

## Chapter NR 419

## CONTROL OF ORGANIC COMPOUND EMISSIONS

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**Note:** Corrections made under s. 13.93 (2m) (b) 7., Stats., Register, December, 1996, No. 492.

**NR 419.01 Applicability; purpose. (1) APPLICABILITY.** This chapter applies to all air contaminant sources which emit organic compounds 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 air contaminant sources and to establish emission limitations for these categories 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.

**NR 419.02 Definitions.** The definitions contained in ch. NR 400 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 420 to 425.

**(1)** "Adsorption system" means a device containing adsorbent material (e.g., activated carbon, alumina, silica gel); an inlet and outlet for exhaust gases; and a system to regenerate the saturated adsorbent.

**(2)** "Automobile" means passenger cars, vans, motorcycles, trucks, or any equipment that is physically capable of being driven or drawn upon a highway including, but not limited to, the following types of equipment: construction vehicles such as mobile cranes, bulldozers or concrete mixers; farming equipment such as tractors, plows, or pesticide sprayers; hauling equipment such as truck trailers, utility bodies or camper shells; and miscellaneous equipment such as street cleaners or golf carts.

**(3)** "Beneficial use or reuse" has the meaning given in s. NR 500.03.

**(4)** "Core" means in foundry operations a separable part of a mold which is usually made of sand and is used to create openings and various cavities in the castings.

**(5)** "Core binder" means any substance used to bind sand together to form a core.

**(6)** "Core or mold coating" means a substance used to alter the surface of a core or mold through coating or cleaning after the core or mold has been manufactured.

**(7)** "Floating roof" means a storage tank cover consisting of a double deck or pontoon single deck, which rests upon and is supported by the petroleum liquid being contained, and is equipped with a closure seal or seals to seal the space between the roof edge and tank wall. The floating roof may be either a covered external floating roof in an open storage tank or an internal floating cover beneath a fixed roof.

**(8)** "Hydrocarbon" means any organic compound containing carbon and hydrogen.

**(9)** "Landfill" has the meaning given in s. NR 500.03.

**(10)** "Landspreading facility" has the meaning given in s. NR 500.03.

**(11)** "Maximum theoretical emissions" means the quantity of VOC emissions that theoretically could be emitted by a stationary source without consideration of control devices based on the design capacity or maximum production capacity of the source

and 8,760 hours of operation per year. In determining the maximum theoretical emissions for a source, the design capacity or maximum production capacity shall include the use of necessary coatings and inks with the highest VOC content used in practice by the source. When appropriate, and upon request by the source owner or operator, maximum theoretical emissions may be limited by the imposition of conditions in a federally enforceable permit. Such conditions shall be used in place of design capacity or maximum production capacity in calculating the maximum theoretical emissions for the source and may include, among other things, the establishment of production limitations, capacity limitations, or limitations on the VOC content of coatings or inks, or the hours of operation of any emission source, or a combination of any such limitations. Production or capacity limitations shall be established on the basis of no longer than one month and may allow for averaging for up to 12 consecutive months.

**(12)** "Mold" means the matrix in which metal is cast and receives its form.

**(13)** "Petroleum liquid" means crude petroleum, petroleum, condensate and any finished or intermediate products manufactured or extracted in a petroleum refinery or in a facility which produces oils from tar sands, shale, coal or coke.

**(14)** "Photochemically reactive organic compounds" means any of the following:

(a) Group A: Hydrocarbons, alcohols, aldehydes, esters, ethers or ketones, which have olefinic or cyclo-olefinic type unsaturation.

(b) Group B: Aromatic compounds with 8 or more carbon atoms to the molecule, except ethylbenzene.

(c) Group C: Ethylbenzene, toluene or ketones having branched hydrocarbon structures.

(d) Group D: A solvent or mixture of organic compounds in which any of the following conditions are met:

1. More than 20% of the total volume is composed of any combination of compounds listed in group A, B or C above.

2. More than 5% of the total volume is composed of any combination of the compounds listed in group A above.

3. More than 8% of the total volume is composed of any combination of the compounds listed in group B above.

**(15)** "Submerged fill pipe" means any fill pipe with a discharge opening which is entirely submerged when the liquid level is 15.2 centimeters (6 inches) above the tank bottom.

**(16)** "Urethane cold box binder" means a core binder which uses components such as phenol formaldehyde resins and isocyanates to form a bond after catalysis by an organic gas such as triethylamine or dimethylethylamine.

**(17)** "Vent" means any port or opening which allows gases to be discharged to the atmosphere when leaving a reactor or other equipment.

**(18)** "Virgin petroleum liquid" means petroleum liquid which has not been contaminated by compounds not initially present through use or mixture with other liquids. Virgin petroleum liquids include gasoline, diesel fuel, kerosene, distillate fuel oils, residual fuel oils and other products produced through distillation

of petroleum or through redistillation, cracking, extraction or reforming of unfinished petroleum derivatives.

**History:** Renum. from NR 154.01, cr. (intro.) and (7), Register, September, 1986, No. 369, eff. 10-1-86; renum. (1) and (2) to be (1m) and NR 400.02 (72), Register, February, 1990, No. 410, eff. 3-1-90; cr. (1s), (1t), (1u), (3m) and (6m), Register, June, 1994, No. 462, eff. 7-1-94; cr. (8), Register, September, 1994, No. 465, eff. 10-1-94; cr. (1p), (3c) and (3e), Register, August, 1995, No. 476, eff. 9-1-95; am. (intro.), renum. (1m), (1p), (1s), (1t), (1u), (2), (3), (3c) and (3e) to be (2) to (10), renum. (3m), (4), (6), (6m) and (7) to be (12) and (14) to (17), renum. (8) to be (18) and am., cr. (11), renum. (13) from 420.02 (28), Register, December, 1995, No. 480, eff. 1-1-96; am. (14) (intro.), Register, October, 1999, No. 526, eff. 11-1-99; am. (2), Register, January, 2001, No. 541, eff. 2-1-01.

**NR 419.03 General limitations. (1)** No person may cause, allow or permit organic compound emissions into the ambient air which substantially contribute to the exceeding of an air standard or cause air pollution.

**(2)** No person may cause, allow or permit organic compounds to be used or handled without using good operating practices and taking reasonable precautions to prevent the spillage, escape or emission of organic compounds, solvents or mixtures. Such precautions shall include, but are not limited to:

(a) Use of caution to prevent spillage or leakage when filling tanks, trucks or trailers.

(b) Use of caution when filling automobile tanks to prevent spillage.

**History:** Renum. from NR 154.13 (1) (a) and (b), Register, September, 1986, No. 369, eff. 10-1-86; am. (1) and (2) (intro.), Register, February, 1990, No. 410, eff. 3-1-90.

**NR 419.04 Disposal of VOC wastes. (1)** Effective August 1, 1979, no person may cause, allow or permit the disposal of more than 5.7 liters (1.5 gallons) of any liquid VOC waste, or of any liquid, semisolid or solid waste materials containing more than 5.7 liters (1.5 gallons) of any VOC, in any one day from a facility in a manner that would permit their evaporation into the ambient air during the ozone season, except as provided for in s. NR 419.07. This includes, but is not limited to, the disposal of VOC which must be removed from VOC control devices so as to maintain the control devices at their required operating efficiency.

**(2)** Disposal during the ozone season shall be by methods approved by the department, such as incineration, recovery for reuse, or transfer in closed containers to an acceptable disposal facility, such that the quantity of VOC which evaporates into the ambient air does not exceed 15% (by weight) or 5.7 liters (1.5 gallons) in any one day, whichever is larger.

**History:** Renum. from NR 154.13 (1) (c), Register, September, 1986, No. 369, eff. 10-1-86; am. (1), Register, February, 1990, No. 410, eff. 3-1-90; am. (1), Register, August, 1995, No. 476, eff. 9-1-95.

**NR 419.05 Storage of any organic compound.**

**(1) APPLICABILITY. (a)** This section applies to all storage tanks for organic compounds having capacities greater than 151,412 liters (40,000 gallons) in the Southeastern Wisconsin Intrastate AQCR, and to all such storage tanks throughout the state on which construction or modification commenced after April 1, 1972, with the following exceptions:

1. Tanks storing organic compounds that are not photochemically reactive on which construction or modification commenced before August 1, 1979.

2. Tanks used exclusively for storing organic compounds exempted under s. NR 425.04 (1) (a).

(b) Where a provision of s. NR 420.03 also applies, the more stringent requirement shall be met.

**(2) STORAGE REQUIREMENTS.** When storing organic compounds, solvents, or mixtures having a vapor pressure equal to or greater than 10.5 kPa (1.52 psia) at 21°C (70°F), floating roofs, vapor condensation systems, vapor holding tanks, or equally effective alternative control methods approved by the department shall be used. Any alternative control method approved by the department under this subsection shall be submitted to, and will not become effective for federal purposes until approved by, the

administrator or designee as a source-specific revision to the department's state implementation plan for ozone.

**History:** Renum. from NR 154.13 (2) (c) and am. Register, September, 1986, No. 369, eff. 10-1-86; am. (1) (a) 2., Register, February, 1990, No. 410, eff. 3-1-90; am. (2), Register, December, 1993, No. 456, eff. 1-1-94; am. (2), Register, December, 1996, No. 492, eff. 1-1-97.

**NR 419.06 Transfer of any organic compound.**

**(1) APPLICABILITY. (a)** This section applies to transfer operations in the Southeastern Wisconsin Intrastate AQCR involving organic compounds, solvents or mixtures having a vapor pressure greater than 10.5 kPa (1.52 psia) at 21°C (70°F), and to such transfer operations throughout the state at facilities on which construction or modification was commenced after April 1, 1972, with the following exceptions:

1. Transfer operations involving organic compounds which are not photochemically reactive at facilities on which construction or modification was commenced before August 1, 1979.

2. Transfer operations involving, exclusively, organic compounds exempted under s. NR 425.04 (1) (a).

(b) Where a provision elsewhere in ss. NR 420.04 and 421.03 (2) also applies, the more stringent requirement shall be met.

**(2) TANK LOADING.** For transfers to storage tanks having greater than 3,785 liter (1,000 gallon) capacity, a permanent submerged fill pipe shall be used, provided such a tank does not have controls mentioned in s. NR 419.05 (2).

**(3) TANK LOAD OUT FOR HIGH THROUGHPUT FACILITIES.** At facilities with over 151,412 liters (40,000 gallons) per day throughput, a vapor collection and disposal system, vapor collection adaptors and vapor-tight seal, or an underfill method with the top hatches partially closed or a means of creating a slight back pressure when loading delivery vessels shall be used.

**(4) TANK LOAD OUT FOR LOW THROUGHPUT FACILITIES.** At facilities with 151,412 liters (40,000 gallons) or less per day throughput, the underfill method or a submerged fill pipe extending to within 6 inches of the tank bottom shall be employed when loading tank trucks or trailers.

**History:** Renum. from NR 154.13 (3) (f) and am. Register, September, 1986, No. 369, eff. 10-1-86; am. (1) (a) 2., Register, February, 1990, No. 410, eff. 3-1-90; am. (3), Register, October, 1999, No. 526, eff. 11-1-99.

**NR 419.07 Remediation of contaminated soil or water. (1) APPLICABILITY.** This section applies to all facilities and procedures used to remediate or dispose of soil or water contaminated with organic compounds which are direct air contaminant sources and to their owners and operators.

**Note:** Certain contaminated soils and water are hazardous wastes. Due to the "mixture", "derived from", and "contained in" rules found in ch. NR 605, soils and water contaminated by listed hazardous waste under s. NR 605.09 (2), Table II or III, are also hazardous wastes. In addition, any residue or contaminated soil, water or other debris resulting from the cleanup of a spill of any material listed in Table IV or V of s. NR 605.09 (3) is a listed hazardous waste. Soils, water or other debris may also be considered hazardous waste when they exhibit a hazardous characteristic under one of the test procedures of s. NR 605.08, including the toxicity characteristic leaching procedure test. Contaminated soils and water must be evaluated for the applicability of hazardous waste management rules (chs. NR 600 to 690). The requirements in chs. NR 600 to 690 for the treatment, storage or disposal of hazardous waste must be followed if the contaminated soil or water is hazardous waste. Requirements in chs. NR 700 to 750 may also apply.

**(2) SOIL AND WATER REMEDIATION PROCEDURE NOTIFICATION AND APPROVAL. (a)** Except as provided in sub. (3), no person may use any procedure to remediate or dispose of soil or water contaminated with organic compounds unless the person has submitted a complete soil or water remediation notification form to the department, complies with par. (c) and, when applicable, has received approval or conditional approval under par. (b). Notification shall be postmarked or delivered as follows:

1. As soon as possible, but no later than the next working day following commencement of remediation, for virgin petroleum liquid spills for which remediation begins within 48 hours of the spill.

2. At least 10 business days prior to commencement of remediation for any other project.

**Note:** For remediation projects other than virgin petroleum liquid contamination projects, department approval may be required.

(b) The department may approve, conditionally approve or deny approval for a remediation project described in the notification required in par. (a) 2.

(c) The remediation may commence if the requirements in par. (a) are met and if the remediation project meets all of the following conditions:

1. The project meets the emission limits in sub. (4) and the requirements in sub. (5).

2. The project will not cause emissions in such quantity, concentration or duration as to be injurious to human health.

3. The project will not cause emissions in quantities which will substantially contribute to the exceeding of an ambient air quality standard or ambient air increment or cause air pollution.

**Note:** This rule only addresses the remediation notification submittal and approval requirements of the bureau of air management. Remediation notification submittal or remediation approval may be required by other bureaus in the department as well.

**(3) EXEMPTIONS.** Any procedure or activity listed in this subsection is exempt from the requirement for submittal of a remediation notification form under sub. (2) and is exempt from the emission limits specified in sub. (4) except those contained in ch. NR 445:

(a) Installation and use of devices which remove organic compounds from a private or municipal potable water supply.

(b) Installation and use of crop irrigation systems or dewatering wells to remediate contaminated water.

(c) Agricultural landspreading of soil contaminated with pesticide or fertilizer.

(d) Pilot testing of a negative pressure venting system provided the testing is limited to a total withdrawal of not more than 150,000 standard cubic feet (scf) of air.

**Note:** The total withdrawal may be determined by the equation: Total withdrawal (scf) = hours of operation of pilot test (hr) × average flow rate in cubic feet per minute at standard conditions (scfm) × 60 min/hr. An example is: 10 hours of operation × 250 scfm × 60 min/hr = 150,000 scf. When testing at multiple flow rates, determine the withdrawal for each flow rate and sum the withdrawals for a total withdrawal.

(e) Discharge to a wastewater treatment plant that is operated in accordance with ch. 283, Stats.

**Note:** Wastewater treatment plants are not exempt from air permit requirements.

(f) A project exempt from notification under s. NR 706.07.

**(4) EMISSION LIMITATIONS.** (a) An owner or operator of a soil or water remediation project shall treat or dispose of soil or water contaminated with organic compounds in a manner which minimizes the emission of volatile organic compounds and hazardous air contaminants, including emissions during the handling, transportation and storage of the contaminated soil or water.

(b) The emissions from the remediation or disposal of contaminated soil or water may not exceed:

1. 137 pounds of volatile organic compounds per day in Kenosha, Kewaunee, Manitowoc, Milwaukee, Ozaukee, Racine, Sheboygan, Walworth, Washington or Waukesha county, except as specified in pars. (d) and (e).

2. 216 pounds of volatile organic compounds per day in counties not listed in subd. 1., except as specified in pars. (d) and (e).

3. The maximum emission limit for any hazardous air contaminant listed in tables 1 to 5 of s. NR 445.04 under ch. NR 445.

(c) When remediating soil or water, thermal evaporation units shall meet the following volatile organic compound emission limits:

1. 137 pounds per day in Kenosha, Kewaunee, Manitowoc, Milwaukee, Ozaukee, Racine, Sheboygan, Walworth, Washington or Waukesha county.

2. 216 pounds per day in counties not listed in subd. 1.

(d) When receiving contaminated soil for disposal or beneficial use or reuse, landfills shall comply with the following limitations:

1. In Kenosha, Kewaunee, Manitowoc, Milwaukee, Ozaukee, Racine, Sheboygan, Walworth, Washington or Waukesha county, the total volatile organic compound content of soils received may not exceed 137 pounds per day.

2. In all counties not listed in subd. 1., the total volatile organic compound content of soils received may not exceed 216 pounds per day.

**Note:** In calculating the total VOC content of soil received for disposal or beneficial use or reuse, landfills should not include in that figure the VOCs in soils accepted for treatment at a treatment facility at the landfill.

**Note:** Section NR 722.09 (4) has further limitations on the amount of contaminated soil that may be disposed of in landfills.

(e) When remediating contaminated soil at a landspreading facility, the total volatile organic compound contaminants in the soil treated at a source may not exceed 6,000 pounds per year.

(f) Except as provided for in sub. (6), the volatile organic compound emissions for pars. (b) and (c) and the volatile organic compound quantity for pars. (d) and (e) are determined by averaging the contaminant concentrations in all samples of the contaminated soil or water analyzed and multiplying that average by the total amount of soil or water to be remediated. If in any sample there is no contamination detected, the detection level of the test method is used for the contaminant concentration in that sample.

(g) The volatile organic compound emissions determined for pars. (b) and (c), and the organic compound quantities determined for pars. (d) and (e), may be reduced by any method approved by the bureau of air management.

**Note:** Methods may include but are not limited to approved destruction efficiency, afterburners, carbon absorption units, etc.

**(5) OTHER REQUIREMENTS.** In addition to the other requirements of this section, a source shall meet the following requirements:

**Note:** Material which is hazardous waste shall comply with the requirements in chs. NR 600 to 690.

(b) *Treatment of chlorinated organic compounds.* 1. Except as provided in subd. 2., a thermal evaporation unit may not be used to remediate soil or water contaminated with chlorinated organic compounds unless an air pollution control permit has been issued to the source authorizing it to remediate soil or water contaminated with chlorinated organic compounds.

2. A thermal evaporation unit may remediate soil or water contaminated with gasoline which contains small amounts of chlorinated organic additives to the gasoline, even though the unit does not have a permit authorizing it to remediate soil or water contaminated with chlorinated organic compounds.

(c) *Fuel requirements.* A thermal evaporation unit may not be used to remediate soil or water contaminated with organic compounds containing aromatic hydrocarbons while using a fuel which is contaminated with chlorinated organic compounds unless an air pollution control permit has been issued to the source allowing it to use the fuel contaminated with chlorinated organic compounds while remediating soil or water contaminated with aromatic hydrocarbons.

(d) *Requirements for asphalt plants to remediate soil.* In addition to the other requirements of this section, the following requirements shall apply to all asphalt plants which remediate soil or water contaminated with organic compounds:

1. The asphalt plant shall have had a compliance stack test for particulate matter within the last 5 calendar years which determined that the particulate matter emission rate during the test did not exceed 90 mg/dscm (0.039 gr/dscf), not including backhalf condensable particulate matter.

2. If an asphalt plant has had more than one compliance test during the last 5 calendar years, the results of the most recent test shall be used for purposes of demonstrating compliance with this section.

3. The stack height shall be equal to or greater than 25 feet above grade.

4. If the asphalt plant is using a wet scrubber to control particulate matter emissions, the scrubber pond shall meet the requirements of ch. NR 213.

5. The asphalt plant shall have an air pollution control permit to operate which allows it to remediate soil or water containing organic compounds.

6. The asphalt plant shall be operating in compliance with its permit.

(e) *Objectionable odors.* If objectionable odors, as determined under s. NR 429.03, are determined to result from the remediation, the source shall take preventive measures satisfactory to the department to abate or control such emissions.

(f) *Relocation.* Any portable source relocating shall file notification with the department's air management program, as specified in s. 285.60 (5) (a), Stats., and s. NR 406.15. The signed notification shall be accompanied by a plot plan showing the layout of the site including the location and heights of any buildings, factories, schools, residences or public places in the vicinity of the proposed remediation site.

(6) **TESTING REQUIREMENTS.** (a) Testing of emissions from facilities or procedures used to remediate or dispose of soil or water contaminated with organic compounds shall be conducted using test methods approved in advance by the department's bureau of air management. Testing shall be scheduled and reported as follows:

1. Emissions from negative pressure venting of contaminated soil shall be conducted according to the following schedules:

a. Total organic compound emissions shall be tested once each day for the first 3 days of operation; weekly for the next 3 weeks; and monthly thereafter.

b. When a substance listed in Table 3 of s. NR 445.04 is present in the contaminated soil, testing for the Table 3 substance shall be done once during the first 3 days of operation, once during the third week of operation, and once every 6 months thereafter. For soil contaminated with more than one Table 3 air contaminant, the department's bureau of air management may approve the testing of certain Table 3 substances that act as indicators for other Table 3 substances present in the soil.

2. Any landfill subject to sub. (4) (d) 2. shall test at a minimum of once per month during the ozone season on a schedule approved in advance in writing by the department.

3. Any facility or procedure used to remediate soil or water contaminated with organic compounds, except for negative pressure venting and landfills, may be required to test the emissions from the remediation according to a schedule determined by the department's bureau of air management.

4. Additional testing may be required by the department.

5. The first quarter results of any testing shall be submitted to the department's bureau of air management within 60 days following the end of the first quarter.

6. The testing required under this paragraph may only be modified or discontinued with written approval from the department's bureau of air management.

**Note:** Continued testing may be required by other bureaus in the department.

(b) Testing of contaminated soil or water required by the department shall be conducted by the responsible party as defined in s. NR 700.03 (51).

(7) **RECORDKEEPING REQUIREMENTS.** An owner or operator of a facility or procedure used to remediate contaminated soil or water shall:

(a) Meet the recordkeeping requirements listed in s. NR 439.04 (1) and (2).

(b) Maintain records for 3 years quantifying the year-to-date weight of s. NR 445.04 Table 3 substances contained in soil or water remediated for which testing was required under sub. (6).

(c) Maintain records of calculations and amounts of soil or water remediated for 3 years.

(d) Meet permit recordkeeping conditions specified in air pollution control permits.

(e) Meet the requirements of ss. NR 438.03 and 439.03.

(8) **WAIVER.** The department may waive compliance with any requirement of this section to the extent necessary to prevent an emergency condition which threatens public health, safety, welfare or the environment.

**History:** Cr. Register, August, 1991, No. 428, eff. 9-1-91; am. (2) (a) (intro.), (b), (c) 2., 3., (4) (a), (b), (5) (c), cr. (2) (a) 1., 2., (note), (4) (c) to (e), (5) (d) 2., (7), r. (3) (b) (intro.), (5) (a), r. and recr. (2) (c) (intro.), (6), renum. (3) (a) (intro.) 1. to 5., (b) 1. and 2., (5) (d) 2. to 5., (7), to be (3) (intro.), (a) to (c), (f) and (g), (d) and (e), (5) (d) 3. to 6. and (8) and am. (3) (intro.), (c) to (f), Register, September, 1994, No. 465, eff. 10-1-94; am. (1) (intro.), (2) (a) (intro.), (b), (4) (a), (b), (c) (intro.), (5) (d) 1., 2., (6) (a) (intro.), (b) and (8), renum. (3) (e) to (g), (4) (d), (e), (6) (a) 2. to 5. and (7) (a) to be (3) (c) to (e), (4) (f), (g), (6) (a) 3. to 6. and (7) and am. (3) (c), (4) (f), (g) and (6) (a) 3., r. (3) (c) and (d), cr. (4) (b) 1. to 3., (d), (e), (5) (f), (6) (a) 2. and (7) (e), r. and recr. (4) (c) 1. and 2., Register, August, 1995, No. 476, eff. 9-1-95; am. (2) (c) (intro.), 1. to 3., r. (4) (e) 3., Register, December, 1996, No. 492, eff. 1-1-97; am. (4) (b) to (f), Register, November, 1998, No. 515, eff. 12-1-98; **CR 02-146; am. (3) (intro.) and (e), cr. (3) (f) Register October 2003 No. 574, eff. 11-1-03.**

**NR 419.08 Core and mold manufacturing for iron or steel foundries.** (1) **APPLICABILITY.** (a) This section applies to the manufacture of cores or molds for use at iron or steel foundries at any facility which is located in the county of Kenosha, Kewaunee, Manitowoc, Milwaukee, Ozaukee, Racine, Sheboygan, Washington or Waukesha.

(b) The emission limits of sub. (2) do not apply to:

1. Iron or steel foundries or core manufacturing facilities which are located in the county of Kenosha, Milwaukee, Ozaukee, Racine, Washington or Waukesha which have maximum theoretical emissions of VOC from core and mold manufacturing of less than 25 tons per year.

2. Iron or steel foundries or core manufacturing facilities which are located in the county of Kewaunee, Manitowoc or Sheboygan which have maximum theoretical emissions of VOC from core and mold manufacturing of less than 100 tons per year.

(c) Any owner or operator of an iron or steel foundry or core manufacturing facility having annual emissions less than the applicability thresholds in par. (b) shall comply with the recordkeeping requirements of sub. (6) for that facility.

(2) **EMISSION AND OPERATIONAL LIMITATIONS.** No owner or operator of a core or mold manufacturing system which produces cores or molds for use at iron or steel foundries may cause, allow or permit the operation of the system unless all of the following requirements are met:

(a) The as applied VOC content of each core or mold coating, when measured using the methods contained in s. NR 439.06 (3) (b), does not exceed any of the following limits:

1. 30%, by weight, including water, for core or mold coatings which have an as purchased density of 15.0 pounds per gallon or greater.

2. 70%, by weight, including water, for core or mold coatings which have an as purchased density of less than 15.0 pounds per gallon.

(b) All core and mold coating storage vessels and containers remain covered whenever product is not being moved into or out of the vessel or container.

(c) Emissions of the organic gases used in the catalysis step in the formation of urethane cold box binders are controlled with an overall efficiency of at least 90%.

(3) **COMPLIANCE AND CERTIFICATION DEADLINES.** (a) Final compliance with the requirements of sub. (2) shall be achieved by May 31, 1995 or upon startup, whichever is later.

(b) The owner or operator shall submit certification to the department, by July 1, 1995 or within 90 days after startup, whichever is later, that the facility is in compliance with the requirements of sub. (2), as demonstrated by the applicable testing methods of s. NR 439.06 (3).

(4) **EMISSION TESTING.** The owner or operator of a facility which employs a urethane cold box binder shall demonstrate com-

pliance with the emission rate in sub. (2) (c) using one of the test methods in s. NR 439.06 (3) (a) prior to the final compliance date in sub. (3) (a), and at least every 2 years thereafter within 60 days of the anniversary of the initial compliance test.

**(5) EMISSION CONTROL SYSTEM MONITORING.** The owner or operator of any facility which uses a wet scrubber to control organic gas emissions from the catalysis of urethane cold box binders shall continuously measure and record the pH of the scrubber liquid in addition to meeting the monitoring requirements of s. NR 439.055 (1) (e).

**(6) RECORDKEEPING.** Owners or operators of a facility subject to this section, including those exempt from the requirements of sub. (2) under sub. (1) (b), shall maintain the following records in accordance with s. NR 439.04 (1) to (3):

(a) The quantity, in pounds, of each type of core binder used

on an annual basis.

(b) Records of operation variables which are required to be measured under sub. (5) and s. NR 439.055 (1) (e).

(c) The total quantity, in pounds, of organic gas used to catalyze the formation of urethane cold box binders on an annual basis.

(d) The as purchased density and percent VOC, by weight, of each core or mold coating used at the facility.

(e) The total quantity, in pounds or gallons, of each core or mold coating used on a monthly basis.

(f) The total quantity of solvent, in pounds, added to each core or mold coating on a monthly basis.

**History:** Cr. Register, June, 1994, No. 462, eff. 7-1-94; am. (1) (c), (2) (intro.), (b), (c), (3), (5) and (6) (intro.) and r. (7), Register, October, 1999, No. 526, eff. 11-1-99.