Chapter NR 415

CONTROL OF PARTICULATE EMISSIONS

NR 415.01 Applicability; purpose. (1) APPLICABILITY. This chapter applies to all air contaminant sources and to all owners or operators of an air contaminant source.

(2) PURPOSE. This chapter is adopted under ss. 144.31 and 144.38, Stats., to categorize particulate matter air contaminant sources and to establish emission limitations for these sources in order to protect air quality.

History: Cr. Register, September, 1986, No. 369, eff. 10-1-86.

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

(1) "Equivalent opacity" means an opacity of 20% per Ringlemann number.

(2) "Fugitive dust" means solid airborne particles emitted from any source other than a flue or stack.

(3) "Heatset web offset press" means a type of lithographic press which requires a heated dryer to solidify the printing inks, uses a blanket cylinder to transfer ink from the plate cylinder to the surface to be printed, and prints on a surface which is fed to the press by a continuous roll web.

(4) "Opacity" means the state of a substance which renders it partially or wholly impervious to rays of light. (20% opacity equals one unit on the Ringlemann Chart.)

(5) "Process weight" means the total weight of all materials introduced into any direct source operation, except liquid fuels, gaseous fuels and air.

(6) "Public trafficable area" means any trafficable area which is owned, operated, maintained or controlled by a municipality, interstate agency, state agency or federal agency.

(7) "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.

(8) "Roadway areas" means any surface on which motor vehicles travel including, but not limited to, highways, roads, streets, parking areas and driveways.

(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 or other method approved by the department.

(10) "Trafficable area" means any area, including but not limited to a parking lot or storage area, which is external to a building or structure, is reasonably capable of being traveled by a motor vehicle, and is accessible to a motor vehicle.

History: Renum. from NR 154.01, cr. (intro.) and (7), Register, September, 1986, No. 369, eff. 10-1-86; renum. (3) to (9) to be (4) to (10), cr. (3), Register, April, 1989, No. 400, eff. 5-1-89.

NR 415.03 General limitations. No person shall 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.

History: Renum. from NR 154.11 (1), Register, September, 1986, No. 369, eff. 10-1-86.

NR 415.04 Fugitive dust. No person shall cause, allow, or permit any materials to be handled, transported, or stored without taking precautions to prevent particulate matter from becoming airborne. Nor shall 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) Such precautions shall include, but not be limited to:

(a) Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, or construction operations.

(b) Application of asphalt, oil, water, suitable chemicals, or plastic covering on dirt roads, material stockpiles, and other surfaces which can create airborne dust, provided such application does not create a hydrocarbon, odor, or water pollution problem.

(c) Installation and use of hoods, fans, and air cleaning devices to enclose and vent the areas where dusty materials are handled.

(d) Covering or securing of materials likely to become airborne while being moved on public roads, railroads, or navigable waters.

(e) Conduct of agricultural practices such as tilling of land or application of fertilizers in such manner as not to create air pollution.

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

(2) In addition to meeting the requirements of sub. (1), any direct or portable source located in a nonattainment area identified under s. NR 401.025 (1) for suspended particulate matter; and any direct or portable source located near such areas whose aggregate fugitive dust emissions may cause an impact on the ambient air quality in such areas equal to or greater than one microgram per cubic meter (annual concentration) or 5 micrograms per cubic meter (maximum 24-hour concentration), as de-

termined by the analysis under ch. NR 401, shall meet the following RACT requirements:

(a) *Storage piles having a material transfer greater than 100 tons in any year:* 1. Storage piles of material having a silt content of 5% to 20% shall be treated with water, surfactants, stabilizers or chemicals; draped; or enclosed on a minimum of 3 sides. Access areas surrounding storage piles shall be watered, cleaned or treated with stabilizers as needed to prevent fugitive dust from vehicle traffic.

2. Storage piles of materials having a silt content of 20% or more shall be completely enclosed or draped except any part being worked, loaded or unloaded. Access areas surrounding storage piles shall be watered, cleaned or treated with stabilizers as needed to prevent fugitive dust from vehicle traffic.

(b) *Materials handling operations:* 1. Materials handling operations, including but not limited to crushing, grinding, mixing, screening, compacting, conveying, handling of waste material with more than 5% silt, and loading and unloading of railcar, truck, ship or barge shall have fugitive emissions controlled to 20% opacity when wind speeds are less than 25 miles per hour except for 3 minutes in any hour when fugitive emissions may equal 50% opacity.

2. Any device used to control fugitive emissions from materials handling operations which has a discharge to the ambient air shall be controlled equal to or less than 0.20 pounds of particulate matter per 1000 pounds of exhaust gas.

(c) *Process fugitive emissions:* 1. Any device used to control fugitive particulate emissions from processes which has a discharge to the ambient air shall be controlled to an exhaust gas concentration equal to or less than 0.20 pounds of particulate matter per 1000 pounds of exhaust gas.

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

(3) In addition to meeting the requirements of sub. (1), private industrial or commercial trafficable areas, roads and driveways which are located in or within one mile of a nonattainment area identified under s. NR 401.025 (1) for suspended particulate matter, are 20,000 square feet or more in total area, are on contiguous property under common ownership or control, and are subject on 3 separate days during any 14 consecutive day period to motor vehicle traffic at any point within the roads, driveways or trafficable areas at a rate equal to or greater than 10 motor vehicles per 60 minute period, shall meet the following RACT emission limitations:

(a) Be paved with asphalt, concrete or other material approved by the department, or use other methods of dust control which the department approves as representing RACT for the particular road, driveway or trafficable area. Such other methods of dust control which may be approved by the department include but are not limited to periodic application of water, oil or suitable chemicals. In reviewing and acting upon plans required by sub. (5) for compliance with this subsection, the department shall consider the effects of the use of paving or other methods

of dust control upon the rate and volume of surface water runoff and water quality.

(b) If paved, be kept reasonably free of material likely to become airborne, through a program of periodic cleaning.

(4) In addition to meeting the requirements of sub. (1), any roadway or public trafficable area which is located in or within one mile of a nonattainment area identified under s. NR 401.025 (1) for suspended particulate matter and which is subject on 3 separate days during any 14 consecutive day period to motor vehicle traffic at any point within the roadway or public trafficable area at a rate equal to or greater than 10 motor vehicles per 60 minute period shall meet the RACT emission limitations of this subsection. For purposes of this subsection, ownership or control of different portions of a roadway or public trafficable area by different municipalities, interstate agencies, state agencies or federal agencies may not be considered in determining the contiguous area of the roadway or public trafficable area.

(a) If paved, roadways and public trafficable areas covered by this subsection shall be kept, through a program of periodic cleaning, reasonably free of material likely to become airborne. This paragraph does not apply to a public trafficable area of less than 20,000 contiguous square feet in area unless the public trafficable area is also a roadway.

(b) If unpaved, roadways and public trafficable areas covered by this subsection shall be paved with asphalt, concrete or other material approved by the department, or use other methods of dust control which the department approves as representing RACT for the particular roadway or public trafficable area. Such other methods of dust control which may be approved by the department include but are not limited to periodic application of water, oil or suitable chemicals. In reviewing and acting upon plans required by sub. (5) for compliance with this subsection, the department shall consider the effects of the use of paving or other methods of dust control upon the rate and volume of surface water runoff and water quality. This paragraph does not apply to roadways or to public trafficable areas which have less than 20,000 contiguous square feet of unpaved surface area.

(5) When a direct or portable source is subject to the emission limitations of sub. (2), (3) or (4) the owner or operator may not exceed the following increments of progress in achieving compliance commencing with the nonattainment determination under s. NR 401.025 (1):

(a) Submit plans for compliance within 8 months.

(b) Award any necessary contracts within 15 months.

(c) Commence construction, installation or modification of emission control techniques required under subs. (2) (a) and (b) 1., (3) and (4) within 18 months.

(d) Commence construction, installation or modification of emission control techniques required under sub. (2) (b) 2. and (c) within 24 months.

(e) Complete construction, installation or modification of emission control techniques required under subs. (2) (a) and (b) 1., (3) and (4), achieve compliance, and so certify to the department within 21 months.

(f) Complete construction, installation or modification of emission control techniques required under sub. (2) (b) 2. and (c) within 30 months and achieve final compliance and so certify to the department within 33 months.

History: Renum. from NR 154.11 (2) and am. Register, September, 1986, No. 369, eff. 10-1-86.

NR 415.05 Particulate emission limits for processes. No person shall 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) All direct and portable sources on which construction or modification was commenced on or before April 1, 1972 shall meet the emission limitations of this subsection.

(a) Cupolas melting more than 200 tons of metal in any year: 0.45 pounds of particulate matter per 1,000 pounds of gas.

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

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

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

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

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

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

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

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

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

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

(l) Cement klinker coolers: 0.3 pounds of particuate matter per 1,000 pounds of gas.

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

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

(o) Any other process not enumerated: 0.4 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 par. (b); emissions in excess of:

1. Any process not otherwise covered by this subsection: emissions calculated by the use of the equation, $E = 3.59\ P^{0.62}$ for process weight rates up to 60,000 pounds per hour; by use of the equation $E = 17.31\ P^{0.16}$ for process weight rates of 60,000 pounds per hour or more; (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 sub. (1), whichever is more restrictive. 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

2. Cement kilns: 0.30 pounds of particulate per ton of feed to the kiln.

3. Cement clinker coolers: 0.10 pounds of particulate per ton of feed to the kiln.

(b) Direct or portable sources specified hereunder on which construction or modification is commenced after February 1, 1975; emissions in excess of:

1. Asphalt concrete plants (any combination of the following: dryers; systems for screening, handling, storing, and weighing hot aggregate; systems for loading, transferring, and storing mineral filler; systems for mixing asphalt concrete; and the loading, transfer, and storage systems associated with emission control systems): 0.04 grains per dry cubic foot at standard conditions (90 milligrams per dry cubic meter at standard conditions).

2. Petroleum refineries (fluid catalytic cracking unit catalyst regenerators or fluid catalytic cracking unit incinerator-waste heat boilers):

a. 1.0 pound per 1,000 pounds (1.0 kilogram per 1,000 kilograms) of coke burn-off in the catalyst regenerator.

b. In those instances in which auxiliary liquid or solid fossil fuels are burned in the fluid catalytic cracking unit incinerator-waste heat boiler, particulate matter in excess of that permitted by subpar. a. may be emit-

ted to the atmosphere, except that the incremental rate of particulate emissions shall not exceed 0.10 pounds per million BTU (0.18 grams per million calories) of heat input attributable to such liquid or solid fuel.

3. Secondary lead smelters (blast or cupola furnaces and reverberatory furnaces): 0.022 grains per dry cubic foot at standard conditions (50 milligrams per dry cubic meter at standard conditions).

4. Secondary brass and bronze ingot production plants (reverberatory furnaces of 2,205 pounds or greater production capacity): 0.022 grains per dry cubic foot at standard conditions (50 milligrams per dry cubic meter at standard conditions).

5. Iron and steel plants (basic oxygen process furnaces): 0.022 grains per dry cubic foot at standard conditions (50 milligrams per dry cubic meter at standard conditions).

(3) In addition to meeting the requirements of subs. (1) and (2), any direct or portable source located in or near a nonattainment area identified under s. NR 401.025 (1) for suspended particulate matter whose aggregate particulate emissions (excluding fugitive dust) may cause an impact on the ambient air quality in such areas equal to or greater than one microgram per cubic meter (annual concentration) or 5 micrograms per cubic meter (maximum 24-hour concentration) as determined by the analysis under s. NR 401.025 shall meet the following RACT emissions limitations:

(a) Sources on which construction or modification was commenced on or before April 1, 1972 may not emit more than 0.20 pounds of particulate matter per 1000 pounds of exhaust gas.

(b) Sources on which construction or modification was commenced after April 1, 1972 shall 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.

(4) Notwithstanding sub. (3), any cupola may emit up to, but not more than 0.25 pounds of particulate matter per 1000 pounds of exhaust gas.

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

(a) Submit plans for compliance within 6 months.

(b) Award any necessary contracts within 12 months.

(c) Commence construction, installation or modification of any emission control system within 24 months.

(d) Complete construction, installation or modification of any emission control system within 30 months.

(e) Achieve final compliance with the applicable emission limitations and so certify to the department within 33 months.

History: Renum. from NR 154.11 (3) and am. Register, September, 1986, No. 369, eff. 10-1-86; correction in (2) (a) 1. made under s. 13.93 (2m) (b) 7, Stats., Register, April, 1989.

NR 415.06 Particulate emission limits for fuel burning installations. No person shall 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) All installations on which construction or modification was commenced on or before April 1, 1972 shall meet the emission limitations of this subsection.

(a) All installations shall meet the emission limitation determined by use of figure 2 of the ASME Standard number APS-1 with the maximum emission irrespective of stack height of 0.60 pounds of particulate matter per million BTU 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 ASP-1 with the maximum emission irrespective of stack height of 0.30 pounds of particulate matter per million BTU input to any stack.

(c) Installations located in the Southeastern Wisconsin Intrastate AQCR, in addition to meeting the emission limitations of par. (a), shall meet the following requirements:

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 in pounds per million BTU to any stack.

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

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

(a) Installations of 250 million BTU per hour or less except as provided in par. (b) hereof: 0.15 pounds of particulate matter per million BTU 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 pounds of particulate matter per million BTU 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: 0.10 pounds of particulate matter per million BTU input to any stack.

(3) In addition to meeting the requirements of sub. (1) or (2), all installations located in or near a nonattainment area identified under s. NR 401.025 (1) for suspended particulate matter whose aggregate particulate emissions (excluding fugitive dust) may cause an impact on the ambient air quality in such areas equal to or greater than one microgram per cubic meter (annual concentration) or 5 micrograms per cubic meter (maximum 24-hour concentration) as determined by the analysis under s. NR 401.025 shall meet the following RACT emission limitations:

(a) Installations of 100 million BTU per hour or less; maximum emission of 0.24 pounds of particulate matter per million BTU 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 of 0.15 pounds of particulate matter per million BTU 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 of 0.15 pounds of particulate matter per million BTU 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 of 0.10 pounds of particulate matter per million BTU 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 in pounds per million BTU to any stack) 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 pounds per million BTU from original design or acceptance performance test conditions.

(5) When an installation is subject to the emission limitations of sub. (3) the owner or operator may not exceed the following increments of progress in achieving compliance commencing with the nonattainment determination under s. NR 401.025 (1):

(a) Submit plans for compliance within 6 months.

(b) Award any necessary contracts within 12 months.

(c) Commence construction, installation or modification of any emission control system within 24 months.

(d) Complete construction, installation or modification of any emission control system within 30 months.

(e) Achieve final compliance with the applicable emission limitations and so certify to the department within 33 months.

History: Renum. from NR 154.11 (4) and am. Register, September, 1986, No. 369, eff. 10-1-86; correction in (2) (b) made under s. 13.93 (2m) (b) 7, Stats., Register, April, 1989.

NR 415.07 Particulate emission limits for incinerators. No person shall 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) All incinerators on which construction or modification was commenced on or before April 1, 1972 shall meet the emission limits of this subsection.

(a) Incinerators located throughout the state; emissions in excess of:

1. Incinerators rated at over 500 pounds of waste per hour: 0.50 pounds of particulate per 1,000 pounds of exhaust gas.

2. Incinerators rated at 500 pounds of waste per hour or less: 0.60 pounds of particulate per 1,000 pounds of exhaust gas.

(b) Incinerators located in subregion 1 of the Lake Michigan Intrastate AQCR or in the Southeastern Wisconsin Intrastate AQCR; in addition to meeting the emission limits of par. (a) these incinerators shall, by July 31, 1975, meet the following emission limits:

1. Incinerators of 5 cubic feet capacity or more: 0.30 pounds of particulate per 1,000 pounds of exhaust gas.

2. Prefabricated domestic incinerators below 5 cubic feet capacity shall not exceed the performance emission requirements prescribed by the United States of America Standards Institute for domestic incinerators, standard Z21.6.

(2) All incinerators on which construction or modification is commenced after April 1, 1972 shall meet the emission limits of this subsection.

(a) Incinerators other than those specified in par. (b); emissions in excess of:

1. Incinerators rated at 4,000 pounds of waste per hour or more: 0.15 pounds of particulate per 1,000 pounds of exhaust gas.

2. Incinerators rated at over 500 pounds of waste per hour and less than 4,000 pounds of waste per hour: 0.20 pounds of particulate per 1,000 pounds of exhaust gas.

3. Incinerators rated at 500 pounds of waste per hour or less other than prefabricated domestic incinerators below 5 cubic feet capacity: 0.30 pounds of particulate matter per 1,000 pounds of exhaust gas.

4. Prefabricated domestic incinerators below 5 cubic feet capacity shall not exceed the performance emission requirements prescribed by the United States of America Standards Institute for domestic incinerators, standard Z21.6.

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

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

History: Renum. from NR 154.11 (5) and am. Register, September, 1986, No. 369, eff. 10-1-86.

NR 415.08 RACT requirements for coking operations. (1) This section applies to all coking operations upon which construction or modification commenced before September 1, 1981. Notwithstanding any other provision of chs. NR 415 and 431, all requirements of this section shall be met on or before September 1, 1981.

(2) Visible emissions from charging procedures shall be limited by the application of RACT. RACT includes:

(a) The use and maintenance of suitable jumper pipes and leveling bar smoke boots,

(b) The use and maintenance of suitable seals on larry car drop sleeves and leveling bar smoke boots,

(c) The use and maintenance of a steam aspiration system which provides maximum safe levels of negative pressure on the oven chamber during the charging operation, and

(d) The completion of each charging procedure (including sweeping excess coal into the oven just charged) as quickly as possible.

(3) Fugitive emissions from pushing operations shall be captured by a traveling hood and controlled to not more than 0.08 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.

(4) There may be no visible emissions from 90% of the doors of all coke ovens in use; 95% of all coke oven charging port lids on ovens in use; and 90% of all offtake piping on ovens in use, except those open for charging, pushing, cleaning, and maintenance as determined by a one pass observation.

(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 not include coke by-product plant effluent, and total dissolved solids in make-up quenching water shall be less than 750 milligrams per liter.

(6) Coke oven combustion stacks may not emit more than 0.10 pounds of particulate matter per 1000 pounds of exhaust gas or have visible emissions greater than 20% opacity.

History: Renum. from NR 154.11 (7) and am. Register, September, 1986, No. 369, eff. 10-1-86.

NR 415.09 Compliance schedule for sources of condensible particulate matter. (1) COMPLIANCE SCHEDULE. If a source on which construction or modification was last commenced on or before July 1, 1975, other than a heatset web offset press, fails to meet a particulate emission limitation in this chapter because of the inclusion of condensible particulate matter, as defined in s. NR 439.02 (4), in the determination of emission rates or

concentrations, the owner or operator of the source may not exceed the following increments of progress in achieving compliance with that limit:

(a) Submit plans for achieving compliance by July 1, 1988.

(b) Award any necessary contracts by December 31, 1988.

(c) Commence construction, installation or modification of any emission control system by December 31, 1989.

(d) Complete construction, installation or modification of any emission control system by July 1, 1990.

(e) Achieve final compliance with the applicable limitation by October 1, 1990.

(2) COMPLIANCE SCHEDULE FOR HEATSET WEB OFFSET PRESSES. If a heatset web offset press on which construction or modification was last commenced on or before July 1, 1975 fails to meet a particulate emission limitation in this chapter because of the inclusion of condensible particulate matter, as defined in s. NR 439.02 (4), in the determination of emission rates or concentrations, the owner or operator of the source may not exceed the following increments of progress in achieving compliance with that limit:

(a) Submit plans for achieving compliance or request a variance in accordance with the provisions of sub. (3) (a) by July 1, 1993.

(b) Award any necessary contracts by July 1, 1994.

(c) Commence construction, installation or modification of any emission control system by December 31, 1994.

(d) Complete construction, installation or modification of any emission control system by July 1, 1995.

(e) Achieve final compliance with the applicable emission limit by December 31, 1995.

(3) VARIANCE. Notwithstanding sub. (1) or (2), the owner or operator of a source constructed or modified on or before July 1, 1975 which fails to meet a particulate emission limitation in this chapter because of the inclusion of condensible particulate matter, as defined in s. NR 439.02 (4), in the determination of emission rates or concentrations may request in writing a variance from the emission limitation from the department under par. (a) or (b) on or before October 1, 1990 if the source is other than a heatset web offset press; or under par. (a) on or before July 1, 1993 if the source is a heatset web offset press.

(a) The department may grant a variance under this paragraph and set an alternate emission limitation under the criteria and procedures outlined in s. NR 436.05 (2) and (3) if compliance with the emission limitation is shown to be technologically or economically infeasible.

(b) The department shall grant a variance under this paragraph and set an alternate emission limitation if the following criteria are met:

1. The variance will not delay attainment or prevent maintenance of any ambient air quality standard, as determined by methods acceptable to the department.

2. The applicable particulate emission limitation for the air contaminant source for which a variance is requested was promulgated on or before October 1, 1987.

3. The request for variance includes the report of a test conducted according to the methods and procedures of s. NR 439.07, for the air contaminant source for which the variance is requested, which demonstrates noncompliance with the applicable particulate emission limitation.

4. The air contaminant source for which a variance is requested is not reasonably capable of complying with the applicable emission limitation except by means of the installation and operation of an electrostatic precipitator, fabric filter baghouse or wet scrubber for particulates or the source is equipped with such a control device and demonstrates to the department's satisfaction that compliance is still not achievable.

(c) The department may revoke or modify any variance granted under this subsection in accordance with the provisions of s. NR 436.05 (4).

History: Cr. Register, September, 1987, No. 381, eff. 10-1-87; am. (1) (intro.) and (c), renum. (2) to be (3) and am. (intro.), cr. (2), Register, April, 1989, No. 400, eff. 5-1-89.