

Chapter NR 415

CONTROL OF PARTICULATE EMISSIONS

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NR 415.01 Applicability; purpose. (1) **APPLICABILITY.** This chapter applies to all air contaminant sources which emit particulate matter and to their owners and operators.

(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.

Note: Particulate emission limitations are also established in chs. NR 431 and 440 and ss. NR 485.05 and 485.055.

History: Cr. Register, September, 1986, No. 369, eff. 10-1-86; am. (1), Register, May, 1992, No. 437, eff. 6-1-92.

NR 415.02 Definitions. In addition to the definitions in this section, the definitions in ch. NR 400 apply to the terms used in this chapter.

(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.

(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.

(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 C136-84a, incorporated by reference in ch. NR 484, 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; am. (intro.) and (9), r. (1), renum. (4) and (7) to be NR 400.02 (60m) and (80m), Register, May, 1992, No. 437, eff. 6-1-92.

NR 415.03 General limitations. No person 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.

History: Renum. from NR 154.11 (1), Register, September, 1986, No. 369, eff. 10-1-86; am. Register, May, 1992, No. 437, eff. 6-1-92.

NR 415.04 Fugitive dust. No person may cause, allow or permit any materials to be handled, transported or stored without taking precautions to prevent particulate matter from becoming airborne. Nor 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) 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 roadway areas 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 determined 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,

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; am. (intro.), (1) (a), (b), (c) 1. and 2., (2) (a) to (c), (3) (a) to (d) and (4), Register, May, 1992, No. 437, eff. 6-1-92.

NR 415.07 Particulate emission limits for incinerators. No person may cause, 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 Intra-state 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 may not exceed the performance emission requirements prescribed by the American National Standards Institute for domestic incinerators, standard Z21.6, incorporated by reference in ch. NR 484.

(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 may not exceed the performance emission requirements prescribed by the 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 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).

History: Renum. from NR 154.11 (5) and am. Register, September, 1986, No. 369, eff. 10-1-86; am. (intro.), (1) (b) 2., (2) (a) 4. and (b), Register, May, 1992, No. 437, eff. 6-1-92.

NR 415.075 Particulate emission limitations for ledge rock quarries and industrial sand mines. (1) **APPLICABILITY.** (a) Except as provided in par. (b), the provisions of this section are applicable to the following operations and emission points in ledge rock quarries and industrial sand mines: blasting, drilling, roads, storage piles and use of haul trucks.

(b) Operations at any of the following ledge rock quarries and industrial sand mines are not subject to the provisions of subs. (2) to (4) of this section:

1. Ledge rock quarries with actual production of less than 25,000 tons per month on a rolling 12 month average.

2. Ledge rock quarries with actual operation of less than 365 days per 5 year period.

3. Industrial sand mines with actual production of less than 2,000 tons per month on a rolling 12 month average.

(c) When a ledge rock quarry or industrial sand mine is operated by more than one owner or operator, then actual production and actual operation shall be cumulative at the site. The applicable particulate emissions limitations of this section shall be applicable to all subsequent operators or owners at that site.

(2) **PARTICULATE EMISSION LIMITATIONS IN ALL AREAS OF THE STATE.** (a) No person may cause, allow or permit the use of any parking lot, road or other area by haul trucks or any drilling or blasting without taking precautions to prevent particulate matter from becoming airborne. These precautions shall be taken to the extent necessary so that any applicable requirements are met and shall include one or more of the following:

1. Application of asphalt, water or suitable chemicals on unpaved roads or other areas used by haul trucks which can create airborne dust, provided the application does not create a hydrocarbon, odor or water pollution problem.

2. Posting and maintenance of a 10 MPH speed limit on paved or unpaved roads or other areas used by haul trucks inside the facility's property line.

3. Covering, treatment or securing of materials likely to become airborne from haul trucks during transport, prior to any transportation off site from the quarry or mine.

4. Use of wet drilling or other means of control approved by the department.

5. The use of stemming materials that have been approved by either the department or the department of industry, labor and human relations.

6. Any precautions proposed by the owner or operator and accepted by the department in a permit or fugitive dust control plan.

7. Use of no precautions where control measures are unnecessary due to site or meteorological conditions.

(b) In addition to meeting the requirements of par. (a), the owner or operator shall control fugitive emissions from a road or other area used by haul trucks and from drilling so that visible emissions do not exceed 20% opacity at the source.

(c) The owner or operator shall submit to the department the fugitive dust control plan described in sub. (6).

(3) PARTICULATE EMISSIONS LIMITATIONS FOR OPERATIONS IN NONATTAINMENT AREAS. In addition to meeting the limitations of sub. (2), the owner or operator of any ledge rock quarry or industrial sand mine located in an area designated as nonattainment for either TSP or PM₁₀ shall do all of the following:

(a) Prior to a haul truck's departure from plant property, the haul truck's wheels and tires shall be sprayed with water or otherwise cleaned at the exit point from plant property.

(b) Storage piles of material having a silt content of greater than 5% shall be treated with water, surfactants, stabilizers or chemicals; draped; or enclosed on a minimum of 3 sides. The height of enclosure shall ensure that excessive fugitive dust emissions are prevented. Access areas surrounding storage piles shall be watered, cleaned or treated with stabilizers as needed to prevent fugitive dust from vehicle traffic.

(c) Emissions from all fugitive sources related to the operation of the quarry shall be controlled so that no visible emissions from these sources, as measured using Method 22 in Appendix A of 40 CFR part 60, incorporated by reference in ch. NR 484, cross the facility's property line.

(d) Emissions from activities not associated with processing equipment, including but not limited to roads, other areas used by haul trucks, storage piles and drilling, shall be controlled so that visible emissions do not exceed 5% opacity at the source.

(e) Roads and other areas used by haul trucks shall be paved with asphalt, concrete or other material approved by the department, or treated by other methods of dust control which the department approves for the particular road, driveway or trafficable area so that the visible

emissions limits of pars. (c) and (d) are met. Other methods of dust control which may be approved by the department include but are not limited to periodic application of water or suitable chemicals provided the application does not create a hydrocarbon, odor or water pollution problem. In reviewing and approving other materials or methods 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. All roads and other areas, if paved, shall be kept free of material likely to become airborne, through a program of periodic cleaning.

(4) **AMBIENT AIR MONITORING.** (a) Except as provided in par. (b), the owner or operator of any operation subject to the provisions of this section shall set up, operate and report the results obtained with a particulate matter ambient air monitoring system. The monitoring system shall comply with all of the following requirements:

1. A plan that describes the ambient air monitoring program shall be submitted to the department within 30 days of the date of issuance of a permit under ch. NR 406 or 407.

2. The department shall review the plan to determine whether it will provide accurate and reliable monitoring at the operation site. Department approval, conditional approval or disapproval of any ambient air monitoring plan shall be completed within 60 days of receipt of the plan.

3. Monitoring for particulate matter shall be conducted for a 24-hour period on the 6 day schedule established by the U.S. environmental protection agency, or more frequently if required by the department. The department shall specify the schedule in the approved plan.

4. Monitoring results shall be submitted to the department on a monthly basis. Results for each month shall be postmarked or received by the department no later than the last day of the following month.

5. The owner or operator shall start monitoring by 120 days from the date of permit issuance under ch. NR 407 or as specified in the ambient air monitoring plan for any source subject to the permit requirements of ch. NR 406.

(b) The owner or operator of a source may apply for, and the department may grant, a variance from the monitoring requirements of this subsection if the applicant demonstrates that the general public will not be exposed to significant levels of particulate matter from the source, and that the source's emissions units and processes are controlled to a level which meets all applicable requirements. The department may review any variance granted under this paragraph on a biennial basis. Following its review, the department may modify, extend or rescind the variance.

(5) **RECORDKEEPING.** Each owner or operator of any ledge rock quarry or industrial sand mine shall keep the following records. Recordkeeping and access to these records shall be in accordance with ss. NR 439.03 to 439.05.

(a) Records of actual operation on a monthly basis.

(b) Records of actual production on a monthly basis.

(6) **FUGITIVE DUST CONTROL PLAN.** (a) Each owner or operator of any ledge rock quarry or industrial sand mine shall prepare a fugitive dust

control plan to prevent, detect and correct malfunctions, equipment failures or other circumstances which may cause any applicable emission limitation to be violated or which may cause air pollution. The plan shall be in writing, and updated as needed, and shall include all of the following:

1. Identification of the individual responsible for implementing the fugitive dust control plan.
2. The maximum intervals for inspection and routine maintenance of fugitive dust control equipment, including a description of the items or conditions that will be checked.
3. Schedules for watering, treating or periodic cleaning of roads, trafficable areas and storage piles.
4. A listing of materials, equipment and spare parts that will be maintained in inventory.
5. Other information as the department may deem pertinent.

(b) The department may order any owner or operator to submit the plan required by par. (a) to the department for review. The department may request any owner or operator to amend the plan if deemed necessary for malfunction prevention or the reduction of excess emissions.

(c) No owner or operator may fail to implement the plan required under par. (a) or as amended under par. (b).

(d) All air pollution control equipment shall be operated and maintained in conformance with good engineering practices to minimize the possibility for the exceedance of any emission limitations.

History: Cr. Register, June, 1994, No. 462, eff. 7-1-94.

NR 415.076 Particulate emission limitations for crushed stone and sand and gravel plants. (1) **APPLICABILITY.** (a) Except as provided in par. (b), the provisions of this section are applicable to the following direct or portable sources in fixed or portable crushed stone and sand and gravel plants; each crusher, screening operation, bucket elevator, belt conveyor or storage bin.

(b) Direct or portable sources at the following plants are not subject to the provisions of this section:

1. Fixed sand and gravel plants and fixed crushed stone plants with capacities of 25 tons per hour or less.
2. Portable sand and gravel plants and portable crushed stone plants with capacities of 150 tons per hour or less.

(2) **FUGITIVE DUST CONTROL.** No person may cause, allow or permit any crusher, screen, bucket elevator, belt conveyor, storage bin or any transfer point on belt conveyors to be used without taking precautions to prevent particulate matter from becoming airborne. These precautions shall be taken to the extent necessary so that any applicable requirements are met and shall include one or more of the following:

(a) Use, where possible, of water, or chemicals approved by the department, for control of dust.

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

(c) The use of spray bars or other wet dust suppression methods.

(d) Any precautions proposed by the owner or operator and accepted by the department.

(e) Use of no precautions where control measures are unnecessary due to site or meteorological conditions.

History: Cr. Register, June, 1994, No. 462, eff. 7-1-94.

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 0.080 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.

(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 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.

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