source's compliance with the proposed alternate emission limitation.

5. The owner or operator of the source demonstrates that the ambient air quality impact of the emissions from the source while emitting at the proposed alternate emission limitation, when added to the background concentration of sulfur dioxide in the vicinity of the source, does not exceed 75% of the ambient air quality standards for sulfur dioxide. In calculating the 75% figure, sulfur dioxide emissions from sources which are regulated under ch. NR 440 shall not be considered. The condition in this subdivision may be waived by the department if a public hearing is held on the proposed alternate emission limitation and the public comments on the proposed alternate emission limitation indicate that there is no significant opposition to waiving this condition.

6. The proposed alternate emission limitation will not result in an increase in the annual emissions of sulfur dioxide from the source when comparing the source's projected annual emissions under the proposed alternate emission limitation with the source's actual annual emissions of sulfur dioxide, either in terms of the highest total tons of sulfur dioxide per calendar year or in terms of the highest annual average emission rate, as expressed in pounds of sulfur dioxide per million BTU, for calendar years 1979 to 1983. This condition does not apply to a source which is authorized by statute to increase its annual emissions of sulfur dioxide or to a major utility which is subject to s. 144.385, Stats.

7. The owner or operator of the source submits an application for and receives an elective operation permit or a modification to an operation permit for the source.

(f) Compliance schedules. 1. When a source is subject to the emission limitations of par. (b), the owner or operator shall meet the following deadlines in achieving compliance with those emission limitations:

- a. Submit plans for achieving compliance on or before July 1, 1985;
- b. Award any necessary contracts on or before October 1, 1985;
- c. If physical alteration of the source is necessary to achieve compliance, commence construction on or before May 1, 1986 and complete construction on or before October 1, 1987;
- d. If only fuel modification or switching is necessary to achieve compliance, commence operation using new fuel on or before October 1, 1986;
- e. Achieve final compliance with the applicable emission limitation in par. (b) and so certify to the department on or before December 31, 1987.

2. If the owner or operator of a source subject to the emission limitations of par. (b) requests an alternate emission limitation under par. (e), the owner or operator shall meet the following deadlines:

a. Submit request for alternate emission limitation under par. (e) on or before March 1, 1985;

b. Submit plans for achieving compliance with the applicable emission limitation on or before December 31, 1985;

c. Award any necessary contracts on or before February 1, 1986;

d. If physical alteration of the source is necessary to achieve compliance, commence construction on or before May 1, 1986 and complete construction on or before October 1, 1987;

e. If only fuel modification or switching is necessary to achieve compliance, commence operation using new fuel on or before January 1, 1987;

f. Achieve final compliance with the applicable emission limitation and so certify to the department on or before December 31, 1987.

3. If the owner or operator of a source requests an alternate emission limitation under par. (e) and the department does not grant the request, the owner or operator of the source shall meet the following deadlines:

a. Submit plans for achieving compliance on or before September 1, 1985;

b. Award any necessary contracts on or before December 1, 1985;

c. If physical alteration of the source is necessary to achieve compliance, commence construction on or before May 1, 1986 and complete construction on or before October 1, 1987.

d. If only fuel modification or switching is necessary to achieve compliance, commence operation using new fuel on or before October 1, 1986;

e. Achieve final compliance with the applicable emission limitation in par. (b) and so certify to the department on or before December 31, 1987.

4. The department shall notify the owner or operator of a source which requests an alternate emission limit under par. (e) or submits a compliance plan under subd. 1.a., 2.b. or 3.a. whether the request is granted or the plan is approved not later than 55 business days after the department receives the request or submittal.

(g) Compliance demonstrations. 1. For purposes of determining compliance with the emission limitations of par. (b) or the alternate emission limitations of par. (e), the owner or operator of the source shall outline the specific methods for demonstrating compliance with the emission limitations, to the satisfaction of the department, in the compliance plans submitted under par. (e) 1.a., 2.b., or 3.a. The compliance demonstrations shall consist of one or more of the following:

a. Installation, calibration, maintenance and operation of a continuous emission monitor, utilizing equipment and procedures reviewed and approved by the department.

b. Collection and analysis of fuel used, utilizing equipment and procedures reviewed and approved by the department;

c. Stack emissions testing, utilizing equipment and procedures reviewed and approved by the department; and

d. Other appropriate methods reviewed and approved by the department.

2. An owner or operator of a source subject to the emission limitations of par. (b) or the alternate emission limitations of par. (e), shall maintain complete records of emissions data and calculations used to verify emissions data at the premises of the source and shall make such records available for inspection upon request by authorized representatives of the department during regular business hours.

(h) Variance from emission limits. 1. The department may grant a source-specific variance from an emission limitation provided in par. (b), an alternate emission limitation authorized under par. (e) or a compliance schedule in par. (f) if compliance with the emission limitations of pars. (b) and (e) or the compliance schedule of par. (f) are shown to be technologically or economically infeasible. A variance may be granted, by setting alternate emission limitations or alternate compliance schedules, or both, provided that:

a. The variance will not delay attainment or prevent maintenance of an ambient air quality standard for sulfur dioxide, as determined by methods acceptable to the department;

b. The owner or operator of the source for which a variance is requested demonstrates that all direct or portable sources owned or operated in the state by such person are in compliance with all applicable requirements of this chapter or are on a schedule for complying with such requirements.

c. The owner or operator submits to the department on or before December 31, 1985 a request for a source-specific variance which demonstrates, to the department's satisfaction, that compliance with the applicable emission limitation or compliance schedule from which a variance is sought is technologically or economically infeasible.

2. A request for a source-specific variance under this paragraph shall be signed by the principal executive officer, sole proprietor, principal governmental executive or elected official or a duly authorized representative of the source and shall contain the following information:

a. The specific conditions or special circumstances which make compliance with the applicable emission limitation or compliance schedule by the source technologically or economically infeasible.

b. If a variance from an emission limitation is sought, the owner or operator shall submit proposed emission limitations.

c. If a variance from a compliance schedule is sought, the owner or operator shall submit a proposed compliance schedule which demonstrates reasonable further progress toward final compliance and contains a date for final compliance as soon as practicable.

d. Other relevant information as required by the department.

3. The department, in acting upon any request for a variance under this paragraph, shall:

a. Act on a request for a variance within 65 business days of the filing of a completed request;

b. Offer, through public notice, the opportunity for public comments including, if requested, a public hearing.

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

4. The department may, after notice and opportunity for hearing, revoke or modify any variance if:

a. Any term or condition of the variance has been violated;

b. Changes in ambient air quality indicate that the source has a significant adverse impact on the attainment or maintenance of any ambient air quality standard for sulfur dioxide; or

c. The owner or operator did not act in good faith in demonstrating the technological or economic infeasibility of compliance with the applicable emission limitation or compliance schedule or in submitting other relevant information in support of the variance request.

(i) Subsequent requests for alternate limits or variances. If the owner or operator of a source subject to the emission limitations of par. (L) does not request an alternate emission under par. (e) on or before March 1, 1985, or source-specific variance under par. (h) on or before December 31, 1985, the source shall comply with the emission limitations of par. (b) and may not request an alternate emission limitation or a source-specific variance prior to January 1, 1986.

The foregoing rules were approved and adopted by the State of Wisconsin Natural Resources Board on September 26, 1984.

The rules herein shall take effect as provided in s. 227.026(1)(intro.), Stats.

Dated at Madison, Wisconsin

December 4, 1984

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

By

Carroll D. Besadny
Carroll D. Besadny, Secretary

(SEAL)