

Chapter NR 421

CONTROL OF ORGANIC COMPOUND EMISSIONS FROM CHEMICAL, COATINGS AND RUBBER PRODUCTS MANUFACTURING

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NR 421.01—Applicability; purpose. (1) APPLICABILITY. This chapter applies to all chemical, coatings and rubber products manufacturing air contaminant sources and to their owners and operators.

(2) PURPOSE. This chapter is adopted under ss. 285.11, 285.13 and 285.17, Stats., to categorize organic compound emissions from chemical, coatings and rubber products manufacturing sources into separate organic compound air contaminant source categories and to establish emission limitations for these categories of sources in order to protect air quality.

History: Cr Register, September, 1986, No. 369, eff. 10-1-86; am Register, February, 1990, No. 410, eff. 3-1-90; corrections made in (2) made under s. 13.93 (2m) (b) 7, Stats., Register, December, 1996, No. 492.

NR 421.02—Definitions. The definitions contained in chs. NR 400, 419 and 420 apply to the terms used in this chapter. In addition, the following definitions apply to the terms used in this chapter and in chs. NR 422 to 425:

(1) “Dead dipping” means the dipping of an assembled tire bead into a solvent based cement.

(2) “Blending tank” means any vessel in which resin, coating or other materials, or any combination thereof, are added to produce product blend.

(3) “Coatings manufacturing facility” means any facility which mixes, blends or compounds paints, varnishes, lacquers, enamels, shellacs or sealers, and which is classified under standard industrial classification code 2851, as described in the Standard Industrial Classification Manual, 1987, incorporated by reference in s. NR 484.05.

(4) “Completed resin” is any resin which has completed its processing and is available for use in the basic components of plastics or as a component of surface coating formulations.

(5) “Green tires” means assembled tires before molding and curing have occurred.

(6) “Green tire spraying” means the spraying of green tires, both inside and outside, with release compounds which help remove air from the tire during molding and prevent the tire from sticking to the mold after curing.

(7) “Grinding mill” means any mill with cylindrical chambers containing grinding media such as balls, pebbles, or sand which grind and disperse coating solids.

(8) “High speed dispersion mill” means any mixer with one or more blades that rotate at high speed in order to disperse coating solids.

(9) “Passenger type tire” means agricultural, airplane, industrial, mobile home, light and medium duty truck, and passenger vehicle tires with a bead diameter up to 50.8 cm (20 inches) and cross section dimension up to 32.5 cm (12.8 inches).

(10) “Pneumatic rubber tire manufacture” means the production of pneumatic rubber passenger type tires on a mass production basis.

(11) “Production equipment exhaust system” means a device for collecting and directing out of the work area fugitive emissions

from reactor openings, centrifuge openings, and other vessel openings at a pharmaceutical manufacturing plant.

(12) “Reaction tank” means any piece of equipment in which organic or other materials are reacted to produce a resin. A reaction tank may include a stripping column, condensers, and a water separator, which return the evaporated solvent to the reaction vessel.

(13) “Reactor” means a vat or vessel, which may be jacketed to permit temperature control, designed to contain chemical reactions.

(14) “Resin” means a solid or semi-solid, water-insoluble, organic material with little or no tendency to crystallize and which is used as the basic components of plastics or as a component of surface coating formulations.

(15) “Roller mill” means any mill with horizontal rollers that grind and disperse coating solids.

(16) “Synthesized pharmaceutical manufacturing” means manufacture of pharmaceutical products by chemical synthesis.

(17) “Synthetic resin manufacturing facility” means any facility which reacts organic compounds to produce a synthetic resin and which is classified under standard industrial classification code 2821, as described in the Standard Industrial Classification Manual, 1987, incorporated by reference in s. NR 484.05.

(18) “Thinning tank” means any vessel in which resin, coating, or other products are combined with solvents to thin the product.

(19) “Tread end cementing” means the application of a solvent based cement to tire tread ends.

(20) “Undertread cementing” means the application of a solvent based cement to the underside of a tire tread.

(21) “VOC emission leak” means a fugitive emission of volatile organic compounds from any valve, pump, sealed agitator, compressor, flange or relief valve for which the fugitive VOC concentration is measured to exceed 10,000 ppm when tested according to Method 21 in Appendix A of 40 CFR part 60, incorporated by reference in s. NR 484.04.

(22) “Water based sprays” means release compounds, sprayed on the inside and outside of green tires, in which solids, water, and emulsifiers have been substituted for all organic solvents.

History: Renum from NR 154.01, cr (1m), (2c), (2s), (4c), (4s), (9m), (10c), (10s), (11c) and (11s), Register, September, 1986, No. 369, eff. 10-1-86; renum (2) and (5) to be NR 400.02 (22) and (51m), cr (12m), Register, February, 1990, No. 410, eff. 3-1-90; renum (10) and (11) to be (10w) and (11w) under s. 13.93 (2m) (b) 1, Stats., Register, August, 1990, No. 416; renum (1m) to be (2), Register, May, 1992, No. 437, eff. 6-1-92; am (2c) and (11c), Register, December, 1993, No. 456, eff. 1-1-94; am (intro), renum (2c) to (13) to be (3) to (22) and am (3), (17) and (21), Register, December, 1995, No. 480, eff. 1-1-96.

NR 421.03—Chemical manufacture. (1) PHARMACEUTICAL MANUFACTURE. (a) Applicability. This subsection applies, subject to the provisions of s. NR 425.03, to all operations at pharmaceutical manufacturing facilities involved in the manufacture of pharmaceutical products by chemical synthesis, with the exception of any reactor, distillation unit, dryer, filter, crystallizer, centrifuge, or other individual operation that has an actual emis-

40 CFR part 60, incorporated by reference in s. NR 484.04. The monitoring schedule shall be as follows:

~~1. Monitor each valve, pump, sealed agitator, compressor and relief valve that is located within 2.0 meters (6.6 feet) of a permanent support surface once during each calendar quarter.~~

2. Monitor all other valves, pumps, sealed agitators, compressors and relief valves, and all flanges, once during each calendar year.

3. Notwithstanding subd. 1., if less than or equal to 2% of the valves monitored pursuant to subd. 1. are found to leak for 5 consecutive quarters, monitoring of valves under subd. 1. will not be required for the following 3 consecutive quarters. Monitoring shall be conducted during the next quarter and every fourth quarter thereafter. If, during monitoring required under this subdivision, more than 2% of valves monitored are found to leak, quarterly monitoring under subd. 1. shall be reinstated in the next quarter.

(f) Check bimonthly by visual inspection each valve, pump, sealed agitator, compressor, flange and relief valve for indications of dripping liquid.

(g) Repair all leaks detected as soon as practicable, but not later than 15 calendar days after leak detection unless the repair is technically infeasible without a process unit shutdown. In the case of such infeasibility, repair shall occur before the end of the next process unit shutdown.

(h) Document to the department all repairs of detectable leaks of VOCs for each calendar quarter. This documentation is to include a description of the equipment that caused the leak, date of detection, date of repair, date of follow-up inspection, and an explanation of what caused the leak. This documentation is to be submitted to the department within one month after the close of the calendar quarter during which the leaks were detected and repaired.

~~(3) COMPLIANCE SCHEDULE.~~ (a) This subsection applies only to a coatings manufacturing facility which is in existence on January 1, 1994 and which meets one of the following criteria:

1. The facility is located in the county of Door, Kewaunee, Manitowoc, Sheboygan or Walworth.

2. The facility is located in the county of Kenosha, Milwaukee, Ozaukee, Racine, Washington or Waukesha and was not subject to this section prior to January 1, 1994.

(b) The owner or operator of any source identified under par. (a) shall:

1. Notify the department's bureau of air management in writing by April 1, 1994. This notification shall provide the name and location of the affected facility and include VOC emission data if necessary to support eligibility under this subsection.

2. Achieve final compliance with the requirements of this section no later than May 31, 1995.

Note: "Maximum theoretical emissions" has the meaning given in s. NR 419.02 (11).

History: Cr Register, September, 1986, No. 369, eff. 10-1-86; am. (1) and (3) (e) 4, r and rec. (2) (e), renun. (2) (f) to be (2) (h) and am., cr. (2) (f) and (g), r. (3) (e) 5, Register, February, 1990, No. 410, eff. 3-1-90; am. (1), cr. (1) (b), r and rec. (3), Register, December, 1993, No. 456, eff. 1-1-94; am. (2) (e), cr. (2) (e) 3, Register, December, 1995, No. 480, eff. 1-1-96; am. (1) (b), (2) (a) (intro.), (2) (a), r. (2) (a) 1 to 3, Register, December, 1996, No. 492, eff. 1-1-97; am. (2) (e) 3, Register, October, 1999, No. 526, eff. 11-1-99.

NR 421.07 Synthetic organic chemical manufacturing industry. (1) **APPLICABILITY** (a) This section applies to the owner or operator of any facility that is located in the county of Milwaukee, Waukesha, Washington, Ozaukee, Racine, Kenosha or Sheboygan, and that has maximum theoretical emissions of VOCs greater than or equal to 100 tons per year from air oxidation unit processes or from distillation operations and reactor processes, as those activities are defined in ss. NR 440.675 (2) (e), 440.686 (2) (e) and 440.705 (2) (e), respectively.

(b) For purposes of this section, any references to total organic compounds or TOC in ss. NR 440.675, 440.686 or 440.705 shall be considered to be volatile organic compounds as defined in s. NR 400.02 (162).

(2) AIR OXIDATION UNIT PROCESSES (a) Unless exempt under par. (b), the owner or operator of a facility operating air oxidation unit processes subject to this section shall comply with the requirements of s. NR 440.675, subject to the following exceptions:

1. Notwithstanding s. NR 440.675 (1) (b) (intro.), for purposes of this section, an affected facility shall be one that is described by the criteria in s. NR 440.675 (1) (b) 1. to 3., without consideration of the specific date of the construction, modification or reconstruction of the facility.

2. Notwithstanding s. NR 440.675 (3) (intro.), for purposes of this section, the owner or operator of an affected facility shall comply with s. NR 440.675 (3) (a), (b) or (c) no later than August 1, 2010.

3. Notwithstanding s. NR 440.675 (6) (a), each owner or operator subject to this section shall notify the department how the facility will comply with the specific provisions of s. NR 440.675 (3) no later than June 1, 2010 or no later than 60 days after becoming subject to this section, whichever is later.

4. Section NR 440.675 (7) does not apply.

(b) Exemptions listed in s. NR 440.675 (1) (c) shall apply to an owner or operator subject to this subsection.

(3) DISTILLATION OPERATIONS (a) Unless exempt under par. (b), the owner or operator of a facility with distillation operations subject to this section shall comply with the requirements of s. NR 440.686, subject to the following exceptions:

1. Notwithstanding s. NR 440.686 (1) (b) (intro.), for purposes of this section, an affected facility shall be one that is described by the criteria in s. NR 440.686 (1) (b) 1. to 3., without consideration of the specific date of the construction, modification or reconstruction of the facility.

2. Notwithstanding s. NR 440.686 (3) (intro.), for purposes of this section, the owner or operator of an affected facility shall comply with s. NR 440.686 (3) (a), (b) or (c) no later than August 1, 2010.

3. Notwithstanding s. NR 440.686 (6) (a), each owner or operator subject to this section shall notify the department how the facility will comply with the specific provisions of s. NR 440.686 (3) no later than June 1, 2010 or no later than 60 days after becoming subject to this section, whichever is later.

4. Section NR 440.686 (7) does not apply.

(b) Exemptions listed in s. NR 440.686 (1) (c) shall apply to an owner or operator subject to this subsection.

(4) REACTOR PROCESSES (a) Unless exempt under par. (b), the owner or operator of a facility with reactor processes subject to this section shall comply with the requirements of s. NR 440.705, subject to the following exceptions:

1. Notwithstanding s. NR 440.705 (1) (b) (intro.), for purposes of this section, an affected facility shall be one that is described by the criteria in s. NR 440.705 (1) (b) 1. to 3., without consideration of the specific date of the construction, modification or reconstruction of the facility.

2. Notwithstanding s. NR 440.705 (3) (intro.), for purposes of this section, the owner or operator of an affected facility shall comply with s. NR 440.705 (3) (a), (b) or (c) no later than August 1, 2010.

3. Notwithstanding s. NR 440.705 (6) (a), each owner or operator subject to this section shall notify the department how the facility will comply with the specific provisions of s. NR 440.705 (3) no later than June 1, 2010 or no later than 60 days after becoming subject to this section, whichever is later.

4. Section NR 440.705 (7) does not apply.

(b) Exemptions listed in s. NR 440.705 (1) (c) shall apply to an owner or operator subject to this subsection.

~~(5) COMPLIANCE EMISSION TESTING The owner or operator of a facility subject to this section shall conduct compliance emission testing in accordance with s. NR 439.075 (2) (c) 3. j.~~

(6) DELAYED COMPLIANCE If the owner or operator of a facility employs a VOC emission control device that, on August 1, 2009 does not achieve compliance with an emission limitation in s. NR 440.675 (3), 440.686 (3) or 440.705 (3), applicable under this section, the owner or operator is not required to comply with the emission limitation until the control device is replaced for rea-

sons other than compliance, including normal maintenance, malfunction, accident, and obsolescence. A control device is considered to be replaced when either of the following occur:

(a) All of the control device is replaced.

(b) The cost of repair of the control device or the cost of replacement of part of the control device exceeds 50% of the cost of replacing the entire control device with a control device that is capable of complying with the respective requirement of s. NR 440.675 (3), 440.686 (3) or 440.705 (3).

History: CR 08-114: cr. Register July 2009 No. 643, eff. 8-1-09; correction in (4) (a) 1. made under s. 13.92 (4) (b) 7., Stats., Register July 2009 No. 643.