



CR 91-5

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Carroll D. Besadny  
Secretary

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

STATE OF WISCONSIN )  
 )  
DEPARTMENT OF NATURAL RESOURCES )      ss

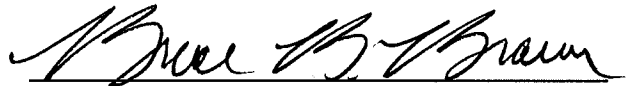
TO ALL TO WHOM THESE PRESENTS SHALL COME, GREETINGS:

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. AM-57-90 was duly approved and adopted by this Department on September 26, 1991. 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 here-  
unto set my hand and affixed the  
official seal of the Department at  
the Natural Resources Building in  
the City of Madison, this 9<sup>th</sup>  
day of December, 1991

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DEC 16 1991  
3:05 pm  
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Bruce B. Braun, Deputy Secretary

(SEAL)

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DEC 16 1991

Revisor of Statutes  
Bureau

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

.....  
IN THE MATTER of repealing NR 400.02(13), 405.10(6), .  
405.11(4), 408.05(2) and (3), 415.02(1), .  
415.05(2)(a)2. and 3. and (b), 417.03, 418.05(1)(b)2., .  
426.03(2), 428.04, 431.05(2), 431.06, 439.02(10), .  
439.07(1) (title), 439.075(1) (title), 484.03(2) and .  
(4) and 484.06(1)(a) to (zp), renumbering NR .  
400.02(37), (46s), (47e), (51m), (82), (92) and (101), .  
403.025, 403.03, 407.04 Table II, 415.02(4), .  
421.02(1m), 439.05, 439.09, 484.03(1) and (5), .  
484.04(4) and 484.08(1) to (5), renumbering and .  
amending NR 404.02(1), 408.05(1), 415.02(7), 417.04, .  
426.025, 426.03(1), 439.07(1)(a) to (j), (2) and (3), .  
439.075(1)(a) to (d), (2) and (3), 439.08, 484.03(3) .  
and (6), 484.04(3) and (7), 484.05(7)(a) to (c), .  
amending NR 170.02(2)(a), 400.02(50), 401.01(1), .  
401.04, 401.05, 404.02(intro.), (4m), (8) and (11), .  
404.04(5) and (8)(b)3., 404.06(2) and (3)(b), .  
405.01(2) Note, 405.02(intro.), (22)(c), (27)(b) and .  
(28), 405.10(1) and (5), 405.11(1)(b), (c) and (e) and .  
(3), 407.01(1), 407.03(1)(a)(intro.) and 1. to 3., .  
(g), (h), and (o) and (2)(a), (b), (bm), (c)1. and 5. .  
and (e), 407.04(1)(a), 408.01(1), 408.06, 409.01(2), .  
409.025, 409.03 (title), 409.04 (title), 415.01(1), .  
415.02(intro.) and (9), 415.03, 415.04(intro.), (1)(f) .  
and (2)(c)2., 415.05 (intro.), (1)(b) to (o), .  
(2)(intro.), (a)(intro.) and 1., (3)(b) and .  
(5)(intro.), 415.06(intro.), (1)(a), (b) and (c)1. and .  
2., (2)(a) to (c), (3)(a) to (d) and (4), .  
415.07(intro.), (1)(b)2. and (2)(a)4. and (b), .  
415.08(3) and (5), 415.09(1) (title), 417.01(1), .  
417.05, 417.06(intro.) and (1), 417.07(1)(a), (2)(a) .  
to (d), (g)1. and 2., (3)(a), (b) and (e)2. and .  
(5)(c), (d) and (f), 418.01(1) and (2), .  
418.025(2)(intro.), 418.03(1)(intro.), (b)2.b. and .  
(c)1. and (2)(intro.), 418.04(1)(a), 418.05(1)(a), .  
(b)1., (c)1. and 2., (d)1. to 3., (e)1. and 2., (f)1. .  
and (g)1., 418.07(1)(c)2., 418.08(1)(a)6., 420.02(31), .  
(33) and (41), 420.03(1)(a) and (3)(c), .  
420.04(3)(d)(intro.) and (i) (title), .  
420.05(3)(b)(intro.) and (4)(c)1.(intro.), .  
421.04(3)(c)1. and 2., 422.02(7), 422.03(intro.) and .  
(2), 425.04(2), 425.05(2)(a)1., 426.01(1), 427.01(1), .  
428.01(1), 428.03, 429.01(1), 429.03(1), 429.04(1)(b), .  
(f) and (i), 431.01(1), 431.02, 431.03, 431.04(1) and .

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(2) 431.05(intro.) and (1), 436.01, 436.03(1), .  
 436.04(2)(g)5., 436.05(5)(intro.), 436.07, 439.01(1) .  
 and (2), 439.02(intro.), (3) and (8), 439.04(1)(a), .  
 439.05 (title), 439.06 (title), (intro.) and .  
 (8)(title), 439.07 (title) and (intro.), 439.075 .  
 (title), 439.11(1)(g), 445.01(1), 445.02(9m), .  
 445.04(5)(c), 445.05(6)(a)1.c., 2.c. and 3.c., (b)3., .  
 (e), (f)2. and 3.a. and b. and (g)3. and (7)(b)3., .  
 446.01(1), 446.03(intro.), 446.04(1)(b), (2)(b), .  
 (3)(c) and (4)(b), 447.01(1), 447.16(2)(intro.) and .  
 (a), 448.01(1), 448.03(1)(intro.), 448.04(2) and (3), .  
 449.01(1), 449.04(2), 449.06(1)(b) and (5)(b)1. and .  
 2., 449.07(2)(f)1., 484.01(1) and (2), 484.03(intro.), .  
 484.04(intro.), (5) and (6), 484.05(intro.), (1) and .  
 (4) to (6), 484.06(1)(intro.), (2)(intro.), (a) to .  
 (c), (e) to (h), (k) to (t), 484.08(intro.), .  
 484.09(intro.) and (1)(a) to (c), 485.01(1), 485.03, .  
 485.05(intro.) and (4), 485.07(4)(a)(intro.), .  
 490.01(2), 492.01(2), 493.01(1), 493.04 (title), .  
 493.05(3)(a)2., 3.(intro.), b., d., g. and h., 6. and .  
 (5) Table 5. and 494.01(1), creating NR 405.02(22)(d), .  
 408.07, 439.085(4), 439.09(8)(intro.) and 484.05(7)(a) .  
 and (b) and repealing and recreating NR .  
 493.05(3)(a)3.i. of the Wisconsin Administrative Code, .  
 pertaining to general cleanup and updating changes to .  
 NR 170 and the NR 400 series to improve the accuracy, .  
 clarity, structure and internal consistency of the .  
 rules and remove obsolete provisions. .  
 .....

Analysis Prepared by the Department of Natural Resources

Authorizing statutes: ss. 144.31(1)(a), 144.38, 144.391(6) and 227.11(2)(a), Stats.

Statute interpreted: s. 144.31(1)(f), Stats. The State Implementation Plan developed under that provision is revised.

Various changes of a cleanup or updating nature which cannot be done by the Revisor of Statutes without a rulemaking order are proposed for chs. NR 170, 400, 401, 403, 404, 405, 407, 408, 409, 415, 417, 418, 420, 421, 422, 425, 426, 427, 428, 429, 431, 436, 439, 445, 446, 447, 448, 449, 484, 485, 490, 492, 493 and 494. The changes are of the following types:

Minor language changes.

Punctuation, grammar and spelling are corrected and redundant language is removed. Changes are made in accord with guidance from the Revisor or Statutes, e.g., replacing "shall not" with "may not" or "will not". References to "heat input to any stack" are replaced with language to make it clear that the emission limits are based on emissions from any stack and not on waste heat to a stack.

#### Correction of errors.

SECTION 1. corrects language in ch. NR 170 which became obsolete when the air permit program was begun, and updates the statutory reference. SECTION 26. corrects cross references to a chapter of the Administrative Code which has been replaced with several new chapters dealing with hazardous solid waste. SECTION 105 repeals the definition of the term "noncriteria pollutant" which was used within the chapter only in a subsection title which is being revised to delete the term because it was not being correctly applied.

#### Internal consistency improvements.

The amendments in SECTIONS 5. and 42. bring about consistency between definitions and the terms as actually used in the body of a rule. Simplified language is consistently applied in the applicability subsection of the first section of each chapter and the introductory language in the definitions sections is made more consistent. The phrase "emission control equipment" is used rather than a mixture of this and the more general phrase "pollution control equipment". Documents in chapters other than NR 440 which are incorporated by reference are now all collected in ch. NR 484, and documents which were referred to but not incorporated by reference are now so incorporated.

#### Updating of references to technical documents.

References to certain documents which are periodically revised such as standards of the American Society for Testing and Materials (ASTM) are generally updated to incorporate by reference the most recent version of the document. In most cases the ASTM document version referenced is that listed in the 1990 ASTM Index. However, where an ASTM document is incorporated by reference solely for a test method contained in the Code of Federal Regulations (C.F.R.), and the C.F.R. cites an older version of the document, reference to the older version is retained. Incorporation by reference of C.F.R. standard methods is updated to reflect the C.F.R. volume as published in 1990. Consent of the attorney general and the revisor of statutes to incorporate by reference the updated document versions is being requested.

SECTION 17. updates the reference to the C.F.R. section containing the federal PSD regulations. As part of our effort to keep our rules consistent with the federal regulations and maintain our delegation of authority from EPA to carry out the PSD program in Wisconsin, SECTION 18. and SECTION 20. amend ss. NR 405.02(22)(c) and (27)(b) to be consistent with the definition of volatile organic compounds in 40 C.F.R. s. 51.166(b)(29).

#### Organizational improvements.

Definitions which were placed in the wrong chapter when ch. NR 154 was divided into the 40 chapters of the NR 400 series are relocated to the proper chapter. Sections NR 439.07 and 439.075 are divided into 3 sections each, along presently existing subsection lines, to make them easier to use. The lists of ASTM documents in ch. NR 484 are rearranged to place them in the logical order used in the ASTM index so that individual documents are easier to find. Where one or more C.F.R. appendices are incorporated by reference for a chapter which refers to specific test methods within the appendices, the unnecessary repetition of the list of specific test methods is eliminated in ch. NR 484.

#### Clarification of rule applicability and intent.

Where appropriate, the first section of each chapter is revised to reflect the nature of the sources to which the chapter is intended to apply. Where emission limits presently contain only one significant figure, a second significant figure is added (a zero except where necessary to be consistent with the emission limit restated within the same provision in different units). Consistent with this, language is added to s. NR 436.03(1) in SECTION 99. making it clear that the zero in an emission limit such as 10 or 50 must be treated as a second significant figure.

Language is added to the definition of "major stationary source" in SECTION 19. to clarify the fact that the prevention of significant deterioration requirements of that chapter are not intended to apply to indirect sources, such as shopping centers and highway projects, and that the emissions from motor vehicles attracted to a facility are not considered in determining whether the facility is a major source. This change was chosen as preferable to revising the definition of "stationary source" in SECTION 20. to exclude indirect sources, as originally proposed, because the definition of stationary source in s. 144.30(23), Stats., includes indirect sources. SECTION 34. further clarifies that the statutory permit requirements concerning the application of lowest achievable emission rate and best available control technology do not apply to indirect sources.

In SECTION 80. a general provision for incineration of carbon monoxide emissions in the present s. NR 426.03(1) is restricted to cupolas, the source category of concern. The amendment in SECTION 107. is made to make it clearer that s. NR 439.04 applies to records such as the supplier's coal analyses required under present s. NR 439.075(2)(b)5. SECTION 110. clarifies the differences in function between s. NR 439.06 and present ss. NR 439.07 and 439.075. In accord with language added in SECTION 114. which refers to s. NR 439.085, s. NR 439.085(4) is created in SECTION 122. paralleling the provision in present s. NR 439.07(2)(c) to make it clear that the department's authority to require fuel sampling and analysis is not limited to sources burning coal and residual fuel oil. SECTION 125. clarifies the fact that it is the monitoring and not the control equipment that is required in s. NR 439.11(1)(e).

The revised language for an order issued during an air pollution emergency in SECTIONS 167. and 169. makes it clear that continued operation of emergency services is not restricted.

Certain unintended loopholes in the rules are also closed. SECTION 75. makes it clear that a process line cannot requalify for a s. NR 422.03 exemption by reducing emissions once an exemption level has been exceeded. The revision to present s. NR 439.075(1)(b)1.b. in SECTION 118. ensures that a sulfur dioxide source is not exempt from emission testing by virtue of having an emission limit more restrictive than that in the statewide sulfur dioxide rule. The revision to present s. NR 439.075(3)(e)1.a. in the SECTION 120. makes it clear that the continuous emission monitor requirement which applies to a stack serving a single boiler burning 25,000 tons of coal per year is equally applicable to a single stack serving two or more boilers having a combined coal burning rate of 25,000 tons per year.

#### Repeal of obsolete provisions.

Definitions for terms no longer used in the rules are deleted and the provision for an extended time period for implementation of an airport permit

is removed because airports are no longer issued permits as a separate category of indirect source. The extended permit duration originally sought by the Wisconsin Department of Transportation for highway projects is also repealed because DOT did not find it practical to apply for the indirect source permit for a highway project prior to location hearings for the project. Instead it has been their practice to apply for the air permit only after construction plans are nearing completion, which has made it unnecessary for them to utilize the extended time period.

The provisions in SECTIONS 44., 51., 78., 82. and 93. are repealed because they reflect federal new source performance standards which are now contained in ch. NR 440, where they are updated when these standards change in the Code of Federal Regulations.

SECTION 1. NR 170.02(2)(a) is amended to read:

NR 170.02(2)(a) Operational phase air ~~notice of intent approvals~~ pollution control permits for the main ~~boiler(s)~~ boiler or boilers issued under ~~s. 144.39~~ ss. 144.391 to 144.399, Stats., for bulk electric generating facilities utilizing fossil or solid fuels as the primary energy source;

SECTION 2. NR 400.02(13) is repealed.

SECTION 3. NR 400.02(37) is renumbered 417.02(1).

SECTION 4. NR 400.02(46s) and (47e) are renumbered 400.02(47) and (48).

SECTION 5. NR 400.02(50) is amended to read:

NR 400.02(50) "Kraft ~~process pulp~~" means any ~~pulping process which uses pulp produced with~~ an alkaline sulfide solution containing sodium hydroxide and sodium sulfide for a cooking liquor.

SECTION 6. NR 400.02(51m) is renumbered 400.02(52).

SECTION 7. NR 400.02(82), (92) and (101) are renumbered 449.02(10m), (11m) and (18).

SECTION 8. NR 401.01(1) is amended to read:

NR 401.01(1) APPLICABILITY. This chapter applies to all ~~sources of air contamination~~ contaminant sources and to ~~all their~~ owners ~~or~~ and operators ~~of an air contaminant source.~~

SECTION 9. NR 401.04 is amended to read:

NR 401.04 COMPLIANCE REQUIRED. The failure to identify, in a document issued under s. NR 401.025(2), a specific source in or near a nonattainment area which is otherwise subject to RACT emission limitations ~~shall~~ does not relieve such source from compliance.

SECTION 10. NR 401.05 is amended to read:

NR 401.05 ISSUANCE AND REVISION OF DOCUMENTS. The department may issue or revise a document under s. NR 401.025(1) or (2) only after 30 days notice and public hearing in the region affected. Such hearings ~~shall~~ will not be contested cases under s. 227.01(3), Stats.

SECTION 11. NR 403.025 and 403.03 are renumbered 403.03 and 403.04.

SECTION 12. NR 404.02(intro.) is amended to read:

NR 404.02(intro.) In addition to the definitions ~~contained~~ in this section, the definitions contained in ch. NR 400 ~~also~~ apply to the terms used in this chapter.

SECTION 13. NR 404.02(1) is renumbered 400.02(5s) and as renumbered is amended to read:

NR 400.02(5s) "Air quality control region" or "AQCR" means an area designated under 42 U.S.C. s. 7407 or s. NR 404.03 in which a plan to maintain or achieve air standards is implemented on a regional basis. Air quality control regions include both interstate and intrastate regions.

SECTION 14. NR 404.02(4m), (8) and (11) are amended to read:

NR 404.02(4m) "PM10" means particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by a reference method based on Appendix J of 40 C.F.R. part 50, incorporated by reference in



ch. NR 484, and ~~designed~~ designated in accordance with 40 C.F.R. part 53, incorporated by reference in ch. NR 484, or by an equivalent method.

(8) "Reference method" means a monitoring method which has been specified by the U.S. environmental protection agency in 40 C.F.R. part 50, Appendices A to K, incorporated by reference in ch. NR 484, or which has been so designated by the department.

(11) "Total suspended particulates" means particulate matter as measured by the method described in Appendix B of 40 C.F.R. part 50, incorporated by reference in ch. NR 484.

SECTION 15. NR 404.04(5) and (8)(b)3. are amended to read:

NR 404.04(5) OZONE: PRIMARY AND SECONDARY STANDARDS. The primary and secondary standards for ozone are: 0.12 ppm (235 micrograms per cubic meter) - maximum 1-hour average concentration. The ozone standards are attained when the expected number of days per calendar year with maximum hourly average concentrations above the designated level is equal to or less than one, as determined by the methodology of 40 C.F.R. part 50, Appendix H ~~(as of September 1, 1981)~~, incorporated by reference in ch. NR 484.

(8)(b)3. The expected concentrations and number of days are determined by the methodology contained in 40 C.F.R. part 50, Appendix K, incorporated by reference in ch. NR 484.

SECTION 16. NR 404.06(2) and (3)(b) are amended to read:

NR 404.06(2) REFERENCE METHODS. Ambient air quality monitoring which utilizes a reference monitoring method shall use monitoring methods which conform to the federal reference methods which are specified in 40 C.F.R. part 50, Appendices A to K, incorporated by reference in ch. NR 484, or which have been so designated by the department.

(3)(b) The department may list a monitoring method as an equivalent method if the department determines that the method satisfies the same requirements for a federal equivalent method as specified in 40 C.F.R. part 53, incorporated by reference in ch. NR 484.

SECTION 17. 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 C.F.R. ~~51.24 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 this rule, the term "volatile organic compounds (VOC's)" does not include methylene chloride, methyl chloroform, methane, ethane and freon 113 compounds which are excluded from regulation as VOC's under Wisconsin's administrative rules.~~ 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).

SECTION 18. NR 405.02(intro.) and (22)(c) are amended to read:

NR 405.02 DEFINITIONS. (intro.) In addition to the ~~terms defined in~~ ch. NR 400 definitions in this section, the following definitions contained in ch. NR 400 apply to the terms used in this chapter.

(22)(c) Volatile organic compounds ~~do not include methylene chloride, methyl chloroform, methane, ethane, and freon 113~~ 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.

SECTION 19. NR 405.02(22)(d) is created to read:

NR 405.02(22)(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.

SECTION 20. NR 405.02(27)(b) and (28) are amended to read:

NR 405.02(27)(b) Volatile organic compounds ~~do not include the following compounds: methylene chloride, methyl chloroform, methane, ethane, and freon 113~~ 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.

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

SECTION 21. NR 405.10(1) and (5) are amended to read:

NR 405.10(1) All estimates of ambient concentrations required under this section shall be based on the applicable air quality models, data bases, and other requirements specified in the Guidelines on Air Quality Models (Revised) (OAQPS 1.2-080, U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Research Triangle Park, N.C. 27711, July 1986). This publication is incorporated by reference in ~~sub. (6)~~ ch. NR 484.

(5) Methods like those outlined in the Workbook for the Comparison of Air Quality Models (U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Research Triangle Park, N.C. 27711, May 1978) should be used to determine the comparability of air quality models. This publication is incorporated by reference in ~~sub. (6)~~ ch. NR 484.

SECTION 22. NR 405.10(6) is repealed.

SECTION 23. NR 405.11(1)(b), (c) and (e) and (3) are amended to read:

NR 405.11(1)(b) ~~Any~~ For any air contaminant for which no national ambient air quality standard exists, the analysis shall contain such air quality monitoring data as the department determines is necessary to assess ambient air quality for that air contaminant in any area that the emissions of that air contaminant would affect.

(c) ~~Any~~ For any air contaminant ~~(other than nonmethane hydrocarbons)~~ for which a standard does exist, the analysis shall contain continuous air quality monitoring data gathered for purposes of determining whether emissions of that air contaminant would cause or contribute to a violation of the standard or any maximum allowable increase.

(e) The owner or operator of a proposed major stationary source or major modification of volatile organic compounds who satisfies all conditions of 40 C.F.R. part 51, Appendix S, section IV, incorporated by reference in ~~sub. (4)~~

ch. NR 484, may provide post-approval monitoring data for ozone in lieu of providing pre-construction data as required under this section.

(3) OPERATION OF MONITORING STATIONS. The owner or operator of major a stationary source or a major modification shall meet the requirements of Appendix B to 40 C.F.R. part 58, incorporated by reference in ~~sub. (4)~~ ch. NR 484, during the operation of monitoring stations for purposes of satisfying this section

SECTION 24. NR 405.11(4) is repealed.

SECTION 25. NR 407.01(1) is amended to read:

NR 407.01(1) APPLICABILITY. This chapter applies to all existing direct sources of air pollution which ~~are~~ may be required under s. 144.391, Stats., to have a mandatory operation permit, ~~unless the source is.~~ In accordance with s. 144.391(6), Stats., sources of certain sizes and types are exempt under s. NR 407.03 from the requirement to obtain a mandatory operation permit under s. NR 407.03.

SECTION 26. NR 407.03(1)(a)(intro.) and 1. to 3., (b), (g), (h) and (o) are amended to read:

NR 407.03(1)(a)(intro.) All fuel burning equipment at a facility which does not burn any hazardous waste identified under ch. NR ~~181 605~~, or which has been issued a ~~permit~~ license under ch. NR ~~181 680~~, and which is designed at combined total capacity to burn the following fuels at the rates indicated:

1. Coal, coke or other solid fuels, except wood, at a heat input rate of not more than ~~one~~ 1.0 million BTU per hour;

2. Wood alone or wood in combination with gaseous or liquid fuels at a heat input rate of not more than ~~5~~ 5.0 million BTU per hour;

3. Residual or crude oil at a heat input rate of not more than ~~5~~ 5.0 million BTU per hour;

(b) Equipment designed to incinerate solid wastes, which are not pathological wastes and are not hazardous wastes under ch. NR ~~181 605~~, at a rate of not more than 500 pounds per hour.

(g) Painting or coating operations, including associated quality assurance laboratories and cleaning operations, which use or will use not more than 250

total gallons of paint, coatings and solvents per month or which emit or will emit not more than 1,666 pounds of volatile organic compounds per month, without considering ~~pollution~~ emission control equipment.

(h) Graphic arts operations, including associated quality assurance laboratories and cleaning operations, which use or will use not more than 250 total gallons of coatings, inks and solvents per month or which emit or will emit not more than 1,666 pounds of organic compounds per month, without considering ~~pollution~~ emission control equipment.

(o) A laboratory which emits organic compounds, sulfur dioxide, carbon monoxide, nitrogen oxides or particulate matter or a combination thereof at a rate of less than 5.7 pounds per hour. Emissions shall be determined, without considering ~~pollution~~ emission control equipment, by dividing the total emissions during a calendar month by the total hours of operation of the laboratory during that calendar month. A laboratory is in operation if laboratory apparatus or equipment is in use.

SECTION 27. NR 407.03(2)(a), (b), (bm), (c)1. and 5. and (e) are amended to read:

NR 407.03(2)(a) The source will not emit sulfur dioxide, carbon monoxide or nitrogen oxides at a rate of more than ~~9~~ 9.0 pounds per hour for each pollutant emitted, without considering ~~pollution~~ emission control equipment;

(b) The source will not emit particulate matter or organic compounds at a rate of more than 5.7 pounds per hour for each pollutant emitted, without considering ~~pollution~~ emission control equipment;

(bm) The source will not emit lead at a rate of more than 0.13 pounds per hour, without considering ~~pollution~~ emission control equipment.

(c)1. Fluorides, ~~3~~ 3.0 tons per year;

5. Vinyl chloride, ~~1~~ 1.0 ton per year.

(e) The source will not emit any air contaminant not mentioned in par. (a), (b), (bm), (c), or (d) at a rate of more than ~~6~~ 6.0 pounds per hour for each pollutant emitted, without considering ~~pollution~~ emission control equipment.

SECTION 28. NR 407.04(1)(a) is amended to read:

NR 407.04(1)(a) The operator of an existing air contaminant source which is not exempt under s. NR 407.03 shall submit a mandatory operation permit application on application forms available from the department by the date set forth in Table ~~II~~ I for the Standard Industrial Classification (SIC) number category, in which the source is classified. If the source is classified in more than one SIC category, the application shall be submitted by the earliest date for any SIC category applicable to the source. The Standard Industrial Classification (SIC) category for a source is determined by reference to the Standard Industrial Classification Code Manual, 1972, as amended by the 1977 Supplement ~~(U.S. Government Printing Office Stock numbers 4101-0066 and 003-005-00176-0, respectively)~~, which is incorporated by reference in ~~this subsection~~ ch. NR 484. ~~The SIC Manual Code and Supplement are available for inspection in the offices of the department of natural resources, secretary of state and revisor of statutes, Madison, Wisconsin, or may be purchased from the superintendent of documents, U.S. government printing office, Washington, D.C. 20402.~~

SECTION 29. NR 407.04 Table II is renumbered 407.04 Table 1.

SECTION 30. NR 408.01(1) is amended to read:

NR 408.01(1) APPLICABILITY. This chapter applies to all air contaminant sources which are required under s. 144.391, Stats., and ch. NR 406 to obtain a construction or modification and new operation permit, ~~unless the source is exempt from the requirement to obtain a permit under s. NR 406.04.~~

SECTION 31. NR 408.05(1) is renumbered 408.05 and as renumbered is amended to read:

NR 408.05 PERMIT DURATION PERIODS. Approval to construct or modify a stationary source ~~other than an airport or a highway section~~ shall become invalid if construction or modification is not commenced within 18 months after the date when a permit for construction or modification was issued by the department. The department may extend such time period for up to 18 months on written request upon satisfactory showing that an extension is justified.

SECTION 32. NR 408.05(2) and (3) are repealed.

SECTION 33. NR 408.06 is amended to read:

NR 408.06 DUTY TO COMPLY. Approval to construct or modify ~~shall~~ does not relieve any owner or operator of the responsibility to comply with the emission limits of chs. NR 400 to 499, the air quality standards of ch. NR 404 or the control strategies of all local, state and federal regulations which are part of the state implementation plan.

SECTION 34. NR 408.07 is created to read:

NR 408.07 EXEMPTION FROM REQUIREMENTS FOR INDIRECT SOURCES. Pursuant to s. 144.393(4)(a), Stats., the permit requirements in s. 144.393(2)(b) and (3)(a), Stats., do not apply to indirect sources.

SECTION 35. NR 409.01(2) is amended to read:

NR 409.01(2) PURPOSE. This chapter is adopted under ss. 144.31 and 144.391, Stats., to establish conditions under which departmental approval is required for the relocation of portable sources and the ~~permit approval~~ procedures ~~used~~ followed by the department ~~for~~ in approving the relocation of portable sources relocations.

SECTION 36. NR 409.025 is amended to read:

NR 409.025 (title) PERMIT REQUIREMENT. No person may cause, allow or permit the relocation of a portable source to a new site, without first obtaining ~~a~~ an air pollution control permit unless the portable source is exempt from the requirement to obtain a permit under ch. NR 406 or the portable source is an approved relocated source under s. 144.391(5), Stats.

SECTION 37. NR 409.03 (title) is amended to read:

NR 409.03 (title) RELOCATION APPROVALS.

SECTION 38. NR 409.04 (title) is amended to read:

NR 409.04 (title) RELOCATION APPROVAL CRITERIA.

SECTION 39. NR 415.01(1) is amended to read:

NR 415.01(1) APPLICABILITY. This chapter applies to all air contaminant sources which emit particulate matter and to all their owners or and operators of an air contaminant source.

SECTION 40. NR 415.02(intro.) is amended to read:

NR 415.02(intro.) ~~The definitions in this section apply to the terms used in chs. NR 415 and 431.~~ In addition to the definitions in this section, the definitions in ch. NR 400 apply to the terms used in this chapter.

SECTION 41. NR 415.02(1) is repealed.

SECTION 42. NR 415.02(4) and (7) are renumbered 400.02(60m) and (80m) and 400.02(80m), as renumbered, is amended to read:

NR 400.02(80m) "Ringlemann Chart" means the chart published by the U.S. bureau of mines in which are illustrated graduated shades of grey to black for use in estimating the shade or density of smoke. ~~(One unit on the Ringlemann Chart equals 20% opacity).~~

~~Note: See Ringlemann Chart published December, 1950, by the U.S. bureau of mines. Copies of "Fundamentals of Smoke Abatement," December, 1950, Ringlemann Chart, Information Circular 7588, 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 the U.S. department of interior, Washington, D.C.~~

Note: One unit on the Ringlemann Chart equals 20% opacity. The Ringlemann Chart is published as Figure 1 in "Fundamentals of Smoke Abatement," December 1950, bureau of mines Information Circular 7588, which is incorporated by reference in ch. NR 484.

SECTION 43. NR 415.02(9) is amended to read:

NR 415.02(9) "Silt content" means that portion by weight of a particulate material which will pass through a no. 200 (75 micron) wire sieve as determined by the dry method in ASTM ~~C136-76~~ C136-84a, incorporated by reference in ch. NR 484, or other method approved by the department.

SECTION 44. NR 415.03 is amended to read:

NR 415.03 GENERAL LIMITATIONS. No person ~~shall~~ may cause, allow, or permit particulate matter to be emitted into the ambient air which substantially contributes to exceeding of an air standard, or creates air pollution.



SECTION 45. NR 415.04(intro.), (1)(f) and (2)(c)2. are amended to read:

NR 415.04 FUGITIVE DUST. (intro.) No person ~~shall~~ may cause, allow, or permit any materials to be handled, transported, or stored without taking precautions to prevent particulate matter from becoming airborne. Nor ~~shall~~ may a person allow a structure, a parking lot, or a road to be used, constructed, altered, repaired, sand blasted or demolished without taking such precautions.

(1)(f) The paving or maintenance of ~~roadways or parking lots~~ roadway areas so as not to create air pollution.

(2)(c)2. Emissions from any building or structure egress other than a stack shall be controlled such that visible emissions ~~shall~~ do not exceed 20% opacity except for 3 minutes in any hour when fugitive emissions may equal 50% opacity.

SECTION 46. NR 415.05(intro.), (1)(b) to (o), (2)(intro.), (a)(intro.) and 1. are amended to read:

NR 415.05(intro.) No person ~~shall~~ may cause, allow, or permit the emission of particulate matter to the ambient air from a direct or portable source involving a process in excess of the following limitations:

(1)(b) Electric arc or induction furnaces: ~~0.1~~ 0.10 pounds of particulate matter per 1,000 pounds of gas.

(c) Open hearth furnaces: ~~0.2~~ 0.20 pounds of particulate matter per 1,000 pounds of gas.

(d) Basic oxygen furnaces: ~~0.1~~ 0.10 pounds of particulate matter per 1,000 pounds of gas.

(e) Sintering plants: ~~0.2~~ 0.20 pounds of particulate matter per 1,000 pounds of gas.

(f) Air melting furnaces: ~~0.3~~ 0.30 pounds of particulate matter per 1,000 pounds of gas.

(g) Heating or preheating furnaces: ~~0.3~~ 0.30 pounds of particulate matter per 1,000 pounds of gas.

(h) Blast furnaces: ~~0.2~~ 0.20 pounds of particulate matter per 1,000 pounds of gas.

(i) Asphalt, concrete, or aggregate mix plants: ~~0.3~~ 0.30 pounds of particulate matter per 1,000 pounds of gas.

(j) Cement kilns: ~~0.2~~ 0.20 pounds of particulate matter per 1,000 pounds of gas.

(k) Lime kilns: ~~0.2~~ 0.20 pounds of particulate matter per 1,000 pounds of gas.

(l) Cement clinker coolers: ~~0.3~~ 0.30 pounds of particulate matter per 1,000 pounds of gas.

(m) Grinding, drying, mixing, conveying, sizing, or blending: ~~0.2~~ 0.20 pounds of particulate matter per 1,000 pounds of gas.

(n) Grain processing or handling: ~~0.4~~ 0.40 pounds of particulate matter per 1,000 pounds of gas.

(o) Any other process not enumerated: ~~0.4~~ 0.40 pounds of particulate matter per 1,000 pounds of gas.

(2) All direct and portable sources on which construction or modification is commenced after April 1, 1972 shall meet the emission limitations of this subsection.

~~(a) Direct or portable sources other than those specified in sub. (2)(b), emissions in excess of:~~

~~1. Any process not otherwise covered by sub. (2): The allowable emissions of particulate matter are calculated by the use of the equation,~~

$$E = 3.59 P^{0.62}$$

for process weight rates up to 60,000 pounds per hour; and by use of the equation

$$E = 17.31 P^{0.16}$$

for process weight rates of 60,000 pounds per hour or more; ~~(, where E is the allowable emissions in pounds per hour and P is the process weight rate in tons per hour) or in concentrations greater than those listed in. If the calculated emission rate is less restrictive than the applicable concentration~~

specified under sub. (1), whichever is more restrictive the limitation under sub. (1) shall apply. Some examples of these calculations are given in the following table.

Process Weight Rate (Lbs/Hr.)	Emission Rate (Lbs/Hr.)
50.....	0.36
100.....	0.56
500.....	1.52
1,000.....	2.33
5,000.....	6.33
10,000.....	9.74
20,000.....	14.96
60,000.....	29.57
80,000.....	31.23
120,000.....	33.33
160,000.....	34.90
200,000.....	36.16
400,000.....	40.41
1,000,000.....	46.79

Note: Some examples of these calculations are given in the following table.

Process Weight Rate (lbs./hr.)	Emission Rate (lbs./hr.)
50.....	0.36
100.....	0.56
500.....	1.52
1,000.....	2.33
5,000.....	6.33
10,000.....	9.74
20,000.....	14.96
60,000.....	29.57
80,000.....	31.23
120,000.....	33.33
160,000.....	34.90
200,000.....	36.16
400,000.....	40.41
1,000,000.....	46.79

SECTION 47. NR 415.05(2)(a)2. and 3. and (b) are repealed.

SECTION 48. NR 415.05(3)(b) and (5)(intro.) are amended to read:

NR 415.05(3)(b) Sources on which construction or modification was commenced after April 1, 1972 ~~shall~~ may not emit more than the emissions limits of sub. (2) or 0.20 pounds of particulate matter per 1000 pounds of exhaust gas, whichever is more restrictive.

(5)(intro.) When a direct or portable source is subject to the emissions limitations of sub. (3) or (4), the owner or operator ~~shall~~ may not exceed the following increments of progress in achieving compliance commencing with the nonattainment determination under s. NR 401.025(1):

SECTION 49. NR 415.06(intro.), (1)(a), (b) and (c)1. and 2., (2)(a) to (c), (3)(a) to (d) and (4) are amended to read:

NR 415.06(intro.) No person ~~shall~~ may cause, allow, or permit the emission of particulate matter to the ambient air from any indirect heat exchanger, power or heating plant, fuel-burning installation, or pulp recovery furnace with maximum heat input more than one million BTU per hour in excess of one of the following limitations:

(1)(a) All installations shall meet the emission limitation determined by use of figure 2 of the ASME Standard number APS-1, incorporated by reference in ch. NR 484, with the maximum emission from any stack, irrespective of stack height, of 0.60 pounds of particulate matter per million BTU heat input ~~to any stack~~.

~~Note: See american society of mechanical engineers standard number APS-1, second edition, November, 1968, copyright 1969. Copies of standard number APS-1 are available for inspection in the offices of department of natural resources, the secretary of state and revisor of statutes, Madison, Wisconsin and may be obtained for personal use from the American Society of Mechanical Engineers, 345 East 47th Street, New York, New York 10017.~~

(b) Installations located in subregion 1 of the Lake Michigan Intrastate AQCR, in addition to meeting the emission limitations of par. (a), shall, by July 31, 1975, meet the emission limitation determined by use of figure 2 of the ASME Standard number APS-1 with the maximum emission from any stack, irrespective of stack height, of 0.30 pounds of particulate matter per million BTU heat input ~~to any stack~~.

(c)1. Installations of 250 million BTU per hour or less (heat input of an installation shall follow ASME Standard number APS-1) ~~÷~~; maximum emission defined by the equation,

$$E = 0.3 - 0.0006I$$

where I is heat input in millions of BTU per hour and E is maximum allowable particulate emissions from any stack in pounds per million BTU ~~to any stack~~ heat input.

2. Installations of more than 250 million BTU per hour: maximum emission from any stack of 0.15 pounds of particulate matter per million BTU heat input ~~to any stack~~.

(2)(a) Installations of 250 million BTU per hour or less except as provided in par. (b) ~~hereof~~: maximum emission from any stack of 0.15 pounds of particulate matter per million BTU heat input ~~to any stack~~.

(b) Installations of 100 million BTU per hour or less which are not located in the Southeastern Wisconsin Intrastate AQCR and which burn only wood, or wood simultaneously with liquid or gaseous fossil fuel: ~~0.5~~ maximum emission from any stack of 0.50 pounds of particulate matter per million BTU heat input ~~to any stack~~ except that installations located in subregion 1 of the Lake Michigan Intrastate AQCR shall meet the requirements of sub. (1)(b).

(c) Installations of more than 250 million BTU per hour: maximum emission from any stack of 0.10 pounds of particulate matter per million BTU heat input ~~to any stack~~.

(3)(a) Installations of 100 million BTU per hour or less: maximum emission from any stack of 0.24 pounds of particulate matter per million BTU heat input ~~to any stack~~.

(b) Installations of more than 100 million BTU per hour on which construction or modification commenced on or before April 1, 1972: maximum emission from any stack of 0.15 pounds of particulate matter per million BTU heat input ~~to any stack~~.

(c) Installations of more than 100 million BTU per hour but of not more than 250 million BTU on which construction or modification commenced after April 1, 1972: maximum emission from any stack of 0.15 pounds of particulate matter per million BTU heat input ~~to any stack~~.

(d) Installations of more than 250 million BTU per hour on which construction or modification commenced after April 1, 1972; maximum emission

from any stack of 0.10 pounds of particulate matter per million BTU heat input ~~to any stack.~~

(4) Notwithstanding sub. (3)(a) or (b), any fuel burning installation of 250 million BTU per hour or less on which construction or modification was commenced on or before April 1, 1972 may emit up to, but not more than, an emission rate defined by the equation

$$E = 0.3 - 0.0006I$$

(where I is the heat input in millions of BTU per hour and E is the maximum allowable particulate emissions from any stack in pounds per million BTU ~~to any stack~~) heat input, if, as of March 1, 1980 for installations which may cause an impact on primary or associated secondary nonattainment areas, or as of March 1, 1982 for installations which may cause an impact on any other secondary nonattainment area, the installation has an emission rate based on original design or equipment performance test conditions ~~(whichever is more restrictive)~~, which is less than the limit set by the above equation, and the emission control system of such installations has not been allowed to degrade more than 0.05 pound per million BTU heat input from original design or acceptance performance test conditions.

SECTION 50. NR 415.07(intro.), (1)(b)2. and (2)(a)4. and (b) are amended to read:

NR 415.07 PARTICULATE EMISSION LIMITS FOR INCINERATORS. No person ~~shall~~ may cause, ~~suffer~~, allow, or permit particulate matter, concentrations corrected to 12% carbon dioxide, to be emitted to the ambient air from any incinerator in excess of one of the following limitations:

(1)(b)2. Prefabricated domestic incinerators below 5 cubic feet capacity ~~shall~~ may not exceed the performance emission requirements prescribed by the ~~United States of America~~ American National Standards Institute for domestic incinerators, standard Z21.6, incorporated by reference in ch. NR 484.

(2)(a)4. Prefabricated domestic incinerators below 5 cubic feet capacity ~~shall~~ may not exceed the performance emission requirements prescribed by the ~~United States of America~~ American National Standards Institute for domestic incinerators, standard Z21.6, incorporated by reference in ch. NR 484.

(b) Sewage treatment plant sludge and grit incinerators on which construction or modification is commenced after February 1, 1975; emissions

~~shall~~ may not exceed 1.30 pounds per ton of dry sludge or grit input (0.65 grams per kilogram of dry sludge or grit input).

SECTION 51. NR 415.08(3) and (5) are amended to read:

NR 415.08(3) Fugitive emissions from pushing operations shall be captured by a traveling hood and controlled to not more than ~~0.08~~ 0.080 pounds of particulate matter per 1000 pounds of exhaust gas. Any emissions escaping capture may not exceed 20% opacity for each pushing operation, as determined by the average of 6 consecutive observations made at 15 second intervals.

(5) Quench towers for the application of water on hot coke shall be equipped with grit arrestors or equivalent equipment approved by the department. Water used in quenching ~~shall~~ may not include coke by-product plant effluent, and total dissolved solids in make-up quenching water shall be less than 750 milligrams per liter.

SECTION 52. NR 415.09(1) (title) is amended to read:

NR 415.09(1) (title) GENERAL COMPLIANCE SCHEDULE.

SECTION 53. NR 417.01(1) is amended to read:

NR 417.01(1) APPLICABILITY. This chapter applies to all air contaminant sources which emit sulfur dioxide or other sulfur compounds and to ~~all their~~ owners or operators ~~of an air contaminant source~~.

SECTION 54. NR 417.03 is repealed.

SECTION 55. NR 417.04 is renumbered 418.035 and as renumbered is amended to read:

NR 418.035 SOUTHEASTERN WISCONSIN INTRASTATE AQCR. In the Southeastern Wisconsin Intrastate AQCR, installations of 250 million BTU per hour or less ~~(heat input of an installation shall follow ASME standard number APS-1) in addition to meeting the emission limits of s. NR 415.06, shall~~ may not burn coal with a sulfur content exceeding 1.11 pounds per million BTU in the coal. Heat input of an installation shall follow ASME standard number APS-1, incorporated by reference in ch. NR 484.

SECTION 56. NR 417.05 is amended to read:

NR 417.05 PETROLEUM REFINERIES. No person ~~shall~~ may cause, ~~suffer,~~ allow or permit the release into the atmosphere or the burning of any fuel gas in an incinerator-waste heat boiler or process heater which contains greater than 0.10 grains of hydrogen sulfide (H<sub>2</sub>S) per dry cubic foot at standard conditions (0.23 grams per dry cubic meter at standard conditions) unless the gases resulting from combustion are treated in a manner which prevents the release of sulfur dioxide to the atmosphere as effectively as controlling the concentration of H<sub>2</sub>S in the fuel gas being burned.

SECTION 57. NR 417.06(intro.) and (1) are amended to read:

NR 417.06(intro.) No person ~~shall~~ may cause, ~~suffer,~~ allow, or permit emission into the ambient air of total reduced sulfur (TRS) in excess of the ~~following~~ limitations: all in this section. All emission standards in this section are based on average daily emissions.

(1) The emission of TRS from all recovery furnace stacks ~~shall~~ may not exceed ~~one-half~~ 0.50 pound of reduced sulfur compounds (as sulfur) per equivalent ton of air-dried kraft pulp, or from each recovery furnace stack ~~17 and one-half~~ 17.5 ppm, expressed as hydrogen sulfide on a dry gas basis, whichever is the more restrictive. New direct sources shall meet such other limit of TRS that proves to be reasonably attainable utilizing the latest in design of recovery furnace equipment, controls, and procedures. All existing direct sources shall be in compliance with this requirement by not later than July, 1976.

SECTION 58. NR 417.07(1)(a), (2)(a) to (d), (g)1. and 2., (3)(a), (b) and (e)2. and (5)(c), (d) and (f) are amended to read:

NR 417.07(1)(a) Any direct source which is subject to emission limitations specified in ~~s. NR 417.04 or~~ ch. NR 418; or

(2)(a) 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 from any stack more than 3.2 pounds of sulfur dioxide per million BTU heat input ~~to any stack.~~



(b) 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 from any stack more than 5.5 pounds of sulfur dioxide per million BTU heat input ~~from the fuel burning equipment to any stack~~.

(c) 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 greater than or equal to 250 million BTU per hour may not emit from any stack more than 1.5 pounds of sulfur dioxide per million BTU heat input ~~from the fuel burning equipment to any stack~~.

(d) 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 from any stack more than 3.0 pounds of sulfur dioxide per million BTU heat input ~~from the fuel burning equipment to any stack~~.

(g)1. The sulfur dioxide emissions from any process heater firing residual fuel oil may not exceed ~~0.8~~ 0.80 pounds of sulfur dioxide per million BTU heat input from the process heater.

2. The sulfur dioxide emissions from any stack serving any fuel burning equipment firing residual fuel oil may not exceed ~~0.8~~ 0.80 pounds of sulfur dioxide per million BTU heat input ~~to any stack~~.

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

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

(e)2. The sulfur dioxide emissions from any stack serving 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~~.

(5)(c) If the source is subject to the emission limitation in sub. (2)(a) or (c), 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. ~~(d)~~ 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.

(f) 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~~ may not be considered. The condition in this paragraph 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.

SECTION 59. NR 418.01(1) and (2) are amended to read:

NR 418.01(1) APPLICABILITY. This chapter applies to all direct air contaminant sources which are located in the specific geographic areas described in this chapter and which emit sulfur dioxide or other sulfur compounds and to all owners or operators of ~~direct air contaminant~~ these sources located in these geographic areas.

(2) PURPOSE. This chapter is adopted under ss. 144.31, 144.38 and 144.385, Stats., to categorize sources of sulfur dioxide air contaminant sources and other sulfur compounds into separate ~~sulfur compound air contaminant~~ source categories and to establish emission limitations for these categories of sources in order to protect air quality.

SECTION 60. NR 418.025(2)(intro.) is amended to read:

NR 418.025(2)(intro.) When a source is subject to the emission limitations of sub. (1), the owner or operator ~~shall~~ may not exceed the following

increments of progress in achieving compliance, commencing with the nonattainment determination under s. NR 401.025(1):

SECTION 61. NR 418.03(1)(intro.), (b)2.b. and (c)1. and (2)(intro.) are amended to read:

NR 418.03(1)(intro.) No person ~~shall~~ may cause, allow or permit sulfur dioxide to be emitted to the ambient air within the geographical boundaries of the city of Madison, Dane county, from any direct source on which construction or modification was commenced prior to November 1, 1979 in amounts greater than:

(b)2.b. Height above ground of emission point of 180 to 220 feet: X pounds of sulfur dioxide per million BTU heat input, where X is determined by the following equation:

$$X = 10^{[0.0089(\text{Emission Point Height}) - 1.18]}$$

(c)1. Distillate fuel oil: that occurring from firing a distillate fuel oil with a sulfur content equal to or less than ~~0.5%~~ 0.50% by weight.

(2)(intro.) When a source is subject to the emission limitations of sub. (1), the owner or operator ~~shall~~ may not exceed the following increments of progress in achieving compliance, commencing with the nonattainment determination under s. NR 401.025(1):

SECTION 62. NR 418.04(1)(a) is amended to read:

NR 418.04(1)(a) ~~Any~~ For any electrical utility installation rated at more than 250 million BTU heat input per hour, emissions from any stack may not exceed:

1. 3.28 pounds sulfur dioxide per million BTU heat input ~~to any stack~~ for solid fossil fuel, 1.60 pounds sulfur dioxide per million BTU heat input ~~to any stack~~ for residual fuel oil and 0.50 pounds sulfur dioxide per million BTU heat input ~~to any stack~~ for all other fuels, or

2. Q, when different fuels are burned in combination. Q is determined by the following equation:

$$Q = \frac{X(3.28) + Y(1.60) + Z(0.5)}{X + Y + Z}$$

where Q is the sulfur dioxide emission limit for a stack expressed in pounds sulfur dioxide per million BTU heat input ~~to any stack~~, X is the percent of total heat input ~~to any stack~~ derived from solid fossil fuel, Y is the percent of total heat input ~~to any stack~~ derived from residual fuel oil, and Z is the percent of total heat input ~~to any stack~~ derived from all other fuels.

SECTION 63. NR 418.05(1)(a) and (b)1. are amended to read:

NR 418.05(1)(a) ~~Any~~ Each electric utility boiler shall comply with the following emission limitations:

1. Any electric utility boiler with the emission point at a height above ground of not less than 377 feet: 5.58 pounds of sulfur dioxide per million BTU heat input ~~from the boiler to any stack~~.

2. Any electric utility boiler with the emission point at a height above ground of less than 377 feet: ~~0.5~~ 0.50 pounds of sulfur dioxide per million BTU heat input ~~from the boiler to any stack~~.

(b)1. ~~Any~~ Each steam generating boiler capable of firing coal, spent sulfite liquor or other fuels: ~~except as provided in subd. 2,~~ 5.95 pounds of sulfur dioxide per million BTU heat input ~~from the boiler to any stack~~.

SECTION 64. NR 418.05(1)(b)2. is repealed.

SECTION 65. NR 418.05(1)(c)1. and 2., (d)1. to 3., (e)1. and 2., (f)1. and (g)1. are amended to read:

NR 418.05(1)(c)1. Fossil fuel fired steam generating boilers with the emissions point at a height above ground of not less than 355 feet: maximum emission from any stack of 4.55 pounds of sulfur dioxide per million BTU heat input ~~from the boilers to any stack~~.

2. Fossil fuel fired steam generating boilers with the emission point at a height above ground of less than 355 feet: ~~0.5~~ maximum emission from any stack of 0.50 pounds of sulfur dioxide per million BTU heat input ~~from the boilers to any stack~~.

(d)1. ~~Any~~ Each fossil fuel fired steam generating boiler rated at less than or equal to 100 million BTU per hour: 2.54 pounds of sulfur dioxide per million BTU heat input ~~from the boiler to any stack.~~

2. ~~Any~~ Each fossil fuel fired steam generating boiler rated at greater than 100 million BTU per hour with the emission point at a height above ground of not less than 211 feet: 3.20 pounds of sulfur dioxide per million BTU heat input ~~from the boiler to any stack.~~

3. ~~Any~~ Each fossil fuel fired steam generating boiler rated at greater than 100 million BTU per hour with the emission point at a height above ground of less than 211 feet: ~~0.5~~ 0.50 pounds of sulfur dioxide per million BTU heat input ~~from the boiler to any stack.~~

(e)1. Steam generating boilers with the emission point at a height above ground of not less than 212 feet: maximum emission from any stack of 3.88 pounds of sulfur dioxide per million BTU heat input ~~from the boilers to any stack~~ when the boilers are fired at or below 158 million BTU per hour; maximum emission from any stack of 3.15 pounds of sulfur dioxide per million BTU heat input ~~from the boilers to any stack~~ when the boilers are fired at a rate greater than 158 million BTU per hour and less than 309 million BTU per hour; and maximum emission from any stack of 2.87 pounds of sulfur dioxide per million BTU heat input ~~from the boilers to any stack~~ when the boilers are fired at a rate of 309 million BTU per hour or greater.

2. Steam generating boilers with the emission point at a height above ground of less than 212 feet: ~~0.5~~ maximum emission from any stack of 0.50 pounds of sulfur dioxide per million BTU heat input ~~from the boilers to any stack.~~

(f)1. Fossil fuel fired steam generating boilers: maximum emission from any stack of 2.10 pounds of sulfur dioxide per million BTU heat input ~~from the boilers to any stack~~ when the boilers are fired above 360 million BTU per hour; and maximum emission from any stack of 2.31 pounds of sulfur dioxide per million BTU heat input ~~from the boilers to any stack~~ when the boilers are fired at or below 360 million BTU per hour.

(g)1. ~~Any~~ Each fossil fuel fired steam generating boiler: 1.50 pounds of sulfur dioxide per million BTU heat input ~~from the boiler to any stack.~~

SECTION 66. NR 418.07(1)(c)2. is amended to read:

NR 418.07(1)(c)2. From any other source not covered by par. (a) or subd. 1., ~~0-0~~ 0.00 pounds per hour.

SECTION 67. NR 418.08(1)(a)6. is amended to read:

NR 418.08(1)(a)6. From all other sources, a total of ~~0-2~~ 0.20 pounds per hour.

SECTION 68. NR 420.02(31), (33) and (41) are amended to read:

NR 420.02(31) "Reid vapor pressure" means the absolute vapor pressure of volatile crude petroleum and volatile nonviscous petroleum liquids except liquefied petroleum gases as determined by ASTM ~~D323-72 (reapproved 1977)~~ D323-89, incorporated by reference in ch. NR 484.

(33) "True vapor pressure" means the equilibrium partial pressure exerted by a petroleum liquid as determined in accordance with methods described in American Petroleum Institute Bulletin Publication 2517, Evaporation Evaporative Loss from External Floating Roof Tanks, 1962 3rd edition, February 1989, incorporated by reference in ch. NR 484.

(41) "Waxy, heavy pour crude petroleum" means a crude petroleum with a pour point of 10°C (50°F) or higher as determined by ~~the ASTM standard D97-66, "Test For Pour Point of Petroleum Oils."~~ D97-87, incorporated by reference in ch. NR 484.

SECTION 69. NR 420.03(1)(a) and (3)(c) are amended to read:

NR 420.03(1)(a) Storage vessels being used for number 2 through number 6 fuel oils as specified in ASTM ~~D396-73~~ D396-89a, gas turbine fuel oils numbers 2-GT through 4-GT as specified in ASTM ~~D2880-71~~ D2880-89, or diesel fuel oils numbers 2-D and 4-D as specified in ASTM ~~D975-73~~ D975-89a. These ASTM standards are incorporated by reference in ch. NR 484.

~~Note: See American Society for Testing and Materials, Part 17, 1973. Copies of applicable standards from Part 17, Petroleum Products - Fuels, Solvents, Burner Fuel Oils, Lubricating Oils, Cutting Oils, Lubricating Greases, Hydraulic Fluids, 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 ASTM, 1916 Race Street, Philadelphia, PA 19103.~~

(3)(c) Vapor pressure determination. The true vapor pressure shall be determined by application of the procedures in API Bulletin Publication 2517,

3rd edition, incorporated by reference in ch. NR 484, in accord with this paragraph. This procedure is dependent upon determination of the average monthly storage temperature and the Reid vapor pressure, which requires sampling of the petroleum liquids in the storage vessels. Unless the department requires in specific cases that the stored petroleum liquid be sampled, the true vapor pressure may be determined by using the average monthly storage temperature and the typical Reid vapor pressure. For those liquids for which certified specifications limiting the Reid vapor pressure exist, that Reid vapor pressure may be used. For other liquids, supporting analytical data shall be made available on request to the department when typical Reid vapor pressure is used.

~~Note: See American Petroleum Institute, Bulletin 2517 Evaporation Loss from Floating Roof Tanks, February, 1962. Copies of Evaporation Loss from Floating Roof Tanks are available for inspection in 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 the American Petroleum Institute, 1220 L Street, N.W., Washington, D.C. 20005.~~

SECTION 70. NR 420.04(3)(d)(intro.) and (i) (title) are amended to read:

NR 420.04(3)(d)(intro.) Operating requirements. The vapor collection system and the gasoline loading equipment shall be designed and operated in ~~such~~ a manner that prevents:

(i) (title) Control system operation and maintenance requirements.

SECTION 71. NR 420.05(3)(b)(intro.) and (4)(c)1.(intro.) are amended to read:

NR 420.05(3)(b) Requirements. (intro.) ~~Notwithstanding s. NR 425.03, before November 1, 1979 the~~ The owner or operator of a petroleum refinery shall develop and submit to the department for approval a detailed procedure for minimizing VOC emissions during process unit turnaround. At a minimum, the procedure shall provide for:

(4)(c)1.(intro.) ~~Notwithstanding s. NR 425.03, before July 1, 1981,~~ develop Develop and submit to the department for approval a monitoring schedule for fugitive emission sources. At a minimum, the schedule shall provide for:

SECTION 72. NR 421.02(1m) is renumbered 421.02(2).

SECTION 73. NR 421.04(3)(c)1. and 2. are amended to read:

NR 421.04(3)(c)1. Industrial Ventilation: A Manual of Recommended Practices, 14th Practice, 20th ed., incorporated by reference in ch. NR 484.  
and

2. Recommended Industrial Ventilation Guidelines, incorporated by reference in ch. NR 484.

~~NOTE: See Industrial Ventilation: A Manual of Recommended Practices, 14th ed., Committee on Industrial Ventilation, American Conference of Governmental Hygienists, 1976, (available from: Governmental Industrial Hygienists, P.O. Box 16153, Lansing, Michigan 48901) and U.S. Department of Health, Education and Welfare, National Institute of Occupational Safety and Health, Recommended Industrial Ventilation Guidelines, Springfield, VA: National Technical Information Service, PB 266 227, 1976. Copies of these documents are available for inspection in 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 the respective agencies listed above.~~

SECTION 74. NR 422.02(7) is amended to read:

NR 422.02(7) "Class II hardboard paneling finish" means finishes which meet the specifications of Voluntary Product Standard PS-59-73 as approved by the American National Standards Institute. This standard is incorporated by reference in ch. NR 484.

~~Note: See National Bureau of Standards, Voluntary Product PS 59 73, "Prefinished Hardwood Paneling." Copies of this document are available for inspection in the offices of the department of natural resources, secretary of state and revisor of statutes, Madison, Wisconsin and may be obtained from National Bureau of Standards, Washington, D.C. 20234.~~

SECTION 75. NR 422.03(intro.) and (2) are amended to read:

NR 422.03 EXEMPTIONS. (intro.) Sections NR 422.04 to 422.155 apply to any facility which contains one or more of the surface coating or printing process lines described in ss. NR 422.05 to 422.155 ~~with the following~~



~~exceptions~~, except as specified in this section. If VOC emissions exceed an exemption level given in this section, the exemption will no longer apply to the source. Exempt facilities include:

(2) Surface coating facilities as described under ss. NR 422.15 and 422.155 which have total emissions of VOCs from all surface coating process lines, with all emission control equipment inoperative, of less than or equal to 10 tons per year. ~~However, if VOC emissions, with all emission control equipment inoperative, exceed 10 tons in any given year, the exception provided by this subsection shall not apply to the facility in any subsequent year.~~

SECTION 76. NR 425.04(2) is amended to read:

NR 425.04(2) REGISTRATION OF CERTAIN SOLVENTS. Any person operating a source which has total combined emissions of methylene chloride and methyl chloroform in excess of ~~0.5~~ 0.50 tons in a calendar year shall register the solvent use with the department by February 1 of the year following such use.

SECTION 77. NR 425.05(2)(a)1. is amended to read:

NR 425.05(2)(a)1. Opportunity for public comment has been offered for a 30 day period through public notice, and where requested, a public hearing has been held. The department shall provide the region V office of the U.S. ~~EPA~~ environmental protection agency with a copy of the public notice, the department's technical analysis and the proposed decision by the first day of the public comment period; and

SECTION 78. NR 426.01(1) is amended to read:

NR 426.01(1) APPLICABILITY. This chapter applies to all air contaminant sources which emit carbon monoxide and to all their owners or operators of ~~an air contaminant source.~~

SECTION 79. NR 426.025 is renumbered 426.03 and as renumbered is amended to read:

NR 426.03 GENERAL LIMITATIONS. No person ~~shall~~ may cause, ~~suffer,~~ allow, or permit emissions of carbon monoxide to the ambient air which

substantially contribute to the exceeding of an air standard or cause air pollution.

SECTION 80. NR 426.03(1) is renumbered 426.04 and as renumbered is amended to read:

NR 426.04 (title) New cupola emission limitations. No person ~~shall~~ may cause, ~~suffer,~~ allow, or permit significant emissions of carbon monoxide from any new ~~direct source not listed below~~ cupola to be emitted to the ambient air unless such emissions are incinerated at 1,300°F for 0.3 ~~seconds~~ second, or reduced by some other means an equivalent amount. ~~Such emissions shall include, but are not limited to, the exhaust from cupolas, blast furnaces, basic oxygen furnaces; or waste streams from petroleum fluid cokers or other petroleum processes.~~ Compliance with ~~these limitations~~ this limitation shall be shown to the department on initial startup of the source.

SECTION 81. NR 426.03(2) is repealed.

SECTION 82. NR 427.01(1) is amended to read:

NR 427.01(1) APPLICABILITY. This chapter applies to all air contaminant sources which emit lead or lead compounds and to ~~all~~ their owners ~~or~~ and operators ~~of an air contaminant source.~~

SECTION 83. NR 428.01(1) is amended to read:

NR 428.01(1) APPLICABILITY. This chapter applies to all air contaminant sources which emit nitrogen compounds and to ~~all~~ their owners ~~or~~ and operators ~~of an air contaminant source.~~

SECTION 84. NR 428.03 is amended to read:

NR 428.03 GENERAL LIMITATIONS. No person ~~shall~~ may cause, ~~suffer,~~ allow, or permit nitrogen oxides or nitrogen compounds to be emitted to the ambient air which substantially contribute to the exceeding of an air standard or cause air pollution.

SECTION 85. NR 428.04 is repealed.

SECTION 86. NR 429.01(1) is amended to read:

NR 429.01(1) APPLICABILITY. This chapter applies to all air contaminant sources and to ~~all their~~ owners ~~or~~ and operators ~~of an air contaminant source.~~

SECTION 87. NR 429.02(2) is renumbered 400.02(98m) and as renumbered is amended to read:

NR 400.02(98m) "Total reduced sulfur" or "TRS" means the sum of any sulfur containing ~~compound~~ compounds in which the oxidation state of sulfur is less than zero. ~~Common examples of such compounds are hydrogen sulfide, mercaptans, and dimethyl disulfide.~~

Note: Common examples of such compounds are hydrogen sulfide, carbonyl sulfide, dimethyl sulfide, carbon disulfide, dimethyl disulfide and mercaptans.

SECTION 88. NR 429.03(1) is amended to read:

NR 429.03(1) GENERAL LIMITATIONS. No person ~~shall~~ may cause, ~~suffer,~~ allow, or permit emission into the ambient air of any substance or combination of substances in such quantities that an objectionable odor is determined to result unless preventive measures satisfactory to the department are taken to abate or control such emission.

SECTION 89. NR 429.04(1)(b), (f) and (i) are amended to read:

NR 429.04(1)(b) Fires set for practice and instruction of ~~firemen~~ fire fighters, or testing of fire fighting equipment.

(f) Burning at rural or isolated solid waste disposal sites outside of the Southeastern Wisconsin Intrastate AQCR ~~that serve less than 2,500 people and are licensed to burn waste which have been granted a written exemption~~ under s. NR 506.04 ~~of the solid waste disposal standards~~, or burning of special waste where permits are obtained from the department.

(i) Burning of trees, wood, brush, or demolition materials ~~(excluding asphaltic or rubber materials) by such~~ using methods approved by the department.

SECTION 90. NR 431.01(1) is amended to read:

NR 431.01(1) APPLICABILITY. This chapter applies to all air contaminant sources and to ~~all their~~ owners ~~or~~ and operators ~~of an air contaminant source.~~

SECTION 91. NR 431.02 is amended to read:

NR 431.02 DEFINITIONS. ~~In addition to the definitions in this section,~~  
~~the~~ The definitions contained in ~~chs. ch.~~ NR 400 ~~and 415~~ apply to the terms  
used in this chapter.

SECTION 92. NR 431.03 is amended to read:

NR 431.03 GENERAL LIMITATIONS. No person ~~shall~~ may cause, ~~suffer,~~  
allow, or permit emissions into the ambient air from any direct or portable  
source in excess of one of the ~~following limitations:~~ limits specified in this  
chapter. Where the presence of uncombined water is the only reason for  
failure to meet the requirements of this chapter, such failure ~~shall~~ is not be  
a violation of this chapter.

SECTION 93. NR 431.04(1) and (2) are amended to read:

NR 431.04(1) ~~All~~ No owner or operator of a direct or portable ~~sources;~~  
~~source~~ may cause or allow emissions of shade or density ~~equal to or~~ greater  
than number 2 of the Ringlemann chart or 40% opacity. Exceptions listed in s.  
NR 431.05~~(1)~~ shall apply.

(2) ~~All~~ No owner or operator of a direct or portable ~~sources~~ source  
located in subregion 1 of the Lake Michigan Intrastate AQCR or in the  
Southeastern Wisconsin Intrastate AQCR ~~shall also meet the requirements of s.~~  
~~NR 431.05~~ may, after July 31, 1975, cause or allow emissions of shade or  
density greater than number 1 of the Ringlemann chart or 20% opacity.  
Exceptions listed in s. NR 431.05 shall apply.

SECTION 94. NR 431.05(intro.) and (1) are amended to read:

NR 431.05 EMISSION LIMITATIONS; AFTER APRIL 1, 1972. (intro.) ~~All~~ No  
owner or operator of a direct ~~and~~ or portable ~~sources~~ source on which  
construction or modification is commenced after April 1, 1972 ~~shall meet the~~  
~~emission limits of this section.~~

~~(1)~~ ~~Direct or portable sources other than those specified in s.~~  
~~NR 431.06;~~ may cause or allow emissions of shade or density greater than  
number 1 of the Ringlemann chart or 20% opacity with the following exceptions:

~~(a)~~ (1) When combustion equipment is being cleaned or a new fire started, emissions may exceed number 1 of the Ringlemann chart or 20% opacity but may not ~~to~~ exceed number 4 of the Ringlemann chart or 80% opacity for 5 minutes in any one hour. Combustion equipment may not be cleaned nor a fire started more than 3 times per day.

~~(b)~~ (2) For Emissions may exceed number 1 of the Ringlemann chart or 20% opacity for stated periods of time, as permitted by the department, for such purpose as an operating test, use of emergency or reserve equipment, or other good cause, provided no hazard or unsafe condition arises.

~~(c)~~ (3) For direct or portable sources in operation on or before February 1, 1975, where emission test data taken concurrently with opacity readings or continuous emission monitor data show the source to be in compliance with the applicable emission limits but not the opacity limits, an alternative opacity limit may be established according to methods and procedures ~~set forth~~ in s. NR 431.07.

SECTION 95. NR 431.05(2) is repealed.

SECTION 96. NR 431.06 is repealed.

SECTION 97. NR 431.07(1)(d) and (2)(a)1. and (c) are amended to read:

NR 431.07(1)(d) The owner or operator of the source installs and operates a continuous emission monitor (CEM) for opacity that meets the performance specifications in s. NR ~~439.07(3)~~ 439.09.

(2)(a)1. A test plan complying with s. NR 439.07~~(1)~~; and

(c) Not more than 30 days prior to the emission test, the continuous emission monitor shall pass a performance ~~and systems audit~~ specification test as required by s. NR ~~439.07(3)~~ 439.09(1) and a quarterly calibration error audit as required under s. NR 439.09(6).

SECTION 98. NR 436.01 is amended to read:

NR 436.01 APPLICABILITY; PURPOSE. (1) APPLICABILITY. This chapter applies to all air contaminant sources and to all their owners ~~or~~ and operators of an air contaminant source.

(2) PURPOSE. This chapter is adopted under ss. 144.31 and 144.38, Stats., to specify that emissions into the ambient air in excess of the limitations set in chs. NR 400 to 499 are prohibited and to establish the conditions under which the department may grant exceptions, delayed compliance orders and variances to ~~the~~ these emission limitations ~~set in chs. NR 400 to 499~~ in order to protect air quality.

SECTION 99. NR 436.03(1) is amended to read:

NR 436.03(1) GENERAL PROHIBITION. No person may cause, allow, or permit emissions into the ambient air in excess of the limits set in chs. NR 400 to 499. Where a numerical limit is specified as a 2 digit integer in which the second digit is zero, the zero is a significant figure.

SECTION 100. NR 436.04(2)(g)5. is amended to read:

NR 436.04(2)(g)5. In the case of a major stationary source, a notice that it may be required to pay administrative noncompliance penalties for failure to comply with the order and that no order issued under this subsection ~~shall~~ will be effective until it is approved by the administrator of the U.S. environmental protection agency or designee.

SECTION 101. NR 436.05(5)(intro.) is amended to read:

NR 436.05(5) EFFECTIVE DATE OF VARIANCES. (intro.) When the department grants, modifies or revokes a source-specific revision to a general RACT requirement which has been approved by the administrator of the U.S. environmental protection agency as part of the state implementation plan, such revision ~~shall~~ will not become effective until:

SECTION 102. NR 436.07 is amended to read:

NR 436.07 DUTY TO COMPLY WITH OTHER APPLICABLE PROVISIONS. The issuance or granting of any order or variance under ~~s. NR 436.03, 436.04 or 436.05~~ shall this chapter does not relieve any person of the duty to comply with all other applicable federal, state and local laws and rules.

SECTION 103. NR 439.01(1) and (2) are amended to read:

NR 439.01(1) APPLICABILITY. This chapter applies to all air contaminant sources and to ~~all~~ their owners ~~or~~ and operators ~~of an air contaminant source.~~

(2) PURPOSE. This chapter is adopted under ss. 144.31, 144.34, 144.38 and 144.394, Stats., to establish general reporting, recordkeeping, testing, inspection and ~~demonstration~~ determination of compliance requirements for all air contaminant sources. Individual chapters of chs. NR 400 to 499, permits or orders may contain additional requirements.

SECTION 104. NR 439.02(intro.), (3) and (8) are amended to read:

NR 439.02 DEFINITIONS. (intro.) In addition to the definitions contained in this section, the definitions contained in ch. NR 400 ~~also~~ apply to the terms used in this chapter.

(3) "Compliance emission test" means a performance test required by the department or conducted in cooperation with the department involving the quantitative measurement of air contaminants as they are emitted from a source to determine compliance with an emission limitation.

(8) "Mechanical collector" means a broad class of particulate control devices that separate ~~dust~~ solid particles from a gas stream by a combination of mechanical forces which include centrifugal, gravitational, and inertial. Such devices may include settling chambers, cyclones, and multicyclone collectors.

SECTION 105. NR 439.02(10) is repealed.

SECTION 106. NR 439.03(4)(a)2. is amended to read:

NR 439.03(4)(a)2. Exceedances of visible emission limitations detected by a continuous emission monitor which are less than 10% opacity above the opacity limit for a period not to exceed 30 minutes. These exceedances shall be reported in the quarterly excess emissions reports required under s. NR ~~439.07(3)(h)~~ 439.09(8).

SECTION 107. NR 439.04(1)(a) is amended to read:

NR 439.04(1)(a) Records of all testing and monitoring conducted or required under chs. NR 400 to 499;

SECTION 108. NR 439.05 (title) is amended to read:

NR 439.05 (title) ACCESS TO RECORDS; INSPECTIONS.

SECTION 109. NR 439.05 is renumbered 439.05(1).

SECTION 110. NR 439.06 (title), (intro.), (2)(c) and (8) (title) are amended to read:

NR 439.06 (title) METHODS AND PROCEDURES FOR DETERMINING COMPLIANCE WITH EMISSION LIMITATIONS (BY AIR CONTAMINANT). (intro.) When a test is tests or a continuous monitoring system are required by the department, the owner or operator of a source shall use the reference methods listed in this section and in ss. NR 439.07 ~~and 439.075~~ to 439.095 to determine compliance with emission limitations, unless an alternative or equivalent method is approved, or a specific method is required, in writing, by the department. The test methods shall include quality control and quality assurance procedures and the data reporting format which are specified and approved by the department for collection, analysis, processing and reporting of compliance monitoring data. Notwithstanding the compliance determination methods which the owner or operator of a source is authorized to use under this chapter, the department may use any relevant information or appropriate method to determine a source's compliance with applicable emission limitations.

(2)(c) Perform periodic fuel sampling and analysis of fossil and nonfossil fuels using the methods and procedures specified in s. NR ~~439.07(2)~~ 439.08.

(8) (title) EMISSIONS OF OTHER AIR CONTAMINANTS.

SECTION 111. NR 439.07 (title) and (intro.) are amended to read:

NR 439.07 (title) METHODS AND PROCEDURES FOR PERIODIC COMPLIANCE EMISSION TESTING. (intro.) The owner or operator of a source required to conduct emission testing under s. NR 439.075 shall comply with all applicable methods and procedures listed in this section.

SECTION 112. NR 439.07(1) (title) is repealed.



SECTION 113. NR 439.07(1)(a) to (j) are renumbered 439.07(1) to (10) and, as renumbered, (1), (2) (title), (4) (title), (8) (title), (a), (b), (g) and (m), (9) (title) and (d) and (10)(b) are amended to read:

(1) GENERAL. All emission tests conducted for the purpose of determining compliance with an emission limitation under chs. NR 400 to 499 shall be performed according to the test methods established in 40 C.F.R. part 60, Appendix A, incorporated by reference in ch. NR 484, or according to other test methods approved in writing by the department. ~~All The owner, operator or contractor responsible for emission testing shall be performed following~~ follow the ~~methods and~~ procedures in this section. Unless the department requires or approves the performance of a test at less than capacity, all compliance emission tests shall be performed with the equipment operating at capacity or as close to capacity as practical.

(2) (title) EMISSION TEST NOTIFICATION AND TEST PLAN SUBMITTAL.

(4) (title) NOTIFICATION OF TEST PLAN REVISION.

(8) (title) PROCEDURES FOR CONDUCTING COMPLIANCE EMISSION TESTS.

(a) Except as provided in ~~subd. 3., 10., 11., or 13. par. (c), (j), (k), or (m)~~, an emission test shall consist of a minimum of 3 representative repetitions, as determined by the department, of the applicable test method with a minimum sampling time of one hour per repetition. Shorter sampling times may be used with the written approval of the department. The arithmetic mean of the results of all repetitions shall be used to determine compliance with an emission limitation.

(b) Sootblowing shall be performed during one repetition of each test for particulate emissions on any boiler that routinely employs sootblowing, unless the boiler uses a continuous sootblowing system. If a continuous sootblowing system is operating during the test, compliance with the emission limitation shall be determined by the arithmetic mean of the results of all repetitions. If a continuous sootblowing system is not operating during the test, the representative average pounds of particulate emissions per million BTU heat input shall be determined by the following equation:

$$E = E_s ((A+B) S/AR) + E_{ns} ((R-S)/R - BS/AR)$$

where:

E - is the weighted average pounds of particulate matter per million BTU heat input.

E<sub>s</sub> - is the pounds of particulate matter per million BTU heat input for test runs during sootblowing.

E<sub>ns</sub> - is the arithmetic average pounds of particulate matter per million BTU heat input for test runs with no sootblowing.

A - is the hours of sootblowing during test runs containing sootblowing.

B - is the hours ~~not~~ with no sootblowing during test runs containing sootblowing.

R - is the average hours of boiler operation per 24 hours.

S - is the average hours of sootblowing per 24 hours.

(g) Any boiler emission ~~concentration~~ rate in pounds per million BTU heat input shall be determined using the heat input based on fuel use rate. The emission ~~concentration~~ rate may be determined using the F-Factor calculation shown in Method 19 in 40 C.F.R. part 60, Appendix A, incorporated by reference in ch. NR 484, with written approval from the department. If the F-Factor method is used, an ultimate fuel analysis shall be performed. An integrated gas sample, using Method 3 or 3A in 40 C.F.R. part 60, Appendix A, incorporated by reference in ch. NR 484, shall be collected and analyzed for oxygen and carbon dioxide content. ~~Any other~~ Other methods ~~used to determine for determining~~ the boiler heat input ~~shall~~ may be used only if approved, in writing, by the department.

(m) When compliance with a nitrogen oxide emission limitation is determined using Method 7, 7A or 7B in 40 C.F.R. part 60, Appendix A, incorporated by reference in ch. NR 484, the test shall consist of 3 repetitions. A repetition shall consist of 4 2-liter evacuated sample bottles that are filled, one at a time, with stack gas at 15 minute intervals. The 4 samples ~~are~~ shall be analyzed independently. The arithmetic mean of the results of the 4 samples shall be the result of that repetition.

(9) (title) EMISSION TEST REPORTING REQUIREMENTS.

(d) Sample calculations ~~of~~ employing all the formulas used to calculate the results.

(10)(b) Sample calculations ~~of~~ employing all formulas used to calculate the results.

SECTION 114. NR 439.07(2) is renumbered 439.08 and, as renumbered, 439.08 (title), (intro.), (1)(a) to (h), (2)(a) and (c) are amended to read:

NR 439.08 (title) METHODS AND PROCEDURES FOR PERIODIC FUEL SAMPLING AND ANALYSIS. (intro.) ~~Where required by the department, the~~ The owner or operator of a source required to conduct fuel sampling and analysis under s. NR 439.085 shall use the ~~following~~ methods and procedures listed in this section to obtain ~~a fuel sample~~ samples and perform ~~analysis~~ analyses for certain properties and constituents. Alternative methods may be used if approved, in writing, by the department.

(1)(a) Coal sampling. Coal sampling shall be performed according to ASTM ~~D2234-76~~ D2234-89, Collection of a Gross Sample of Coal, incorporated by reference in ch. NR 484.

(b) Preparing coal for analysis. Preparation of a coal sample for analysis shall be performed according to ASTM ~~D2013-72~~ D2013-86, Preparing Coal Samples for Analysis, incorporated by reference in ch. NR 484.

(c) Sulfur content in coal. The sulfur content of a coal sample shall be determined according to ASTM ~~D3177-75~~ D3177-89, Total Sulfur in the Analysis Sample of Coal and Coke, or ASTM ~~D4239-83~~ D4239-85, Sulfur in the Analysis Sample of Coal and Coke Using High Temperature Tube Furnace Combustion Methods, incorporated by reference in ch. NR 484.

(d) Heat content in coal. The heat content of a coal sample shall be determined according to ASTM ~~D2015-77~~ D2015-85, Gross Calorific Value of Solid Fuel by the Adiabatic Bomb Calorimeter, incorporated by reference in ch. NR 484.

(e) Ash content in coal. The ash content of a coal sample shall be determined according to ASTM ~~D3174-82~~ D3174-89, Standard Test Method for Ash in the Analysis Sample of Coal and Coke, incorporated by reference in ch. NR 484.

(f) Moisture content in coal. The moisture content of a coal sample shall be determined according to ASTM ~~D3173-73~~ D3173-87, Standard Test Method for Moisture in the Analysis Sample of Coal and Coke, incorporated by reference in ch. NR 484.

(g) Ultimate analysis of coal. The ultimate analysis of a coal sample shall be determined according to ASTM ~~D3176-84~~ D3176-89, Ultimate Analysis of Coal and Coke, incorporated by reference in ch. NR 484.

(h) Coal audit samples. The owner or operator of a source shall be required to participate at least once every 6 months in an interlaboratory coal audit program acceptable to the department. The results of the audit shall be reported to the department in the quarterly report on coal quality required under s. NR 439.085(2) following receipt of the results from the audit program. The results ~~must~~ shall comply with quality control and quality assurance procedures submitted by the owner or operator of the source and approved by the department.

(2)(a) Liquid fossil fuel sampling. Liquid fossil fuel sampling shall be performed according to ASTM ~~D4057-81~~ D4057-88, Standard Practice for Manual Sampling of Petroleum and Petroleum Products or ASTM D4177-82, Standard Method for Automatic Sampling of Petroleum and Petroleum Products, incorporated by reference in ch. NR 484.

(c) Heat content in liquid fossil fuel. The heat content of a liquid fossil fuel sample shall be determined according to ASTM ~~D240-76~~ D240-87, Heat of Combustion of Liquid Hydrocarbon Fuels by a Bomb Colorimeter, incorporated by reference in ch. NR 484.

SECTION 115. NR 439.07(3) is renumbered 439.09 and, as renumbered, 439.09 (title), (intro.), (8)(a)(intro.) and 1., (b)(intro.) and (c) are amended to read:

NR 439.09 (title) METHODS AND PROCEDURES FOR CONTINUOUS EMISSION MONITORING. (intro.) ~~Where required by the department, the~~ The owner or operator of a source required to conduct continuous emission monitoring under s. NR 439.095 shall use the ~~following~~ methods and procedures listed in this section to install, calibrate, maintain and operate a continuous emissions monitoring system, or other methods and procedures approved, in writing, by the department:

(8)(a)(intro.) ~~The owner or operator of a continuous emissions monitoring system shall submit quarterly excess emission reports within 30 days following the end of each calendar quarter.~~ The reports required under this subsection shall contain the following information:

1. The date and starting and ending times of each period of excess emissions ~~including~~ and the magnitude of the emissions.

(b)(intro.) ~~For the purpose of~~ In the reports required under this ~~paragraph subsection~~, periods of excess emissions shall be reported as follows:

(c) For purposes of reporting exceedances on the basis of a 24-hour rolling average under this ~~paragraph subsection~~, an exceedance shall be based on at least 18 and not more than 24 valid recordings of hourly average ~~concentrations~~ emission rates in any 24 hour period. An hourly average may be included in only one 24-hour rolling average exceedance.

SECTION 116. NR 439.075 (title) is amended to read:

NR 439.075 (title) PERIODIC COMPLIANCE EMISSION TESTING REQUIREMENTS.

SECTION 117. NR 439.075(1) (title) is repealed.

SECTION 118. NR 439.075(1)(a) to (d) are renumbered 439.075(1) to (4) and, as renumbered, 439.075(1), (2)(a)(intro.), 1., 2. and 4., (b)(intro.) and 3. and (c)(intro.), (3), (4)(a)(intro.), 1.a. and b., 2. and 3. and (b) are amended to read:

NR 439.075(1) APPLICABILITY AND GENERAL REQUIREMENTS. (a) The owner or operator of a direct stationary source specified in ~~par. (b)~~ sub. (2) which has been issued an air pollution control permit under s. 144.391, Stats., shall comply with the compliance emission testing requirements of this ~~subsection~~ section.

(b) Nothing in this ~~subsection~~ section may be construed as preventing the department from requiring the performance of additional compliance emission tests on the affected sources or requiring tests for pollutants and sources other than those specified in this ~~subsection~~ section.

(c) All compliance emission tests under this ~~subsection~~ section shall be performed according to s. NR 439.07 and chs. NR 445 to 449.

(2) AFFECTED EMISSION POINTS AND AIR CONTAMINANTS REQUIRING TESTING. (a) Except as provided in ~~par. (d)~~ sub. (4), the owner or operator of a source identified in this ~~subdivision~~ paragraph, with an emission point that has allowable emissions of particulate matter, sulfur dioxide, or organic compounds of 100 tons or more per year or allowable emissions of total reduced

sulfur of 25 tons or more per year, shall perform compliance emission testing according to the testing schedules in ~~par. (e)~~ sub. (3).

1. Compliance emission testing for particulate matter is required for an emission point subject to ~~an~~ a particulate emission limitation under ch. NR 405 or in s. NR 415.04(2)(b)2. or (c)1., 415.05, 415.06, 415.07 or 415.08(3) or (6).

2. Compliance emission testing for sulfur dioxide is required for an emission point subject to ~~an~~ a sulfur dioxide emission limitation under ch. NR 405 or in s. NR ~~417.03~~, 417.07(2), (3), (4), or (5), 418.025, 418.03 or 418.04 or to a more restrictive emission limit as described in s. NR 417.07(1)(b).

4. Compliance emission testing for organic compounds is required for an emission point subject to an emission limitation in s. NR 421.03, 421.04, 422.05, ~~422.06, 422.07, to~~ 422.08, 422.09, ~~422.10, 422.11, 422.12, 422.13, 422.14, 422.15, to~~ 422.155, 423.05, 424.03 or 424.04 which uses a control device to achieve compliance with the applicable requirements. This test shall include a determination of the overall control efficiency of the control device on the affected emission point.

(b) The owner or operator of a source, subject to the requirements of ch. NR 427 or chs. NR 445 to 449, shall perform compliance emission testing for lead, mercury, beryllium or vinyl chloride according to the testing schedules in ~~par. (e)~~ sub. (3).

3. Compliance emission testing for vinyl chloride is required for an emission point identified in s. NR 449.04, 449.05 or 449.06(1), (2), (3) or (4), and for any control system to which reactor emissions are required to be ducted in s. NR 449.06(1)(b) or (5)(a) or (b) ~~and~~ or to which fugitive emissions are required to be ducted in s. NR 449.07(2)(a), (b), (c), (e), (f) ~~and 449.09(2)~~ or (i).

(c) Except as provided in ~~par. (d)~~ sub. (4), the owner or operator of a source identified in this ~~subdivision~~ paragraph which is subject to the requirements of ch. NR 440 shall perform compliance emission testing for the following air contaminants according to the testing schedules in ~~par. (e)~~ sub. (3).

(3) TESTING SCHEDULES. (a) The owner or operator of a direct stationary source which has received a construction, modification or new operation permit under s. 144.391(1)(b), (2)(b) or (3)(b), Stats., shall

perform the compliance emission tests required under ~~par. (b)1.~~ sub. (2)(a) during the initial operating period authorized by the permit and shall perform the compliance emission tests required under ~~par. (b)~~ sub. (2) at least once every 24 months thereafter as long as the permit remains valid. Each biennial test shall be performed within 90 days of the anniversary date of release for permanent operation of the affected source or within 90 days of an alternate date specified by the department.

(b) The owner or operator of a direct stationary source which has received a mandatory operating permit under s. 144.391(1)(bm), (2)(bm), or (3)(bm), Stats., shall perform the compliance emission tests required under ~~par. (b)~~ sub. (2) every 24 months as long as the permit remains valid. Each biennial test shall be performed within 90 days of the anniversary date of the issuance of the permit or within 90 days of an alternate date specified by the department.

(c) The owner or operator of a direct stationary source which has received an elective operating permit under s. 144.391(1)(c), (2)(c) or (3)(c) Stats., shall perform the compliance emission tests required under ~~par. (b)~~ sub. (2) every 24 months as long as the permit remains valid. Each biennial test shall be performed within 90 days of the anniversary date of the issuance of the permit or within 90 days of an alternate date specified by the department.

(4) EXCEPTIONS TO COMPLIANCE EMISSION TESTING REQUIREMENTS. (a) (intro.) The following exceptions apply to the testing required under ~~par. (b)1.~~ sub. (2)(a) or ~~3.~~ (c):

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

b. The most recently completed test results from a test conducted according to the methods and procedures specified in s. NR 439.07 for the direct stationary source demonstrate that the emissions of the air contaminant for which compliance emission testing is required under ~~the subsection~~ this section are 50% or less of the applicable emission limitation: ; or

2. No periodic compliance emission test is required under ~~this subsection~~ section for any affected emission point equipped with a continuous

emission monitor for the air contaminants requiring testing if the monitor meets the performance specification requirements of s. NR ~~439.07(3)~~ 439.09.

3. No periodic compliance emission test is required under this ~~subsection~~ section for any affected emission point of a fuel burning installation that only fires natural gas, propane or distillate fuel oil or any combination of these fuels.

(b) All requests for waivers under ~~subd. 1 par. (a)~~ shall be submitted in writing for department review and approval at least 60 days prior to the required test date.

SECTION 119. NR 439.075(2) is renumbered 439.085 and, as renumbered, 439.085(1)(intro.) and (c), (2)(a)(intro.), 1. and 2.a. and d., (b)(intro.), 1. and 2.(intro.), (c)(intro.), 1. and 2.(intro.), (d)(intro.) and 2. to 5. and (e), (3)(a)(intro.), 1. and 2., (b)(intro.) and (c) are amended to read:

NR 439.085(1) GENERAL APPLICABILITY. (intro.) Effective April 1, 1989, the requirements of this ~~subsection~~ section apply to all owners or operators of sources described in this ~~subsection~~ section, with the following exceptions:

(c) Sources which have installed a sulfur dioxide continuous emission monitor that meets the performance specification requirements of s. NR ~~439.07(3)~~ 439.09.

(2)(a)(intro.) The owner or operator of a coal burning installation which has ~~an annual~~ a coal burning rate equal to or greater than 250,000 tons per year shall sample coal and submit reports on coal quality in the following manner:

1. Perform coal sampling, using the procedures in ASTM ~~D2234~~ D2234-89, incorporated by reference in ch. NR 484, which result in data at least as reliable as classification I-B-1, defined in ASTM ~~D2234~~ D2234-89 as automatic sampling — full stream cut — systematic spacing, and analyze these samples for ash content, sulfur content, and heat content according to the applicable methods and procedures in s. NR ~~439.07(2)~~ 439.08(1).

a. ~~Total~~ The total quantity of coal burned expressed in tons.

d. Average heat content expressed in BTU per pound of the coal burned.

(b)(intro.) The owner or operator of a coal burning installation which has ~~an annual~~ a coal burning rate equal to or greater than 100,000 tons per



year but less than 250,000 tons per year shall sample coal and submit reports on coal quality in the following manner:

1. Perform coal sampling using the procedures in ASTM ~~D2234~~ D2234-89, which result in data at least as reliable as classification I-C-2, defined in ASTM ~~D2234~~ D2234-89 as automatic sampling — part stream cut — random spacing, and analyze these samples for ash content, sulfur content, and heat content according to the applicable methods and procedures in s. NR ~~439.07(2)~~ 439.08(1).

2.(intro.) Submit quarterly reports within 30 days following the end of each calendar quarter which ~~shall~~ include the following information for each week during the calendar quarter:

(c)(intro.) The owner or operator of a coal burning installation which has ~~an annual~~ a coal burning rate equal to or greater than 10,000 tons per year but less than 100,000 tons per year shall sample coal and submit reports on coal quality in the following manner:

1. Perform coal sampling using the procedures in ASTM ~~D2234~~ D2234-89, which result in data at least as reliable as classification II-D-2, defined in ASTM ~~D2234~~ D2234-89 as manual sampling — stationary coal sampling — random spacing, and analyze these samples for ash content, sulfur content, and heat content according to the applicable methods and procedures in s. NR ~~439.07(2)~~ 439.08(1).

2.(intro.) Submit quarterly reports within 30 days following the end of each calendar quarter which ~~shall~~ include the following information for each month during the calendar quarter:

(d)(intro.) The owner or operator of a coal burning installation which has ~~an annual~~ a coal burning rate equal to or greater than 1,000 tons per year but less than 10,000 tons per year shall submit, on a quarterly basis, information on coal quality which is calculated from the supplier's analyses for each shipment of coal received at ~~this~~ the installation. Each quarterly report is due within 30 days following the end of ~~each~~ the calendar quarter. The owner or operator shall obtain certification from the supplier that the applicable methods and procedures in s. NR ~~439.07(2)~~ 439.08(1) were followed by the supplier. The report shall include the following information for each calendar quarter:

2. ~~The weighted~~ Weighted average percent of the ash content of the coal burned.

3. ~~The weighted~~ Weighted average percent of the sulfur content of the coal burned.

4. ~~The weighted~~ Weighted average heat content expressed in BTU per pound of the coal burned.

5. ~~The weighted~~ Weighted average sulfur dioxide emission rate in terms of pounds of sulfur dioxide per million BTU heat input from the coal burned.

(e) The owner or operator of a coal burning installation which has ~~an annual~~ a coal burning rate less than 1,000 tons per year shall retain copies of the supplier's analyses at the installation for each shipment of coal received. The owner or operator shall obtain certification from the supplier that the applicable methods and procedures in s. NR ~~439.07(2)~~ 439.08(1) were followed. The supplier's analyses shall include, at a minimum, each shipment's coal quantity, sulfur content, ash content, and heat content.

(3)(a)(intro.) The owner or operator of a residual fuel oil burning installation which has ~~an annual~~ a residual fuel oil burning rate equal to or greater than 1.5 million gallons per year shall sample residual fuel oil and submit reports on residual fuel oil quality in the following manner:

1. Perform liquid fossil fuel sampling for each storage tank of residual fuel oil and analyze these samples for sulfur content and heat content according to the applicable methods and procedures for sampling and analysis in s. NR ~~439.07(2)~~ 439.08(2).

2. Submit quarterly reports within 30 days following the end of each calendar quarter which include the following information for each month during the calendar quarter-:

(b)(intro.) The owner or operator of a residual fuel oil burning installation which has ~~an annual~~ a residual fuel oil burning rate equal to or greater than 150,000 gallons per year but less than 1.5 million gallons per year shall submit, on a quarterly basis, information on residual fuel oil quality which is calculated from the supplier's analyses for each shipment of residual fuel oil received at the installation. Each quarterly report is due within 30 days following the end of ~~each~~ the calendar quarter. The owner or operator of the installation shall obtain certification from the supplier that the applicable methods and procedures in s. NR ~~439.07(2)~~ 439.08(2) were

followed by the supplier. The report shall include the following information for each calendar quarter:

(c) The owner or operator of a residual fuel oil burning installation which has ~~an annual~~ a residual fuel oil burning rate less than 150,000 gallons per year shall retain copies of the supplier's analyses, at the installation, for each shipment of residual fuel oil received. The owner or operator shall obtain certification from the supplier that the applicable methods and procedures in s. NR ~~439.07(2)~~ 439.08(2) were followed. The supplier's analyses shall include, at a minimum, each shipment's residual fuel oil quantity, sulfur content, and heat content.

SECTION 120. NR 439.075(3) is renumbered 439.095 and, as renumbered, 439.095(1) to (4), (5)(intro.), (a)(intro.), 1., 2.(intro.) and b., 3. and 4. and (b) to (d) and (6) are amended to read:

NR 439.095(1) (title) APPLICABILITY AND GENERAL REQUIREMENTS. (intro.) Except as provided in ~~par. (b)~~ sub. (2), the owner or operator of a direct stationary source listed in this ~~paragraph~~ subsection shall install, calibrate, operate, and maintain all monitoring equipment necessary for continuously monitoring the pollutants specified in this ~~paragraph~~ subsection for the applicable source. The type of monitoring equipment used and the manner and location of its installation are subject to prior department approval. The sources and their respective monitoring requirements are:

(a) Fossil fuel fired steam generators identified in ~~par. (e)~~ sub. (5) shall be monitored for opacity, nitrogen oxide emissions, sulfur dioxide emissions, and oxygen or carbon dioxide.

(b) Fluid bed catalytic cracking unit catalyst regenerators identified in ~~par. (e)~~ sub. (5) shall be monitored for opacity.

(c) Sulfuric acid plants identified in ~~par. (e)~~ sub. (5) shall be monitored for sulfur dioxide emissions.

(d) Nitric acid plants identified in ~~par. (e)~~ sub. (5) shall be monitored for nitrogen oxide emissions.

(2)(intro.) EXEMPTIONS. The department may grant an exemption from any monitoring requirement of this ~~subsection~~ section for any source which is:

(a) Subject to a continuous emission monitoring requirement under a new source performance standard in ch. NR 440; or

(b) Scheduled for retirement prior to ~~5 years after~~ October 1, ~~1987~~ 1992 if the source demonstrates, to the satisfaction of the department, that the source will cease operations prior to the scheduled retirement date.

(3) INSTALLATION DEADLINES. The owner or operator of a source which is required under ~~par. (a) sub. (1)~~ to install continuous monitoring equipment shall complete the installation and performance tests of the equipment and begin monitoring and recording not later than April 1, 1989, except as provided in pars. (a) and (b). The department may grant requests for extensions of the time provided for installation of monitors for facilities unable to meet the prescribed time frame if the owner or operator of the facility demonstrates that good faith efforts have been made to obtain and install the devices within the prescribed time frame.

(a) For new sources, monitoring and recording shall begin upon startup.

(b) For boilers connected to a single stack which have individual coal burning rates of less than 25,000 tons per year but which have a combined coal burning rate of 25,000 tons or more per year, monitoring and recording shall begin not later than January 1, 1993.

(4) MONITORING SYSTEM MALFUNCTION. The department may grant a temporary exemption from the monitoring and reporting requirements of this ~~subsection~~ section during any period of monitoring system malfunction if the source owner or operator shows, to the satisfaction of the department, that the malfunction was unavoidable and is being repaired as expeditiously as practicable.

(5) (intro.) MINIMUM MONITORING REQUIREMENT. ~~The department shall, as a minimum, require the~~ The owner or operator of the following sources to a source listed in this subsection shall, as a minimum, meet the monitoring requirements of this ~~paragraph~~ subsection and ~~par. (a) sub. (1)~~.

(a) Fossil fuel fired steam generating facilities. The owner or operator of fossil fuel fired steam generating facilities subject to ~~par. (a) sub. (1)~~ shall comply with the monitoring requirements in this ~~subdivision~~ paragraph.

1. 'Opacity'. The owner or operator of any steam generating facility which has a total heat input capacity equal to or greater than 250 million BTU per hour shall install, calibrate, maintain and operate a continuous monitoring system which meets the performance specifications of ~~par. (f) sub.~~

(6) for the measurement of opacity from each stack serving a coal fired boiler ~~that has or boilers with a combined~~ coal burning rate of 25,000 tons or more per year, unless the source utilizes an alternative method of compliance determination approved, in writing, by the department.

2. 'Sulfur dioxide'. The owner or operator of any steam generating facility shall install, calibrate, maintain and operate a continuous monitoring system for the measurement of sulfur dioxide which meets the performance specifications of ~~par. (f)~~ sub. (6) if:

b. The coal burning rate of all boilers at the facility which emit to a stack without a sulfur dioxide control system is equal to or greater than 100,000 tons of coal per year, unless the source utilizes an alternative method of compliance determination approved, in writing, by the department which meets the requirements of ~~sub. (2)~~ s. NR 439.085.

3. 'Nitrogen oxides'. The owner or operator of a fossil fuel fired steam generator with a capacity greater than 1000 million BTU per hour heat input which is located in a nonattainment area for nitrogen oxides shall install, calibrate, maintain and operate a continuous monitoring system ~~on the generator~~ for the measurement of the source's nitrogen oxides emissions which meets the performance specifications of ~~par. (f)~~ sub. (6), unless the source owner or operator demonstrates by a compliance emission test that the source emits nitrogen oxides at levels 30% or more below the applicable emission limit.

4. 'Oxygen or carbon dioxide'. The owner or operator of a fossil fuel fired steam generator where measurement of oxygen or carbon dioxide in the flue gas is required to convert either sulfur dioxide or nitrogen oxides continuous emission monitoring data, or both, to units of the applicable emission limitation shall install, calibrate, operate and maintain a continuous monitoring system for the measurement of percent oxygen or carbon dioxide which meets the performance specifications of ~~par. (f)~~ sub. (6).

(b) Nitric acid plants. The owner or operator of a nitric acid plant of greater than 300 tons per day production capacity, expressed as 100% acid, which is located in a nonattainment area for nitrogen oxides shall install, calibrate, maintain and operate a continuous monitoring system for the measurement of nitrogen oxides which meets the performance specifications of ~~par. (f)~~ sub. (6) for each nitric acid producing unit within the plant.

(c) Sulfuric acid plants. The owner or operator of a sulfuric acid plant of greater than 300 tons per day production capacity, expressed as 100% acid, shall install, calibrate, maintain and operate a continuous monitoring system for the measurement of sulfur dioxide which meets the performance specifications of ~~par. (f)~~ sub. (6) for each sulfuric acid producing unit within the plant.

(d) Fluid bed catalytic cracking unit catalyst regenerators at petroleum refineries. The owner or operator of a catalyst regenerator for fluid bed catalytic cracking units of greater than 20,000 barrels per day fresh feed capacity shall install, calibrate, maintain and operate a continuous monitoring system for the measurement of opacity which meets the performance specifications of ~~par. (f)~~ sub. (6).

(6) PERFORMANCE SPECIFICATION. The owner or operator of monitoring equipment installed to comply with this ~~subsection~~ section shall install, calibrate, maintain and operate the continuous emission monitor in accordance with the performance specifications in 40 C.F.R. part 60, Appendix B, incorporated by reference in ch. NR 484, and the requirements in s. NR ~~439.07(3)~~ 439.09.

SECTION 121. NR 439.08 is renumbered 439.055 and as renumbered is amended to read:

NR 439.055 INSTRUMENTATION FOR AIR POLLUTION CONTROL EQUIPMENT AND SOURCES. The department may require an owner or operator to install instrumentation to monitor the operation of a source or its air pollution control equipment.

SECTION 122. NR 439.085(4) is created to read:

NR 439.085(4) REQUIREMENTS FOR INSTALLATIONS BURNING FUELS OTHER THAN COAL OR RESIDUAL FUEL OIL. The owner or operator of an installation subject to reporting requirements under s. NR 439.03 which burns fuel other than coal or residual fuel oil may be required to sample and analyze the fuel used in a manner specified by the department.

SECTION 123. NR 439.09 is renumbered 439.05(2).

SECTION 124. NR 439.09(8)(intro.) is created to read:

NR 439.09(8)(intro.) The owner or operator of a continuous emissions monitoring system shall submit quarterly excess emission reports to the department within 30 days following the end of each calendar quarter.

SECTION 125. NR 439.11(1)(g) is amended to read:

NR 439.11(1)(g) A description of the activities and maximum intervals for inspection and routine maintenance of instrumentation installed and operated to monitor the operation of air pollution control equipment as required in par. (e).

SECTION 126. NR 445.01(1) is amended to read:

NR 445.01(1) APPLICABILITY. This chapter applies to all air contaminant sources which may emit hazardous pollutants and to ~~all their~~ owners ~~or~~ and operators ~~of an air contaminant source~~. The emission limitations and control requirements of this chapter do not apply to a source of a hazardous air contaminant regulated under chs. NR 446 to 449 for the specific hazardous air contaminants regulated under those chapters or to a source which must meet a national emission standard for a hazardous air pollutant promulgated under section 112 of the federal clean air act for the specific air pollutant regulated under that standard.

SECTION 127. NR 445.02(9m) is amended to read:

NR 445.02(9m) "Reference method" means any method of sampling and analyzing for an air pollutant, as described in 40 C.F.R. part 61, Appendix B, incorporated by reference in ch. NR 484.

SECTION 128. NR 445.04(5)(c) is amended to read:

NR 445.04(5)(c) Subsequent requirements. The owner or operator of a source which has achieved compliance with this section by installing emission control equipment may not be required to install additional control equipment to achieve compliance with this section for a period of 10 years after the installation of the control equipment or the useful life of the control equipment as determined by the department, whichever is less. For the purposes of this paragraph, increasing stack height, other dilution measures,

or material reformulation may not be construed as installation of emission control equipment. Material reformulation which requires substantial capital expenditures for process equipment which was made with prior department approval and which results in a reduction of emissions of hazardous air contaminants which is sufficient to comply with the limitations of this section may be construed as installation of emission control equipment under this paragraph.

SECTION 129. NR 445.05(6)(a)1.c., 2.c. and 3.c., (b)3., (e), (f)2. and 3.a. and b. and (g)3. and (7)(b)3. are amended to read:

NR 445.05(6)(a)1.c. Achieve final compliance with subs. (1) to (3) by April 1, 1990 if compliance consists of measures other than installation of emission control equipment (e.g., material substitution), or by April 1, 1991 if compliance requires installation of emission control equipment.

2.c. Achieve final compliance with subs. (1) to (3) by October 1, 1990 if compliance consists of measures other than installation of emission control equipment (e.g., material substitution), or by October 1, 1991 if compliance requires installation of emission control equipment.

3.c. Achieve final compliance with subs. (1) to (3) by April 1, 1991 if compliance consists of measures other than installation of emission control equipment (e.g., material substitution), or by April 1, 1992 if compliance requires installation of emission control equipment.

(b)3. Achieve final compliance with sub. (4) by April 1, 1993 if compliance consists of measures other than installation of emission control equipment (e.g., material substitution), or by April 1, 1994 if compliance requires installation of emission control equipment.

(e) Subsequent requirements. The owner or operator of a source which has achieved compliance with this section by installing emission control equipment may not be required to install additional control equipment to achieve compliance with this section for a period of 10 years after the installation of the control equipment or the useful life of the control equipment as determined by the department, whichever is less. For the purpose of this paragraph, increasing stack height, other dilution measures, or material reformulations may not be construed as installation of emission control equipment. Material reformulation which requires substantial capital



expenditures for process equipment which was made with prior department approval and which results in a reduction of emissions of hazardous air contaminants which is sufficient to comply with the limitations of this section, may be construed as installation of emission control equipment under this paragraph.

(f)2. The owner or operator of a source which has achieved compliance with the emission limits for the hazardous air contaminants in Tables 1 to 3 of s. NR 445.04 under subs. (1) to (3) by installing emission control equipment, may apply for, and the department may grant, an extension of the schedule for submitting a compliance plan and deadline for achieving compliance with an emission limitation in par. (b) for the earlier of April 1, 1997 or the useful life of the control equipment installed to meet the provisions of subs. (1) to (3), as determined by the department. For the purposes of this paragraph, increasing stack height, other dilution measures, or material reformulation may not be construed as installation of emission control equipment. Material reformulation which requires substantial capital expenditures for process equipment which was made with prior department approval and which results in a reduction of emissions of hazardous air contaminants which is sufficient to comply with the limitations of this section, may be construed as installation of emission control equipment under this subdivision. An extension may be granted under this subdivision if the applicant demonstrates to the satisfaction of the department that compliance with par. (b) would be economically infeasible and the department finds that the residual emissions would not pose a threat to public health and would not cause significant public harm.

3.a. Within 12 months after the department completes its review of the source's compliance plan under par. (c), if compliance consists of measures other than installation of emission control equipment; or

b. Within 24 months after the department completes its review of the source's compliance plan under par. (c), if compliance requires installation of emission control equipment.

(g)3. Achieve final compliance with subs. (1), (3), and (4) by April 1, 1993 if compliance consists of measures other than installation of emission control equipment (e.g., material substitution), or by April 1, 1994 if compliance requires installation of emission control equipment.

(7)(b)3. Achieve final compliance with the emission limits under sub. (3) for chloroform and formaldehyde by April 1, 1993 if compliance consists of measures other than installation of emission control equipment (e.g., material substitution), or by April 1, 1994 if compliance requires installation of emission control equipment.

SECTION 130. NR 446.01(1) is amended to read:

NR 446.01(1) APPLICABILITY. This chapter applies to all air contaminant sources which may emit mercury and to all their owners or and operators of an air contaminant source which emits mercury.

SECTION 131. NR 446.03(intro.) is amended to read:

NR 446.03 MERCURY EMISSION LIMITATIONS. (intro.) No person ~~shall~~ may cause, ~~suffer,~~ allow or permit emissions of mercury:

SECTION 132. NR 446.04(1)(b), (2)(b), (3)(c) and (4)(b) are amended to read:

NR 446.04(1)(b) The department shall be notified at least 30 days prior to a stack or performance test to afford it the opportunity to have a representative present to witness the testing procedures. The notice shall include a test plan in accordance with s. NR ~~439.05~~ 439.07.

(2)(b) The department shall be notified at least 30 days in advance of stack or performance tests to afford it the opportunity to have a representative present to witness the testing procedures. The notice shall include a test plan in accordance with s. NR ~~439.05~~ 439.07.

(3)(c) The department shall be notified at least 30 days in advance of stack or performance tests to afford it the opportunity to have a representative present to witness the testing procedures. The notice shall provide a test plan in accordance with s. NR ~~439.05~~ 439.07.

(4)(b) The department shall be notified at least 30 days in advance of stack or performance tests to afford it the opportunity to have a representative present to witness the testing procedures. The notice shall include a test plan in accordance with s. NR ~~439.05~~ 439.07.

SECTION 133. NR 447.01(1) is amended to read:

NR 447.01(1) APPLICABILITY. This chapter applies to all air contaminant sources ~~and~~ which may emit asbestos, to ~~all their~~ owners or and operators of an air contaminant source and to any person whose action causes the emission of asbestos to the ambient air.

SECTION 134. NR 447.16(2)(intro.) and (a) are amended to read:

NR 447.16(2)(intro.) If a fabric filter device is used to control emissions, the pressure drop across the fabric filter in inches of water gage; and

(a) If the fabric filter device uses a woven fabric, the airflow permeability in  $m^3/min/m^2$  and; if the fabric is synthetic, whether the fill yarn is spun or not spun; and

SECTION 135. NR 448.01(1) is amended to read:

NR 448.01(1) APPLICABILITY. This chapter applies to all air contaminant sources which may emit beryllium and to ~~all their~~ owners or and operators of an air contaminant source.

SECTION 136. NR 448.03(1)(intro.) is amended to read:

NR 448.03(1)(intro.) Emissions to the atmosphere ~~shall~~ may not exceed 10 grams of beryllium over a 24-hour period from:

SECTION 137. NR 448.04(2) and (3) are amended to read:

NR 448.04(2) Emission to the atmosphere from rocket-motor test sites ~~shall~~ may not cause time-weighted atmospheric concentration of beryllium to exceed 75 microgram minutes per cubic meter of air within the limits of 10 to 60 minutes accumulated during any 2 consecutive weeks, in any area in which an effect adverse to public health would occur.

(3) If combustion products from the firing of beryllium propellant are collected in a closed tank, emissions from such tank ~~shall~~ may not exceed 2 2.0 grams per hour and a maximum of 10 grams per day.

SECTION 138. NR 449.01(1) is amended to read:

NR 449.01(1) APPLICABILITY. This chapter applies to plants which produce ethylene dichloride by reaction of oxygen and hydrogen chloride with ethylene, vinyl chloride by any process, one or more polymers containing any fraction of polymerized vinyl chloride and any combination of these products and to all owners ~~or~~ and operators of ~~any air contaminant source described above these~~ plants.

SECTION 139. NR 449.04(2) is amended to read:

NR 449.04(2) OXYCHLORINATION REACTOR. Except as provided in s. NR 449.07(1), emissions of vinyl chloride to the atmosphere from each oxychlorination reactor may not exceed ~~0.2~~ 0.20 gram/kilogram (~~0.0002~~ 0.00020 pound/pound) of the 100% ethylene dichloride product from the oxychlorination process.

SECTION 140. NR 449.06(1)(b) and (5)(b)1. and 2. are amended to read:

NR 449.06(1)(b) The vinyl chloride reactor opening loss from each vinyl chloride reactor may not exceed ~~0.02~~ 0.020 gram vinyl chloride/kilogram (~~0.00002~~ 0.000020 pound vinyl chloride/pound) of polyvinyl chloride product, with the product determined on a dry solids basis. This requirement applies to any vessel which is used as a vinyl chloride reactor or as both a vinyl chloride reactor and a stripper. In the bulk process, the product means the gross product of prepolymerization and postpolymerization.

(5)(b)1. ~~2~~ 2.0 grams/kilogram (~~0.002~~ 0.0020 pound/pound) product from the strippers (or vinyl chloride reactors if the plant has no strippers) for dispersion polyvinyl chloride resins, excluding latex resins, with the product determined on a dry solids basis;

2. ~~0.4~~ 0.040 gram/kilogram (~~0.0004~~ 0.00040 pound/pound) product from the strippers ~~(or vinyl chloride reactors if the plant has no strippers)~~, for all other polyvinyl chloride resins, including latex resins, with the product determined on a dry solids basis.

SECTION 141. NR 449.07(2)(f)1. is amended to read:

NR 449.07(2)(f)1. Before opening any equipment for any reason, the quantity of vinyl chloride shall be reduced so that the equipment contains no

more than ~~2%~~ 2.0% by volume vinyl chloride or 0.0950 cubic meter (25 gallons) of vinyl chloride, whichever is larger, at standard temperature and pressure, and

SECTION 142. NR 484.01(1) and (2) are amended to read:

NR 484.01(1) APPLICABILITY. This chapter applies to all air contaminant sources governed by chs. NR 400 to 499 and to their owners ~~or~~ and operators.

(2) PURPOSE. This chapter is adopted under ~~ss.~~ ss. 144.31(1) and 227.21(2), Stats., to incorporate by reference testing, monitoring and other technical standards, established by the federal government and technical societies and organizations, by to which reference ~~into~~ is made in chs. NR 400 to 499.

SECTION 143. NR 484.03 (intro.) is amended to read:

NR 484.03 CODE OF FEDERAL REGULATIONS AND OTHER MATERIALS IN CHS. NR 400 TO 404. (intro.) The federal regulations or appendix materials in effect on ~~June 30, 1988~~ July 1, 1990 and other materials listed in this section are incorporated by reference for the corresponding sections of chs. NR 400 to 404. Copies of these materials are available for inspection in the offices of the department of natural resources, secretary of state and revisor of statutes, Madison, Wisconsin or may be purchased for personal use from the superintendent of documents, U.S. government printing office, Washington, D.C. 20402, or from the organization listed in the applicable subsection.

SECTION 144. NR 484.03(1) is renumbered 484.03(3).

SECTION 145. NR 484.03(2) is repealed.

SECTION 146. NR 484.03(3) is renumbered 484.03(1) and as renumbered is amended to read:

NR 484.03(1) Appendices A to K of 40 C.F.R. part 50 for ss. NR 404.02(4m), (8) and (11), 404.04(5) and (8)(b)3. and 404.06(2).

SECTION 147. NR 484.03(4) is repealed.

SECTION 148. NR 484.03(5) and (6) are renumbered 484.03(2) and (5) and, as renumbered, 484.03(5) is amended to read:

NR 484.03(5) ASTM D396-89a, Standard Specification for Fuel Oils, for s. NR 400.02(80). Copies of this document may be obtained from American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.

SECTION 149. NR 484.04(intro.) is amended to read:

NR 484.04 CODE OF FEDERAL REGULATIONS AND OTHER MATERIALS IN CHS. NR 405 TO 418. (intro.) The federal regulations or appendix materials in effect on July 1, ~~1988~~ 1990 and other materials listed in this section are incorporated by reference for the corresponding sections of chs. NR 405 to 418. Copies of these materials are available for inspection in the offices of the department of natural resources, secretary of state and revisor of statutes, Madison, Wisconsin or may be purchased for personal use at the address noted in the corresponding subsection.

SECTION 150. NR 484.04(3) is renumbered 484.03(4) and as renumbered is amended to read:

NR 484.03(4) Fundamentals of Smoke Abatement, December, 1950, Ringlemann Chart, Information Circular 7588, U.S. bureau of mines, for s. NR ~~415.02(7)~~ 400.02(80m). Copies may be obtained from the U.S. department of interior, Washington, D.C. 20240.

SECTION 151. NR 484.04(4) is renumbered 484.04(3).

SECTION 152. NR 484.04(5) to (6) are amended to read:

NR 484.04(5) ASME standard number APS-1, second edition, November, 1968, copyright 1969, for ss. NR 415.06(1)(a), (b) and (c)1. and ~~417.04~~ 418.035. Copies of standard number APS-1 may be obtained from the American Society of Mechanical Engineers, 345 East 47th Street, New York, NY 10017.

(6) ASTM ~~6136-76~~ C136-84a, Standard Method for Sieve Analysis of Fine and Coarse Aggregates, for s. NR 415.02(9). Copies may be obtained from the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.

SECTION 153. NR 484.04(7) is renumbered 484.04(4) and as renumbered is amended to read:

NR 484.04(4) ~~United States of America Standards Institute standard Z21.6, USA Standard Approval Requirements for Domestic Gas Fired Incinerators, December 28, 1966, copyright 1967, American National Standard for Domestic Gas-Fired Incinerators, number Z21.6 - 1973, approved April 4, 1973 by American National Standards Institute, Inc., with addenda Z21.6a - 1975, approved October 2, 1975, and addenda Z21.6b - 1978, approved June 28, 1978,~~ for s. NR 415.07(1)(b)2. and (2)(a)4. Copies of this standard and addenda may be obtained from the American Gas Association Laboratories, 8501 East Pleasant Valley Road, Cleveland, OH 44131.

SECTION 154. NR 484.05(intro.), (1) and (4) to (6) are amended to read:

NR 484.05 CODE OF FEDERAL REGULATIONS AND OTHER MATERIALS IN CHS. NR 419 TO 438. (intro.) The federal regulations or appendix materials in effect on July 1, ~~1988~~ 1990 and other materials listed in this section are incorporated by reference ~~in~~ for the corresponding sections of chs. NR 419 to 438. Copies of these materials are available for inspection in the offices of the department of natural resources, secretary of state and revisor of statutes, Madison, Wisconsin or may be purchased for personal use from the superintendent of documents, U.S. government printing office, Washington, D.C. 20402, or from the organization listed in the applicable subsection.

(1) Test Method 21 in Appendix A of 40 C.F.R. part 60 is incorporated by reference ~~in~~ for ss. NR 421.02(12m), 421.05(2)(e) and 421.06(2)(e).

(4) Industrial Ventilation: A Manual of Recommended Practice, ~~14th~~ 20th ed., American Conference of Governmental Industrial Hygienists, ~~1976~~ 1988, for s. NR 421.04(3)(c)1. Copies may be obtained from the American Conference of Governmental Industrial Hygienists, Committee on Industrial Ventilation, ~~P.O. Box 16153, Lansing, MI 48901~~ 6500 Glenway Ave., Building D-7, Cincinnati, OH 45211.

(5) The Architectural Aluminum Manufacturer's Association publication number AAMA 605.2-1985 is incorporated by reference ~~in~~ for s. NR 422.02(21m). The publication may be purchased for personal use from the Architectural

Aluminum Manufacturer's Association, 2700 River Road, Suite 118, Des Plaines, IL 60018.

(6) American Petroleum Institute, ~~Bulletin~~ Publication 2517, ~~Evaporation~~ Evaporative Loss from External Floating Roof Tanks, 3rd edition, February, ~~1962~~ 1989 for s. NR 420.02(33) and 420.03(3)(c). Copies may be obtained from the American Petroleum Institute, 1220 L Street, N.W., Washington, D.C. 20005.

SECTION 155. NR 484.05(7)(a) to (c) are renumbered 484.05(7)(c) to (e) and as renumbered are amended to read:

NR 484.05(7)(c) ASTM ~~D396-73~~ D396-89a, Standard Specification for Fuel Oils, for s. NR 420.03(1)(a).

(d) ASTM ~~D975-73~~ D975-89a, Standard Specification for Diesel Fuel Oils, for s. NR 420.03(1)(a).

(e) ASTM ~~D2880-71~~ D2880-89, Standard Specification for Gas Turbine Fuel Oils, for s. NR 420.03(1)(a).

SECTION 156. NR 484.05(7)(a) and (b) are created to read:

NR 484.05(7)(a) ASTM D97-87, Standard Test Methods for Pour Point of Petroleum Oils, for s. NR 420.02(41).

(b) ASTM D323-89, Standard Test Method for Vapor Pressure of Petroleum Products (Reid Method), for s. NR 420.02(31).

SECTION 157. NR 484.06(1)(intro.) is amended to read:

NR 484.06(1) APPENDICES OF 40 C.F.R. PART 60. (intro.) Appendices A and B of 40 C.F.R. part 60 and test methods in ~~the~~ these appendices, ~~of 40 C.F.R. part 60~~ as in effect on ~~October 31, 1986~~ July 1, 1990, which are listed ~~in this section~~ are incorporated by reference ~~in the corresponding sections of~~ for ch. NR 439. Copies of these appendices are available for inspection in the offices of the department of natural resources, secretary of state and revisor of statutes, Madison, Wisconsin, or may be purchased for personal use from the superintendent of documents, U.S. government printing office, Washington, D.C. 20402.

SECTION 158. NR 484.06(1)(a) to (zp) are repealed.



SECTION 159. NR 484.06(2)(intro.), (a), (b), (c), (e) to (h), (k) to (t) are amended to read:

NR 484.06(2) OTHER MATERIALS. (intro.) The materials listed in this subsection are incorporated by reference ~~in~~ for the corresponding sections noted. Some of the materials are also incorporated ~~in~~ for Appendix A or B of 40 C.F.R. part 60 as in effect on ~~October 31, 1986~~ July 1, 1990. Since these Appendices are incorporated by reference in this chapter by sub. (1), materials listed in this subsection which are incorporated by reference ~~in~~ for the Appendices are hereby also incorporated by reference and made a part of this chapter and ch. NR 439. The materials are available for inspection in the offices of the department of natural resources, secretary of state and revisor of statutes, Madison, Wisconsin or may be purchased for personal use at one of the following addresses: American Society for Testing and Materials (ASTM), 1916 Race Street, Philadelphia, Pennsylvania 19103; or the University Microfilms International, 300 North Zeeb Road, Ann Arbor, Michigan 48106.

(a) ASTM D129-64(1978), Standard Test Method for Sulfur in Petroleum Products (General Bomb Method), for 40 C.F.R. part 60, Appendix A, Method 19, ~~par. 2.2.3~~ and for s. NR ~~439.07(2)(b)2.~~ 439.08(2)(b).

(b) ASTM ~~D240-76~~ D240-87, Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter, for 40 C.F.R. part 60, Appendix A, Method 19, ~~pars. 2.2.3. and 5.2.2~~ and for s. NR ~~439.07(2)(b)3.~~ 439.08(2)(c).

(c) ASTM D1193-77(1983), Standard Specification for Reagent Water, for 40 C.F.R. part 60, Appendix A, Method 6, par. 3.1.1., Method 7, par. 3.2.2., Method 7A, par. 3.2., Method 7C, par. 3.1.1, Method 7D, par. 3.1.1, Method 8, par. 3.1.3., Method 11, par. 6.1.3., Method 12, par. 4.1.3., and Method 13A, par. 6.1.2.

(e) ASTM D1826-77, Standard Test Method for Calorific Value of Gases in Natural Gas Range by Continuous Recording Calorimeter, for 40 C.F.R. part 60, Appendix A, Method 19, ~~par. 5.2.2.~~

(f) ASTM ~~D2013-72~~ D2013-86, Standard Method ~~for~~ of Preparing Coal Samples for Analysis, for 40 C.F.R. part 60, Appendix A, Method 19, ~~par. 2.1.3~~ and for s. NR ~~439.07(2)(a)2.~~ 439.08(1)(b).

(g) ASTM ~~D2015-77~~ D2015-85, Standard Test Method for Gross Calorific Value of ~~Solid Fuel Coal and Coke~~ by the Adiabatic Bomb Calorimeter, for 40 C.F.R. part 60, Appendix A, Method 19, ~~pars. 2.1.3. and 5.2.2.~~ and for s. NR ~~439.07(2)(a)4.~~ 439.08(1)(d).

(h) ASTM ~~D2234-76~~ D2234-89, Standard Test Methods for Collection of a Gross Sample of Coal, for 40 C.F.R. part 60, Appendix A, Method 19, ~~par. 2.1.1.~~ and for ss. NR ~~439.07(2)(a)1.~~ 439.08(1)(a) and ~~439.075(2)(b)1.a., 2.a.~~ 439.085(2)(a)1., (b)1. and 3.a. (c)1.

(k) ASTM ~~D3173-73~~ D3173-87, Standard Test Method for Moisture in the Analysis Sample of Coal and Coke, for 40 C.F.R. part 60, Appendix A, Method 19, ~~par. 2.1.3.~~ and for s. NR ~~439.07(2)(a)6.~~ 439.08(1)(f).

(l) ASTM ~~D3174-82~~ D3174-89, Standard Test Method for Ash in the Analysis Sample of Coal and Coke ~~from~~ From Coal, for s. NR ~~439.07(2)(a)5.~~ 439.08(1)(e).

(m) ASTM ~~D3176-84~~ D3176-89, Method Standard Practice for Ultimate Analysis of Coal and Coke, for s. NR ~~439.07(2)(a)7.~~ 439.08(1)(g).

(n) ASTM ~~D3177-75~~ D3177-89, Standard Test Methods for Total Sulfur in the Analysis Sample of Coal and Coke, for 40 C.F.R. part 60, Appendix A, Method 19, ~~par. 2.1.3.~~ and for s. NR ~~439.07(2)(a)3.~~ 439.08(1)(c).

(o) ASTM D3792-79, Standard Test Method for Water Content of Water-Reducible Paints by Direct Injection into a Gas Chromatograph, for 40 C.F.R. part 60, Appendix A, Method 24, par. 2.3.

(p) ASTM D4017-81, Standard Test Method for Water in Paints and Paint Materials by ~~the~~ Karl Fischer ~~Titration~~ Method, for 40 C.F.R. part 60, Appendix A, Method 24, par. 2.4.

(q) ASTM ~~D4057-81~~ D4057-88, Standard Practice for Manual Sampling of Petroleum and Petroleum Products, for s. NR ~~439.07(2)(b)1.~~ 439.08(2)(a).

(r) ASTM D4177-82, Standard Method for Automatic Sampling of Petroleum and Petroleum Products, for s. NR ~~439.07(2)(b)1.~~ 439.08(2)(a).

(s) ASTM ~~D4239-83~~ D4239-85, Standard Test ~~Method~~ Methods for Sulfur in the Analysis Sample of Coal and Coke Using High Temperature Tube Furnace Combustion Methods, for 40 C.F.R. part 60, Appendix A, Method 19, ~~par. 2.1.3.~~ and for s. NR ~~439.07(2)(a)3.~~ 439.08(1)(c).

(t) ASTM D4294-83, Standard Test Method for Sulfur in Petroleum Products by Non-Dispersive X-Ray Fluorescence Spectrometry, for s. NR ~~439.07(2)(b)2.~~ 439.08(2)(b).

SECTION 160. NR 484.08(intro.) is amended to read:

NR 484.08 CODE OF FEDERAL REGULATIONS IN CHS. NR 445 TO 483. (intro.) The federal regulations or appendix materials in effect on ~~June 30, 1983~~ July 1, 1990 listed in this section are incorporated by reference ~~in~~ for the corresponding sections of chs. NR 445 to 483. Copies of these materials are available for inspection in the offices of the department of natural resources, secretary of state and revisor of statutes, Madison, Wisconsin or may be purchased for personal use from the superintendent of documents, U.S. government printing office, Washington, D.C. 20402.

SECTION 161. NR 484.08(1) to (5) are renumbered 484.08(5), (3), (4), (1) and (2).

SECTION 162. NR 484.09(intro.) and (1)(a) to (c) are amended to read:

NR 484.09 OTHER MATERIALS IN CHS. NR 445 TO 483. (intro.) The materials listed in this section are incorporated by reference ~~in~~ for the corresponding sections noted. Some of the materials are also incorporated ~~in~~ for Appendix B of 40 C.F.R. part 61 as in effect on ~~June 30, 1983~~ July 1, 1990. Since Appendix B is incorporated by reference in s. NR 484.08, materials incorporated by reference ~~in~~ for that Appendix are hereby also incorporated by reference and made a part of this section. The materials are available for inspection in the offices of the department of natural resources, secretary of state and revisor of statutes, Madison, Wisconsin or may be purchased for personal use at the corresponding address noted.

(1)(a) ASTM D737-75(1980), Standard Test Method for Air Permeability of Textile Fabrics, for s. NR 447.15(1)(a)2.

(b) ASTM ~~D1193-74~~ D1193-77(1983), Standard ~~Specifications~~ Specification for ~~Type I~~ Reagent Water, for 40 C.F.R. part 61, Appendix B, Method 101, par. 6.1.1.

(c) ASTM D2986-71 (~~Reapproved~~ 1978), Standard Method for Evaluation of Air, Assay Media by the Monodisperse DOP (Diocetyl Phthalate) Smoke Test, for 40 C.F.R. part 60, Appendix A, Method 5, par. 3.1.1.

SECTION 163. NR 485.01(1) is amended to read:

NR 485.01(1) APPLICABILITY. This chapter applies to all motor vehicles, internal combustion engines and mobile air contaminant sources and to their owners ~~or~~ and operators.

SECTION 164. NR 485.03 is amended to read:

NR 485.03 GENERAL LIMITATIONS. No person may cause, ~~suffer~~, allow, or permit emissions of particulate matter, sulfur oxides, hydrocarbons, carbon monoxide, nitrogen oxides, or odors from a motor vehicle, internal combustion engine, or mobile source which substantially contribute to the exceeding of an air standard or create air pollution.

SECTION 165. NR 485.05(intro.) and (4) are amended to read:

NR 485.05 VISIBLE EMISSION LIMITS FOR MOTOR VEHICLES, INTERNAL COMBUSTION ENGINES, AND MOBILE SOURCES. (intro.) No person may cause, ~~suffer~~, allow, or permit visible emissions in amounts greater than the following limitations, except when uncombined water is the cause for violation.

(4) Ships, locomotives, or semistationary diesel engines: emissions of shade or density greater than number 2 on the Ringlemann chart or 40% opacity for longer than an aggregate time of 5 minutes in any 30-minute period. At no time ~~shall~~ may emissions exceed a shade or density greater than number 4 on the Ringlemann chart or 80% opacity.

SECTION 166. NR 485.07(4)(a)(intro.) is amended to read:

NR 485.07(4)(a)(intro.) Upon written department approval granted to DOT, a partial tampering inspection procedure may be substituted for the full inspection procedure in sub. (3), provided that use of the substitute procedure maintains the inspection program effectiveness in terms of adequate pollution reduction and adequate identification and repair of tampered and misfueled vehicles and improperly maintained ~~pollution~~ emission control

equipment. The department may also consider program operation cost and waiting time impacts in reviewing the substitute procedure. The following types of substitute procedures are acceptable for part or all of the full inspection:

SECTION 167. NR 490.01(2) is amended to read:

NR 490.01(2) PURPOSE. This chapter is adopted under ss. 144.31 and 144.403, Stats., to establish the content of a request for a public hearing and the procedure to follow when submitting such a request to the department, and to establish procedures for the submission of written comments to the department and the processing of ~~written~~ comments by the department.

SECTION 168. NR 492.01(2) is amended to read:

NR 492.01(2) PURPOSE. This chapter is adopted under ss. 144.31 and ~~227.0105~~ 227.116, Stats., to establish a time schedule for the department to follow when acting on requests for a permit or departmental approval submitted pursuant to ss. 144.391 to 144.426, Stats.

SECTION 169. NR 493.01(1) is amended to read:

NR 493.01(1) APPLICABILITY. This chapter applies to all air contaminant sources and to ~~all their owners or~~ and operators of an air contaminant source.

SECTION 170. NR 493.04 (title) is amended to read:

NR 493.04 (title) EMISSION CONTROL ACTION PROGRAMS.

SECTION 171. NR 493.05(3)(a)2. and 3.(intro.), b., d., g. and h. are amended to read:

NR 493.05(3)(a)2. All manufacturing establishments ~~except~~ including those too small to be included in ~~under~~ s. NR 493.04(1), shall institute such action as will result in maximum reduction of air contaminants from their operations by ceasing, curtailing, or postponing operations which emit air contaminants to the extent possible without causing injury to persons or damage to equipment.

3.(intro.) All places of employment described in this subdivision shall immediately cease operations+ except for those operations necessary to provide emergency services or products or to prevent personal injury or property loss or damage.

b. All contract construction work ~~except that which must proceed to avoid physical harm.~~

d. All offices of local, county, and state government and any other public body, except for those offices providing emergency services such as fire or police protection, medical services, or protection of public health and the environment, and those offices that must continue to operate in order to enforce the requirements of this order.

g. Wholesale and retail ~~laundries, laundry services and cleaning and dyeing establishments, dry cleaners,~~ photographic studios, beauty shops, barber shops, shoe repair shops and other establishments providing personal services.

h. ~~Advertising~~ Business services such as advertising offices, consumer credit reporting ~~adjustment and collection~~ agencies, copying, duplicating, ~~addressing, blueprinting, photocopying,~~ mailing, ~~mailing list~~ and stenographic services, equipment rental services, and commercial testing laboratories.

SECTION 172. NR 493.05(3)(a)3.i. is repealed and recreated to read:

NR 493.05(3)(a)3.i. Auto body shops, vehicle paint shops and car washes.

SECTION 173. NR 493.05(3)(a)6. and (5) Table 5. are amended to read:

NR 493.05(3)(a)6. No person may use a motor vehicle ~~except in an emergency with the approval of local or state police as necessary to provide or obtain~~ emergency services or products or to prevent personal injury or property loss or damage.

(5)

TABLE 5. EMISSION REDUCTION REQUIREMENTS FOR VOLATILE ORGANIC COMPOUNDS FOR CONTROL OF OZONE

Source of Air Contamination	Air Pollution Alert	Air Pollution Warning	Air Pollution Emergency
1. Petroleum products storage and distribution.	a. Substantial reduction of volatile organic compounds by curtailing, postponing, or deferring transfer operations.	a. Maximum reduction of volatile organic compounds by assuming reasonable economic hardship by postponing transfer operations.	a. Elimination of volatile organic compounds by curtailing, postponing, or deferring transfer operations to the extent possible without causing damage to equipment.
2. Surface coating and preparation.	a. Substantial reduction of volatile organic compounds by curtailing, postponing, or deferring <del>transfer</del> <u>surface preparation and coating application</u> operations.	a. Maximum reduction of volatile organic compounds by assuming reasonable economic hardship by postponing <del>transfer</del> <u>surface preparation and coating application</u> operations.	a. Elimination of volatile organic compounds by curtailing, postponing, or deferring <del>transfer</del> <u>surface preparation and coating application</u> operations to the extent possible without causing damage to equipment.
3. Manufacturing and processing industries. OR Other persons required by the department to prepare emission control action programs.	a. Substantial reduction of volatile organic compounds from manufacturing operations by curtailing, postponing, or deferring production and allied operations.	a. Maximum reduction of volatile organic compounds from manufacturing operations by, if necessary, assuming reasonable economic hardship by postponing production and allied operations.	a. Elimination of volatile organic compounds from manufacturing operations by ceasing, curtailing, postponing or deferring production and allied operations to the extent possible without causing injury to persons or damage to equipment.

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SECTION 174. NR 494.01(1) is amended to read:

NR 494.01(1) **APPLICABILITY.** This chapter applies to all ~~sources of air contamination~~ contaminant sources governed by ss. 144.30 to 144.426 or 144.96, Stats., or by chs. NR 101 and 400 to 499, and to all their owners or and operators of an air contaminant source governed by ss. 144.30 to 144.426 or 144.96, Stats., or by chs. NR 101 and 400 to 499.

The foregoing rule was approved and adopted by the State of Wisconsin Natural Resources Board on September 26, 1991.

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 December 9, 1991.

STATE OF WISCONSIN  
DEPARTMENT OF NATURAL RESOURCES

By Carroll D. Besadny  
Carroll D. Besadny, Secretary

(SEAL)

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