Chapter NR 463

NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR METALS TREATING AND PROCESSING

Subchapter I — Chromium Emissions from Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks

NR 463.01 Applicability and designation of sources; purpose. (1) APPLICABILITY. This chapter applies to the owners and operators of hard chromium electroplating tanks, decorative chromium electroplating tanks and chromium anodizing tanks.

(a) The affected source to which this chapter applies is each chromium electroplating or chromium anodizing tank at facilities performing hard chromium electroplating, decorative chromium electroplating or chromium anodizing.

(b) Owners or operators of affected sources subject to this chapter are also subject to the requirements of ch. NR 460, according to the applicability of ch. NR 460 to these sources as identified in Appendix N of ch. NR 460.

(c) Process tanks associated with a chromium electroplating or chromium anodizing process, but in which neither chromium electroplating nor chromium anodizing takes place, are not subject to this chapter. Examples of these tanks include, but are not limited to, rinse tanks, etching tanks and cleaning tanks. Likewise, tanks that contain a chromium solution, but in which no electrolytic process occurs, are not subject to this chapter. An example of such a tank is a chrome conversion coating tank where no electrical current is applied.

(d) Affected sources in which research and laboratory operations are performed are exempt from this chapter when these operations are taking place.

(e) An owner or operator of any affected source subject to this chapter which is not exempt under s. NR 407.03 (1) (km) is subject to part 70 permit requirements under ch. NR 407.

(2) PURPOSE. This chapter is adopted under ss. 285.11, 285.13, 285.27 (2) and 285.65, Stats., to establish emission standards for hard chromium electroplating tanks, decorative chromium electroplating tanks, and chromium anodizing tanks in order to protect air quality.

Note: This chapter is based on the federal regulations contained in 40 CFR part 63 Subpart N, created January 25, 1995, as last revised on June 3, 1996.

History: Cr. Register, September, 1997, No. 501, eff. 10–1–97.

NR 463.02 Definitions. For terms not defined in this section, the definitions contained in chs. NR 400 and 460 apply to the terms used in this subchapter, with definitions in ch. NR 460 taking priority over definitions in ch. NR 400. In addition, the definitions in this section apply to the terms used in this subchapter. If this section defines a term which is also defined in ch. NR 400 or 460, the definition in this section applies in this subchapter rather than the definition in ch. NR 400 or 460. In this subchapter:

(1) "Add–on air pollution control device" means equipment installed in the ventilation system of chromium electroplating and anodizing tanks for the purposes of collecting and containing chromium emissions from the tanks.

(2) "Air pollution control technique" means any method, such as an add–on air pollution control device or a chemical fume suppressant, that is used to reduce chromium emissions from chromium electroplating and chromium anodizing tanks.

(3) "Base metal" means the metal or metal alloy that comprises the workpiece.

(4) "Bath component" means the trade, brand or chemical name of each component in trivalent chromium plating baths.

Note: Since for trivalent chromium baths, the bath composition is proprietary in most cases, the trade or brand name for each component may be used. However, ss. NR 463.103 (1) (n) and 463.106 (9) (a) 3. require identification by chemical name of the wetting agent contained in that component.

(5) "Chemical fume suppressant" means any chemical agent that reduces or suppresses fumes or mists at the surface of an electroplating or anodizing bath.

Note: Another term for fume suppressant is mist suppressant.

(6) "Chromic acid" means the common name for chromium anhydride (CrO_3).

(7) "Chromium anodizing" means the electrolytic process by which an oxide layer is produced on the surface of a base metal for functional purposes, such as corrosion resistance or electrical insulation, using a chromic acid solution. In chromium anodizing, the part to be anodized acts as the anode in the electrical circuit, and the chromic acid solution, with a concentration typically ranging from 50 to 100 grams per liter (g/L), serves as the electrolyte.

(8) "Chromium anodizing tank" means the receptacle or container along with the following accompanying internal and external components needed for chromium anodizing: rectifiers fitted with controls to allow for voltage adjustments, heat exchanger equipment, circulation pumps and air agitation systems.

(8m) "Chromium electroplating tank" means the receptacle or container along with the following accompanying internal and external components needed for chromium electroplating: rectifiers, anodes, heat exchanger equipment, circulation pumps and air agitation systems.

(9) "Composite mesh–pad system" means an add–on air pollution control device typically consisting of several mesh–pad stages. The purpose of the first stage is to remove large particles. Smaller particles are removed in the second stage, which consists of the composite mesh pad. A final stage may remove any reentrained particles not collected by the composite mesh pad.

(10) "Decorative chromium electroplating" means the process by which a thin layer of chromium (typically 0.003 to 2.5 μm) is electrodeposited on a base metal, plastic or undercoating to provide a bright surface with wear and tarnish resistance. In this process, the part serves as the cathode in the electrolytic cell and the solution serves as the electrolyte. Typical current density applied during this process ranges from 540 to 2,400 amperes per square meter (A/m^2) for total plating times ranging between 0.5 to 5 minutes.

(11) "Electroplating or anodizing bath" means the electrolytic solution used as the conducting medium in which the flow of current is accompanied by movement of metal ions for the purposes of electroplating metal out of the solution onto a workpiece or for oxidizing the base material.

(12) "Emission limitation" means the concentration of total chromium allowed to be emitted expressed in milligrams per dry standard cubic meter (mg/dscm), or the allowable surface tension expressed in dynes per centimeter (dynes/cm).

(12m) "Enclosed hard chromium electroplating tank" means a chromium electroplating tank that is equipped with an enclosing hood and ventilated at half the rate or less than that of an open surface tank of the same surface area.

(13) "Existing" means any hard chromium electroplating tank, decorative chromium electroplating tank or chromium anodizing tank the construction or reconstruction of which was commenced on or before December 16, 1993.

(14) "Facility" means the major or area source at which chromium electroplating or chromium anodizing is performed.

(15) "Fiber–bed mist eliminator" means an add–on air pollution control device that removes contaminants from a gas stream through the mechanisms of inertial impaction and Brownian diffusion. These devices are typically installed downstream of another control device, which serves to prevent plugging, and consist of one or more fiber beds. Each bed consists of a hollow cylinder formed from 2 concentric screens; the fiber between the screens may be fabricated from glass, ceramic plastic or metal.

(16) "Foam blanket" means the type of chemical fume suppressant that generates a layer of foam across the surface of a solution when current is applied to that solution.

(17) "Fresh water" means water, such as tap water, that has not been previously used in a process operation or, if the water has been recycled from a process operation, it has been treated and meets the effluent guidelines for chromium wastewater.

(18) "Hard chromium electroplating" or "industrial chromium electroplating" means a process by which a thick layer of chromium (typically 1.3 to 760 μm) is electrodeposited on a base material to provide a surface with functional properties such as wear resistance, a low coefficient of friction, hardness and corrosion resistance. In this process, the part serves as the cathode in the electrolytic cell and the solution serves as the electrolyte. The hard chromium electroplating process is performed at current densities typically ranging from 1,600 to 6,500 A/m^2 for total plating times ranging from 20 minutes to 36 hours depending upon the desired plate thickness.

(19) "Hexavalent chromium" means the form of chromium in a valence state of +6.

(20) "Large, hard chromium electroplating facility" means a facility that performs hard chromium electroplating and has a maximum cumulative potential rectifier capacity greater than or equal to 60 million ampere–hours per year (A–hr/yr).

(21) "Maximum cumulative potential rectifier capacity" means the summation of the total installed rectifier capacity associated with the hard chromium electroplating tanks at a facility, expressed in amperes, multiplied by the maximum potential operating schedule of 8,400 hours per year and 0.7, which assumes that electrodes are energized 70% of the total operating time. The maximum potential operating schedule is based on operating 24 hours per day, 7 days per week, 50 weeks per year.

(22) "New source" or "new tank" means any hard chromium electroplating, decorative chromium electroplating or chromium anodizing source or tank the construction or reconstruction of which is commenced after December 16, 1993.

(22m) "Open surface hard chromium electroplating tank" means a chromium electroplating tank that is ventilated at a rate consistent with good ventilation practices for open tanks.

(23) "Operating parameter value" means a minimum or maximum value established for a control device or process parameter which, if achieved by itself or in combination with one or more other operating parameter values, determines that an owner or operator is in continual compliance with the applicable emission limitation or standard.

(24) "Packed–bed scrubber" means an add–on air pollution control device consisting of a single or double packed bed that contains packing media on which the chromic acid droplets impinge. The packed–bed section of the scrubber is followed by a mist eliminator to remove any water entrained from the packed–bed section.

(25) "Research or laboratory operation" means an operation whose primary purpose is for research and development of new processes and products, that is conducted under the close supervision of technically trained personnel, and that is not involved in the manufacture of products for commercial sale, except in a de minimis manner.

(26) "Small, hard chromium electroplating facility" means a facility that performs hard chromium electroplating and has a maximum cumulative potential rectifier capacity less than 60 million A–hr/yr.

(27) "Stalagmometer" means an instrument used to measure the surface tension of a solution by determining the mass of a drop of liquid by weighing a known number of drops or by counting the number of drops obtained from a given volume of liquid.

(28) "Surface tension" means the property, due to molecular forces, that exists in the surface film of all liquids and tends to prevent liquid from spreading.

(29) "Tank operation" means the use of a tank for chromium electroplating or a chromium anodizing through the application of current or voltage. Tank operation ceases when the current or voltage is turned off.

(30) "Tensiometer" means an instrument used to measure the surface tension of a solution by determining the amount of force needed to pull a ring from the liquid surface. The amount of force is proportional to the surface tension.

(31) "Trivalent chromium" means the form of chromium in a valence state of +3.

(32) "Trivalent chromium process" means the process used for electrodeposition of a thin layer of chromium onto a base material using a trivalent chromium solution instead of a chromic acid solution.

(33) "Wetting agent" means the type of chemical fume suppressant that reduces the surface tension of a liquid.

History: Cr. Register, September, 1997, No. 501, eff. 10–1–97; CR 05–039: am. (intro.), (8), (27) and (30), cr. (8m), (12m) and (22m) Register February 2006 No. 602, eff. 3–1–06.

NR 463.03 Nomenclature, units and abbreviations.

The definitions contained in s. NR 400.03 apply to the abbreviations and symbols of units of measure used in this chapter. In addition, the nomenclature used in this chapter has the following meaning:

(1) AMR is the allowable mass emission rate from each type of affected source subject to the same emission limitation in milligrams per hour (mg/hr).

(2) AMR_{sys} is the allowable mass emission rate from affected sources controlled by an add–on air pollution control device controlling emissions from multiple sources in mg/hr.

(3) CMP is composite mesh–pad, a control technique.

(4) EL is the applicable emission limitation from s. NR 463.04 in milligrams per dry standard cubic meter (mg/dscm).

(5) IA_{total} is the sum of all inlet duct areas from both affected sources and sources not affected by this chapter in meters squared.

(6) IDA_i is the total inlet area for all ducts associated with affected sources in meters squared.

(7) $IDA_{i,a}$ is the total inlet duct area for all ducts conveying chromic acid from each type of affected source performing the same operation, or each type of affected source subject to the same emission limitation in meters squared.

(8) lb_f is pound–force, the unit of force in the English system.

(9) PBS is packed–bed scrubber, a control technique.

(10) VR is the total of ventilation rates for each type of affected source subject to the same emission limitation in dry standard cubic meters per minute (dscm/min).

(11) VR_{inlet} is the total ventilation rate from all inlet ducts associated with affected sources in dscm/min.

(12) $VR_{inlet,a}$ is the total ventilation rate from all inlet ducts conveying chromic acid from each type of affected source performing the same operation, or each type of affected source subject to the same emission limitation in dscm/min.

(13) VR_{tot} is the average total ventilation rate for the 3 test runs as determined at the outlet by testing using Method 306 of Appendix A of 40 CFR part 63, incorporated by reference in s. NR 484.04, in dscm/min.

History: Cr. Register, September, 1997, No. 501, eff. 10–1–97.

NR 463.04 Emission limits. (1) MACT REQUIREMENTS. Each owner or operator of an affected source subject to the provisions of this chapter shall comply with these requirements on and after the compliance dates specified in s. NR 463.06 (1). All affected sources are regulated by applying maximum achievable control technology.

(2) APPLICABILITY OF EMISSION LIMITS. (a) The emission limitations in this section apply during tank operation as well as during periods of startup and shutdown as these are routine occurrences for affected sources subject to this chapter. The emission limitations do not apply during periods of malfunction. However, the work practice standards that address operation and maintenance and that are required by s. NR 463.05 shall be followed during malfunctions.

(b) If an owner or operator is controlling a group of tanks with a common add–on air pollution control device, the emission limitations of subs. (3), (4) and (5) apply whenever any one affected source is operated. The emission limitation that applies to the group of affected sources is as follows:

1. The emission limitation identified in subs. (3), (4) and (5) if the affected sources are performing the same type of operation, such as hard chromium electroplating, are subject to the same emission limitation, and are not controlled by an add–on air pollution control device also controlling sources not affected by this chapter.

2. The emission limitation calculated according to s. NR 463.09 (5) (c) if affected sources are performing the same type of operation, are subject to the same emission limitation, and are controlled with an add–on air pollution control device that is also controlling sources not affected by this chapter.

3. The emission limitation calculated according to s. NR 463.09 (5) (d) if affected sources are performing different types of operations, or affected sources are performing the same operations but subject to different emission limitations, and are controlled with an add–on air pollution control device that may also be controlling emissions from sources not affected by this chapter.

(3) STANDARDS FOR HARD CHROMIUM ELECTROPLATING. (a) *Open surface tanks.* During tank operation, each owner or operator of an existing, new or reconstructed affected source shall control chromium emissions discharged to the atmosphere from that affected source by doing any of the following:

1. Not allowing the concentration of total chromium in the exhaust gas stream discharged to the atmosphere to exceed 0.015 milligrams of total chromium per dry standard cubic meter (mg/dscm) of ventilation air (6.6×10^{-6} grains per dry standard cubic foot (gr/dscf)) for all open surface hard chromium electroplating tanks that are affected sources other than those that are existing affected sources located at small hard chromium electroplating facilities.

2. Not allowing the concentration of total chromium in the exhaust gas stream discharged to the atmosphere to exceed 0.03 mg/dscm (1.3×10^{-5} gr/dscf) if the open surface hard chromium electroplating tank is an existing affected source and is located at a small, hard chromium electroplating facility.

3. If a chemical fume suppressant containing a wetting agent is used, not allowing the surface tension of the electroplating or anodizing bath contained within the affected tank to exceed 45 dynes per centimeter (dynes/cm) (3.1×10^{-3} pound–force per foot (lb_f/ft)) as measured by a stalagmometer or 35 dynes/cm (2.4×10^{-3} lb_f/ft) as measured by a tensiometer at any time during tank operation.

(b) *Enclosed tanks.* During tank operation, each owner or operator of an existing, new or reconstructed affected source shall control chromium emissions discharged to the atmosphere from that affected source by doing any of the following:

1. Not allowing the concentration of total chromium in the exhaust gas stream discharged to the atmosphere to exceed 0.015 mg/dscm (6.6×10^{-6} gr/dscf) for all enclosed hard chromium electroplating tanks that are affected sources other than those that are existing affected sources at small, hard chromium electroplating facilities.

2. Not allowing the concentration of total chromium in the exhaust gas stream discharged to the atmosphere to exceed 0.03 mg/dscm (1.3×10^{-5} gr/dscf) if the enclosed hard chromium electroplating tank is an existing affected source and is located at a small, hard chromium electroplating facility.

3. If a chemical fume suppressant containing a wetting agent is used, not allowing the surface tension of the electroplating or anodizing bath contained within the affect tank to exceed 45 dynes/cm (3.1×10^{-3} lb_f/ft) as measured by a stalagmometer or 35 dynes/cm (2.4×10^{-3} lb_f/ft) as measured by a tensiometer at any time during tank operation.

4. Not allowing the mass rate of total chromium in the exhaust gas stream discharged to the atmosphere to exceed the maximum allowable mass emission rate determined by using the calculation procedure in s. NR 463.09 (6) (b) for all enclosed hard electroplating tanks that are affected sources other than those that are existing affected sources located at small, hard chromium electroplating facilities.

5. Not allowing the mass rate of total chromium in the exhaust gas stream discharged to the atmosphere to exceed the maximum allowable mass emission rate determined by using the calculation procedure in s. NR 463.09 (6) (d) if the enclosed hard chromium electroplating tank is an existing affected source and is located at a small, hard chromium electroplating facility.

(c) *Facility size.* 1. An owner or operator may demonstrate the size of a hard chromium electroplating facility by meeting the criteria of s. NR 463.02 (20) or (26). Alternatively, an owner or operator of a facility with a maximum cumulative potential rectifier capacity of 60 million A–hr/yr or more may be considered small if the actual cumulative rectifier capacity is less than 60 mil-

lion A–hr/yr as demonstrated using one of the following procedures:

a. If records show that the facility's previous annual actual rectifier capacity was less than 60 million A–hr/yr, by using nonresettable ampere–hour meters and keeping monthly records of actual ampere–hour usage for each 12–month rolling period following the compliance date in accordance with s. NR 463.103 (2) (L). The actual cumulative rectifier capacity for the previous 12–month rolling period shall be tabulated monthly by adding the capacity for the current month to the capacities for the previous 11 months.

b. By accepting a federally–enforceable limit on the maximum cumulative potential rectifier capacity of a hard chromium electroplating facility and by maintaining monthly records in accordance with s. NR 463.103 (2) (L) to demonstrate that the limit has not been exceeded. The actual cumulative rectifier capacity for the previous 12–month rolling period shall be tabulated monthly by adding the capacity for the current month to the capacities for the previous 11 months.

2. Once the monthly records required to be kept by s. NR 463.103 (2) (L) and by this paragraph show that the actual cumulative rectifier capacity over the previous 12–month rolling period corresponds to the large designation, the owner or operator is subject to the emission limitation identified in par. (a) 1. or 3. or (b) 1., 3. or 4., in accordance with the compliance schedule of s. NR 463.06 (1) (e).

(4) STANDARDS FOR DECORATIVE CHROMIUM ELECTROPLATING TANKS USING A CHROMIC ACID BATH AND CHROMIUM ANODIZING TANKS. During tank operation, each owner or operator of an existing, new or reconstructed decorative chromium electroplating tank using a chromic acid bath or chromium anodizing tank shall control chromium emissions discharged to the atmosphere from that affected source by one of the following:

(a) By not allowing the concentration of total chromium in the exhaust gas stream discharged to the atmosphere to exceed 0.01 mg/dscm (4.4×10^{-6} gr/dscf).

(b) If a chemical fume suppressant containing a wetting agent is used, by not allowing the surface tension of the electroplating or anodizing bath contained within the affected tank to exceed 45 dynes per centimeter (dynes/cm) (3.1×10^{-3} pound–force per foot (lb_f/ft)) as measured by a stalagmometer or 35 dynes/cm (2.4×10^{-3} lb_f/ft) as measured by a tensiometer at any time during operation of the tank.

(5) STANDARDS FOR DECORATIVE CHROMIUM ELECTROPLATING TANKS USING A TRIVALENT CHROMIUM BATH. (a) Each owner or operator of an existing, new or reconstructed decorative chromium electroplating tank that uses a trivalent chromium bath that incorporates a wetting agent as a bath ingredient is subject to the recordkeeping and reporting requirements of ss. NR 463.103 (2) (n) and 463.106 (9), but is not subject to the work practice requirements of s. NR 463.05, or the continuous compliance monitoring requirements in s. NR 463.07. The wetting agent shall be an ingredient in the trivalent chromium bath components purchased from vendors.

(b) Each owner or operator of an existing, new or reconstructed decorative chromium electroplating tank that uses a trivalent chromium bath that does not incorporate a wetting agent as a bath ingredient is subject to the standards of sub. (4).

(c) Each owner or operator of existing, new or reconstructed decorative chromium electroplating tank that had been using a trivalent chromium bath that incorporates a wetting agent and ceases using this type of bath shall fulfill the reporting requirements of s. NR 463.106 (9) (c) and comply with the applicable emission limitation within the timeframe specified in s. NR 463.06 (1) (f).

History: Cr. Register, September, 1997, No. 501, eff. 10–1–97; CR 05–039: am. (3) (a), (4) (b), (5) (a) and (c), cr. (3) (a) 3. and (b), renum. (3) (b) to be (3) (c) and am. (3) (c) 1. a., b. and 2. Register February 2006 No. 602, eff. 3–1–06.

NR 463.05 Operation and maintenance practices.

(1) WORK PRACTICE STANDARDS. All owners or operators subject to the standards in s. NR 463.04 (3) and (4) are subject to the following work practice standards:

(a) At all times, including periods of startup, shutdown and malfunction, owners or operators shall operate and maintain any affected source, including associated air pollution control devices and monitoring equipment, in a manner consistent with good air pollution control practices, consistent with the operation and maintenance plan required by sub. (2).

(b) Malfunctions shall be corrected as soon as practicable after their occurrence in accordance with the operation and maintenance plan required by sub. (2).

(c) Determination of whether acceptable operation and maintenance procedures are being used will be based on information available to the department, which may include, but is not limited to, monitoring results; review of the operation and maintenance plan, procedures and records; and inspection of the source.

(d) Based on the results of a determination made under par. (c), the department may require that an owner or operator of an affected source make changes to the operation and maintenance plan required by sub. (2) for that source. Revisions may be required if the department finds that the plan does any of the following:

1. Does not address a malfunction that has occurred.

2. Fails to provide for the proper operation of the affected source, the air pollution control techniques, or the control system and process monitoring equipment during a malfunction in a manner consistent with good air pollution control practices.

3. Does not provide adequate procedures for correcting malfunctioning process equipment, air pollution control techniques or monitoring equipment as quickly as practicable.

Table 1

Summary of Work Practice Standards

Control technique	Work practice standards	Frequency
Composite mesh–pad (CMP) system	1. Visually inspect device to ensure there is proper drainage, no chronic acid buildup on the pads, and no evidence of chemical attack on the structural integrity of the device.	1. 1/quarter.
	2. Visually inspect back portion of the mesh pad closest to the fan to ensure there is no breakthrough of chromic acid mist.	2. 1/quarter.
	3. Visually inspect ductwork from tank to the control device to ensure there are no leaks.	3. 1/quarter.
	4. Perform washdown of the composite mesh–pads in accordance with manufacturer's recommendations.	4. Per manufacturer.
Packed–bed scrubber (PBS)	1. Visually inspect device to ensure there is proper drainage, no chromic acid buildup on the packed beds, and no evidence of chemical attack on the structural integrity of the device.	1. 1/quarter.
	2. Visually inspect back portion of the chevron blade mist eliminator to ensure that it is dry and there is no breakthrough of chromic acid mist.	2. 1/quarter.
	3. Same as number 3 for CMP system.	3. 1/quarter.
	4. Add fresh makeup water to the top of the packed bed[a,b].	4. Whenever makeup is added.
PBS/CMP system	1. Same as for CMP system.	1. 1/quarter.
	2. Same as for CMP.	2. 1/quarter.
	3. Same as for CMP system.	3. 1/quarter.
	4. Same as for CMP system.	4. Per manufacturer.
Fiber–bed mist eliminator[c]	1. Visually inspect fiber–bed unit and prefiltering device to ensure there is proper drainage, no chromic acid buildup in the units, and no evidence of chemical attack on the structural integrity of the devices.	1. 1/quarter.
	2. Visually inspect ductwork from tank or tanks to the control device to ensure there are no leaks.	2. 1/quarter.
	3. Perform washdown of fiber elements in accordance with manufacturer's recommendations.	3. Per manufacturer
Air pollution control device not listed in rule	To be proposed by the source for approval by the department.	To be proposed by the source for approval by the department.
	Monitoring Equipment	
Pitot tube	Backflush with water, or remove from the duct and rinse with fresh water. Replace in the duct and rotate 180 degrees to ensure that the same zero reading is obtained. Check pitot tube ends for damage. Replace pitot tube if cracked or fatigued.	1/quarter.
Stalagmometer	Follow manufacturer's recommendations.	

[a] If greater than 50% of the scrubber water is drained, for purposes such as maintenance, makeup water may be added to the scrubber basin.

[b] For horizontal–flow scrubbers, top is defined as the section of the unit directly above the packing media such that the makeup water would flow perpendicular to the air flow through the packing. For vertical–flow units, the top is defined as the area downstream of the packing material such that the makeup water would flow countercurrent to the air flow through the unit.

[c] Work practice standards for the control device installed upstream of the fiber–bed mist eliminator to prevent plugging do not apply as long as the work practice standards for the fiber–bed unit are followed.

(2) OPERATION AND MAINTENANCE PLAN. (a) The owner or operator of an affected source subject to the work practices of this section shall prepare an operation and maintenance plan to be implemented no later than the compliance date. The plan shall be incorporated by reference into the source's part 70 permit, if and when a part 70 permit is required under ch. NR 407. The plan shall include all the following elements:

1. The plan shall specify the operation and maintenance criteria for the affected source, the add–on air pollution control device, if such a device is used to comply with the emission limits, and the process and control system monitoring equipment, and shall include a standardized checklist to document the operation and maintenance of this equipment.

2. For sources using an add–on air pollution control device or monitoring equipment to comply with this subchapter, the plan

shall incorporate the work practice standards for that device or monitoring equipment, as identified in Table 1 of this subchapter, if the specific equipment used is identified in Table 1.

3. If the specific equipment used is not identified in Table 1 of this subchapter, the plan shall incorporate proposed work practice standards. These proposed work practice standards shall be submitted to the department for approval as part of the submittal required under s. NR 463.08.

4. The plan shall specify procedures to be followed to ensure that equipment or process malfunctions due to poor maintenance or other preventable conditions do not occur.

5. The plan shall include a systematic procedure for identifying malfunctions of process equipment, add–on air pollution control devices, and process and control system monitoring equipment and for implementing corrective actions to address the malfunctions.

(b) If the operation and maintenance plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction at the time the plan is initially developed, the owner or operator shall revise the operation and maintenance plan within 45 days after the event occurs. The revised plan shall include procedures for operating and maintaining the process equipment, add–on air pollution control device, or monitoring equipment during similar malfunction events, and a program for corrective action for the events.

(c) Recordkeeping associated with the operation and maintenance plan is identified in s. NR 463.103 (2). Reporting associated with the operation and maintenance plan is identified in s. NR 463.106 (7) and (8) and par. (d).

(d) If actions taken by the owner or operator during periods of malfunction are inconsistent with the procedures specified in the operation and maintenance plan required by par. (a), the owner or operator shall record the actions taken for that event and shall report by phone the actions within 2 working days after commencing actions inconsistent with the plan. This report shall be followed by a letter within 7 working days after the end of the event, unless the owner or operator makes alternative reporting arrangements, in advance, with the department.

(e) Each owner or operator shall keep the written operation and maintenance plan on record after it is developed to be made available for inspection, upon request, by the department for the life of the affected source or until the source is no longer subject to the provisions of this chapter. In addition, if the operation and maintenance plan is revised, the owner or operator shall keep previous versions of the operation and maintenance plan on record to be made available for inspection, upon request, by the department for a period of 5 years after each revision to the plan.

(f) To satisfy the requirements of this subsection, the owner or operator may use applicable standard operating procedure manuals, OSHA plans or other existing plans, provided the alternative plans meet the requirements of this chapter.

(3) CHROMIC ACID BATH STANDARDS NOT MET BY USING REDUCING AGENT. The standards in s. NR 463.04 and this section that apply to chromic acid baths may not be met by using a reducing agent to change the form of chromium from hexavalent to trivalent.

History: Cr. Register, September, 1997, No. 501, eff. 10–1–97; CR 05–039: am. (1) (d) 2., (2) (a) 2., 3. and (c) Register February 2006 No. 602, eff. 3–1–06.

NR 463.06 Compliance provisions. (1) COMPLIANCE DATES. (a) The owner or operator of an existing affected source shall comply with the emission limitations in ss. NR 463.04 and 463.05 as follows:

1. No later than October 1, 1998, if the affected source is a decorative chromium electroplating tank.

2. No later October 1, 1999, if the affected source is a hard chromium electroplating tank or a chromium anodizing tank.

(b) The owner or operator of a new or reconstructed affected source that has an initial startup after October 1, 1997, shall comply immediately upon startup of the source. The owner or operator of a new or reconstructed affected source that has an initial startup after December 16, 1993, but before October 1, 1997, shall follow the compliance schedule of s. NR 460.05 (2) (a).

(c) The owner or operator of an existing area source that increases actual or potential emissions of hazardous air pollutants such that the area source becomes a major source shall comply with the provisions for existing major sources, including the reporting provisions of s. NR 463.106 (7), immediately upon becoming a major source.

(d) The owner or operator of a new area source that increases actual or potential emissions of hazardous air pollutants such that the area source becomes a major source shall comply with the provisions for new major sources immediately upon becoming a major source.

(e) An owner or operator of an existing hard chromium electroplating tank or tanks located at a small, hard chromium electroplating facility that increases its maximum cumulative potential rectifier capacity, or its actual cumulative rectifier capacity, such that the facility becomes a large, hard chromium electroplating facility shall comply with the requirements of s. NR 463.04 (3) (a) 1. for all hard chromium electroplating tanks at the facility no later than one year after the month in which monthly records required by ss. NR 463.04 (3) (c) and 463.103 (2) (L) show that the large designation is met, or by the compliance date specified in par. (a) 2., whichever is later.

(f) An owner or operator of a decorative chromium electroplating tank that uses a trivalent chromium bath that incorporates a wetting agent, and that ceases using the trivalent chromium process, shall comply with the emission limitation thereafter applicable to the tank within one year of switching from the bath operation.

(2) REQUEST FOR A COMPLIANCE DATE EXTENSION. An owner or operator of an affected source or sources that requests a compliance date extension shall do so in accordance with this subsection and the applicable paragraphs of s. NR 460.05 (7). When the owner or operator is requesting the extension for more than one affected source located at the facility, then only one request may be submitted for all affected sources at the facility.

(a) The owner or operator of an existing affected source who is unable to comply with a relevant standard under this chapter may request that the department grant an extension allowing the owner or operator up to one additional year to comply with the standard for the affected source. The owner or operator of an affected source who has requested a compliance date extension under this subsection and is otherwise required to obtain a part 70 permit for the source shall apply for the permit or apply to have the part 70 permit revised to incorporate the conditions of the compliance date extension. The conditions of a compliance date extension granted under this subsection will be incorporated into the owner or operator's part 70 permit for the affected source according to 40 CFR part 70 or part 71, whichever is applicable.

(b) Any request under this subsection for an extension of compliance with a relevant standard shall be submitted in writing to the department not later than 6 months before the affected source's compliance date as specified in this section.

(3) METHODS TO DEMONSTRATE INITIAL COMPLIANCE. (a) Except as provided in pars. (b) and (c), an owner or operator of an affected source subject to the requirements of this chapter is required to conduct an initial performance test as required under s. NR 460.06, using the procedures and test methods listed in ss. NR 460.06 (2) and (5) and 463.09.

(b) If the owner or operator of an affected source meets all of the following criteria, an initial performance test is not required to be conducted under this chapter:

1. The affected source is a hard chromium electroplating tank, a decorative chromium electroplating tank or a chromium anodizing tank.

2. A wetting agent is used in the plating or anodizing bath to inhibit chromium emissions from the affected source.

3. The owner or operator complies with the applicable surface tension limit of s. NR 463.04 (3) (a) 3. or (b) 3. or (4) (b) as demonstrated through the continuous compliance monitoring required by s. NR 463.07 (5) (b).

(c) If the affected source is a decorative chromium electroplating tank using a trivalent chromium bath, and the owner or operator is subject to the provisions of s. NR 463.04 (5), an initial performance test is not required to be conducted under this chapter.

History: Cr. Register, September, 1997, No. 501, eff. 10–1–97; CR 05–039: am. (1) (c), (e), (3) (b) 1. and 3. Register February 2006 No. 602, eff. 3–1–06.

NR 463.07 Monitoring to demonstrate continuous compliance. The owner or operator of an affected source subject to the emission limitations of this chapter shall conduct monitoring according to the type of air pollution control technique that is used to comply with the emission limitation. The monitoring required to demonstrate continuous compliance with the emission limitations is identified in this section for the air pollution control techniques expected to be used by the owners or operators of affected sources.

(1) COMPOSITE MESH–PAD SYSTEMS. (a) During the initial performance test, the owner or operator of an affected source, or a group of affected sources under common control, complying with the emission limitations in s. NR 463.04 through the use of a composite mesh–pad system shall determine the outlet chromium concentration using the test methods and procedures in s. NR 463.09 (3), and shall establish as a site–specific operating parameter the pressure drop across the system, setting the value that corresponds to compliance with the applicable emission limitation, using the procedures in s. NR 463.09 (4) (e). An owner or operator may conduct multiple performance tests to establish a range of compliant pressure drop values, or may set as the compliant value the average pressure drop measured over the 3 test runs of one performance test and accept ± 2 inches of water column from this value as the compliant range.

(b) On and after the date on which the initial performance test is required to be completed under s. NR 460.06, the owner or operator of an affected source, or group of affected sources under common control, shall monitor and record the pressure drop across the composite mesh–pad system once each day that any affected source is operating. To be in compliance with the standards in s. NR 463.04, the composite mesh–pad system shall be operated within ± 2 inches of water column of the pressure drop value established during the initial performance test, or shall be operated within the range of compliant values for pressure drop established during multiple performance tests.

(c) The owner or operator of an affected source complying with the emission limitation of s. NR 463.04 through the use of a composite mesh–pad system may repeat the performance test and establish as a new site–specific operating parameter the pressure drop across the composite mesh–pad system according to the requirements in par. (a) or (b). To establish a new site–specific operating parameter for pressure drop, the owner or operator shall satisfy all of the following requirements:

1. Determine the outlet chromium concentration using the test methods and procedures in s. NR 463.09 (3).

2. Establish the site–specific operating parameter value using the procedures in s. NR 463.09 (4).

3. Satisfy the recordkeeping requirements in s. NR 463.103.

4. Satisfy the reporting requirements in s. NR 463.106.

(d) The requirement to operate a composite mesh–pad system within the range of pressure drop values established under pars. (a) to (c) does not apply during the automatic–washdown cycles of the composite–mesh pad system.

(2) PACKED–BED SCRUBBER SYSTEMS. (a) During the initial performance test, the owner or operator of an affected source, or group of affected sources under common control, complying with the emission limitations in s. NR 463.04 through the use of a packed–bed scrubber system shall determine the outlet chromium concentration using the procedures in s. NR 463.09 (3), and shall establish as site–specific operating parameters the pressure drop across the system and the velocity pressure at the common inlet of the control device, setting the value that corresponds to compliance with the applicable emission limitation using the procedures in s. NR 463.09 (4) (d) and (e). An owner or operator may conduct multiple performance tests to establish a range of compliant operating parameter values. Alternatively, the owner or operator may set as the compliant value the average pressure drop and inlet velocity pressure measured over the 3 test runs of one performance test, and accept ± 1 inch of water column from the pressure drop value and ± 10% from the velocity pressure value as the compliant range.

(b) On and after the date on which the initial performance test is required to be completed under s. NR 460.06, the owner or operator of an affected source, or group of affected sources under common control, shall monitor and record the velocity pressure at the inlet to the packed–bed scrubber and the pressure drop across the scrubber system once each day that any affected source is operating. To be in compliance with the standards in s. NR 463.04, the scrubber system shall be operated within ±10% of the velocity pressure value established during the initial performance test, and within ±1 inch of water column of the pressure drop value established during the initial performance test, or within the range of compliant operating parameter values established during multiple performance tests.

(3) PACKED–BED SCRUBBER/COMPOSITE MESH–PAD SYSTEM. The owner or operator of an affected source, or group of affected sources under common control, that uses a packed–bed scrubber in conjunction with a composite mesh–pad system to meet the emission limitations of s. NR 463.04 shall comply with the monitoring requirements for composite mesh–pad systems as identified in sub. (1).

(4) FIBER–BED MIST ELIMINATOR. (a) During the initial performance test, the owner or operator of an affected source, or group of affected sources under common control, complying with the emission limitations in s. NR 463.04 through the use of a fiber–bed mist eliminator shall determine the outlet chromium concentration using the procedures in s. NR 463.09 (3), and shall establish as a site–specific operating parameter the pressure drop across the fiber–bed mist eliminator and the pressure drop across the control device installed upstream of the fiber bed to prevent plugging, setting the value that corresponds to compliance with the applicable emission limitation using the procedures in s. NR 463.09 (4) (e). An owner or operator may conduct multiple performance tests to establish a range of compliant pressure drop values, or may set as the compliant value the average pressure drop measured over the 3 test runs of one performance test and accept ±1 inch of water column from this value as the compliant range.

(b) On and after the date on which the initial performance test is required to be completed under s. NR 460.06, the owner or operator of an affected source, or group of affected sources under common control, shall monitor and record the pressure drop across the fiber–bed mist eliminator, and the control device installed upstream of the fiber bed to prevent plugging, once each day that any affected source is operating. To be in compliance with the standards in s. NR 463.04, the fiber–bed mist eliminator and the upstream control device shall be operated within ±1 inch of water column of the pressure drop value established during the initial performance test, or shall be operated within the range of compli-

ant values for pressure drop established during multiple performance tests.

(5) WETTING AGENT–TYPE OR COMBINATION WETTING AGENT–TYPE/FOAM BLANKET FUME SUPPRESSANTS. (a) During the initial performance test, the owner or operator of an affected source complying with the emission limitations in s. NR 463.04 through the use of a wetting agent in the electroplating or anodizing bath shall determine the outlet chromium concentration using the procedures in s. NR 463.09 (3). The owner or operator shall establish as the site–specific operating parameter the surface tension of the bath using Method 306B in Appendix A of 40 CFR part 63, incorporated by reference in s. NR 484.04 (25), setting the maximum value that corresponds to compliance with the applicable emission limitation. In lieu of establishing the maximum surface tension during the performance test, the owner or operator may accept 45 dynes/cm (3.1×10^{-3} pound–force per foot (lb_f /ft)) as measured by a stalagmometer or 35 dynes/cm (2.4×10^{-3} lb_f /ft) as measured by a tensiometer as the maximum surface tension value that corresponds to compliance with the applicable emission limitation. However, the owner or operator is exempt from conducting a performance test only if the criteria of s. NR 463.06 (3) (b) are met.

(b) On and after the date on which the initial performance test is required to be completed under s. NR 460.06, the owner or operator of an affected source shall monitor the surface tension of the electroplating or anodizing bath. Operation of the affected source at a surface tension greater than the value established during the performance test or greater than 45 dynes/cm (3.1×10^{-3} lb_f /ft) as measured by a stalagmometer or 35 dynes/cm (2.4×10^{-3} lb_f /ft) as measured by a tensiometer if the owner or operator is using this value in accordance with par. (a), shall constitute noncompliance with the standards in s. NR 463.04. The surface tension shall be monitored according to the following schedule:

1. The surface tension shall be measured once every 4 hours during operation of the tank with a stalagmometer or a tensiometer as specified in Method 306B in Appendix A of 40 CFR part 63, incorporated by reference in s. NR 484.04.

2. The time between monitoring may be increased if there have been no exceedances. The surface tension shall be measured once every 4 hours of tank operation for the first 40 hours of tank operation after the compliance date. Once there are no exceedances during 40 hours of tank operation, surface tension measurement may be conducted once every 8 hours of tank operation. Once there are no exceedances during 40 more hours of tank operation, surface tension measurement may be conducted once every 40 hours of tank operation on an ongoing basis, until an exceedance occurs. The minimum frequency of monitoring allowed by this chapter is once every 40 hours of tank operation.

3. Once an exceedance occurs as indicated through surface tension monitoring, the original monitoring schedule of once every 4 hours shall be resumed. A subsequent decrease in frequency shall follow the schedule laid out in subd. 2. For example, if an owner or operator had been monitoring an affected source once every 40 hours and an exceedance occurs, subsequent monitoring would take place once every 4 hours of tank operation. Once an exceedance does not occur for 40 hours of tank operation, monitoring may occur once every 8 hours of tank operation. Once an exceedance does not occur for 40 hours of tank operation on this schedule, monitoring may occur once every 40 hours of tank operation.

(c) Once a bath solution is drained from the affected tank and a new solution added, the original monitoring schedule of once every 4 hours shall be resumed, with a decrease in monitoring frequency allowed following the procedures of par. (b) 2. and 3.

(6) FOAM BLANKET–TYPE FUME SUPPRESSANTS. (a) During the initial performance test, the owner or operator of an affected source complying with the emission limitations in s. NR 463.04 through the use of a foam blanket in the electroplating or anodizing bath shall determine the outlet chromium concentration using the procedures in s. NR 463.09 (3), and shall establish as the site–specific operating parameter the thickness of the foam blanket, setting the minimum thickness that corresponds to compliance with the applicable emission limitation. In lieu of establishing the minimum foam blanket thickness during the performance test, the owner or operator may accept 2.54 centimeters (1 inch) as the minimum foam blanket thickness that corresponds to compliance with the applicable emission limitation. All foam blanket measurements shall be taken in close proximity to the workpiece or cathode area in the plating tank.

(b) On and after the date on which the initial performance test is required to be completed under s. NR 460.06, the owner or operator of an affected source shall monitor the foam blanket thickness of the electroplating or anodizing bath. Operation of the affected source at a foam blanket thickness less than the value established during the performance test, or less than 2.54 cm (1 inch) if the owner or operator is using this value in accordance with par. (a), constitutes noncompliance with the standards in s. NR 463.04. The foam blanket thickness shall be measured according to the following schedule:

1. The foam blanket thickness shall be measured once every hour of tank operation.

2. The time between monitoring may be increased if there have been no exceedances. The foam blanket thickness shall be measured once every hour of tank operation for the first 40 hours of tank operation after the compliance date. Once there are no exceedances for 40 hours of tank operation, foam blanket thickness measurement may be conducted once every 4 hours of tank operation. Once there are no exceedances during 40 more hours of tank operation, foam blanket thickness measurement may be conducted once every 8 hours of tank operation on an ongoing basis, until an exceedance occurs. The minimum frequency of monitoring allowed by this chapter is once per 8 hours of tank operation.

3. Once an exceedance occurs as indicated through foam blanket thickness monitoring, the original monitoring schedule of once every hour shall be resumed. A subsequent decrease in frequency shall follow the schedule laid out in subd. 2. For example, if an owner or operator had been monitoring an affected source once every 8 hours and an exceedance occurs, subsequent monitoring would take place once every hour of tank operation. Once an exceedance does not occur for 40 hours of tank operation, monitoring may occur once every 4 hours of tank operation. Once an exceedance does not occur for 40 hours of tank operation on this schedule, monitoring may occur once every 8 hours of tank operation.

(c) Once a bath solution is drained from the affected tank and a new solution added, the original monitoring schedule of once every hour shall be resumed, with a decrease in monitoring frequency allowed following the procedures of par. (b) 2. and 3.

(7) FUME SUPPRESSANT/ADD–ON CONTROL DEVICE. (a) If the owner or operator of an affected source uses both a fume suppressant and add–on control device and both are needed to comply with the applicable emission limit, monitoring requirements as identified in subs. (1) to (6), and the work practice standards of Table 1 of this chapter, apply for each of the control techniques used.

(b) If the owner or operator of an affected source uses both a fume suppressant and add–on control device, but only one of these techniques is needed to comply with the applicable emission limit, monitoring requirements as identified in subs. (1) to (6), and work practice standards of Table 1 of this subchapter, apply only for the control technique used to achieve compliance.

(8) USE OF AN ALTERNATIVE MONITORING METHOD. (a) Requests and approvals of alternative monitoring methods shall be considered in accordance with s. NR 460.07 (6).

(b) After receipt and consideration of an application for an alternative monitoring method, the department may approve alternatives to any monitoring methods or procedures of this chapter including, but not limited to, the following:

1. Alternative monitoring requirements when installation or use of monitoring devices specified in this chapter would not provide accurate measurements due to interferences caused by substances within the effluent gases.

2. Alternative locations for installing monitoring devices when the owner or operator can demonstrate that installation at alternate locations will enable accurate and representative measurements.

History: Cr. Register, September, 1997, No. 501, eff. 10–1–97; CR 05–039: am. (1) (a), (b), (5) (a), (b) (intro.) and (7) (b), cr. (1) (c) and (d) Register February 2006 No. 602, eff. 3–1–06.

NR 463.08 Alternative control devices. An owner or operator who uses an air pollution control device not listed in s. NR 463.07 shall submit a description of the device, test results collected in accordance with s. NR 463.09 (3) verifying the performance of the device for reducing chromium emissions to the atmosphere to the level required by this chapter, a copy of the operation and maintenance plan referenced in s. NR 463.05 including proposed work practice standards, and appropriate operating parameters that will be monitored to establish continuous compliance with the standards in s. NR 463.04. The monitoring plan submitted identifying the continuous compliance monitoring is subject to the department's approval.

History: Cr. Register, September, 1997, No. 501, eff. 10–1–97.

NR 463.09 Performance test requirements and test methods. (1) PERFORMANCE TEST REQUIREMENTS. Performance tests shall be conducted using the test methods and procedures in this section and s. NR 460.06. The test plan to be followed shall be made available to the department prior to the testing, if requested. Performance test results shall be documented in complete test reports that contain all of the following information:

(a) A brief process description.

(b) Sampling location description.

(c) A description of sampling and analytical procedures and any modifications to standard procedures.

(d) Test results.

(e) Quality assurance procedures and results.

(f) Records of operating conditions during the test, preparation of calibration standards, and calibration procedures.

(g) Raw data sheets for field sampling and field and laboratory analyses.

(h) Documentation of calculations.

(i) Any other information required by the test method.

(2) USE OF OPERATION PERMIT PERFORMANCE TEST RESULTS FOR COMPLIANCE DEMONSTRATION. (a) If the owner or operator of an affected source conducts performance testing at startup to obtain an operation permit under ch. NR 407, the results of the testing may be used to demonstrate compliance with this chapter if all of the following conditions are met:

1. The test methods and procedures identified in sub. (3) were used during the performance test.

2. The performance test was conducted under representative operating conditions for the source.

3. The performance test report contains the elements required by sub. (1).

4. The owner or operator of the affected source for which the performance test was conducted has sufficient data to establish the operating parameter values that correspond to compliance with the standards in s. NR 463.04, as required for continuous compliance monitoring under s. NR 463.07.

(b) The results of tests conducted prior to December 1991 in which Method 306A in Appendix A of 40 CFR part 63, incorporated by reference in s. NR 484.04, was used to demonstrate the performance of a control technique are not acceptable.

(3) TEST METHODS. Each owner or operator subject to the provisions of this chapter and required by s. NR 463.06 (3) to conduct an initial performance test shall use the test methods identified in this section to demonstrate compliance with the standards in s. NR 463.04.

(a) Method 306 or Method 306A in Appendix A of 40 CFR part 63, both titled "Determination of Chromium Emissions From Decorative and Hard Chromium Electroplating and Anodizing Operations," which are incorporated by reference in s. NR 484.04, shall be used to determine the chromium concentration from hard or decorative chromium electroplating tanks or chromium anodizing tanks. The sampling time and sample volume for each run of Methods 306 and 306A shall be at least 120 minutes and 1.70 dscm (60 dscf), respectively. Methods 306 and 306A allow the measurement of either total chromium or hexavalent chromium emissions. For the purposes of this chapter, sources using chromic acid baths may demonstrate compliance with the emission limits of s. NR 463.04 by measuring either total chromium or hexavalent chromium. The hexavalent chromium concentration measured by these methods is equal to the total chromium concentration for the affected operations.

(b) Method 306B in Appendix A of 40 CFR part 63, "Surface Tension Measurement and Recordkeeping for Tanks Used at Decorative Chromium Electroplating and Anodizing Facilities," incorporated by reference in s. NR 484.04, shall be used to measure the surface tension of electroplating and anodizing baths.

(c) Alternate test methods may also be used if the method has been validated using Method 301 in Appendix A of 40 CFR part 63, incorporated by reference in s. NR 484.04, and if approved by the department. Procedures for requesting and obtaining approval are contained in s. NR 460.06 (5).

(4) ESTABLISHING SITE–SPECIFIC OPERATING PARAMETER VALUES. (a) Each owner or operator required to establish site–specific operating parameters shall follow the procedures in this subsection.

(b) All monitoring equipment shall be installed such that representative measurements of emissions or process parameters from the affected source are obtained. For monitoring equipment purchased from a vendor, verification of the operational status of the monitoring equipment shall include execution of the manufacturer's written specifications or recommendations for installation, operation and calibration of the system.

1. Specifications for differential pressure measurement devices used to measure velocity pressure shall be in accordance with section 2.2 of Method 2 in Appendix A of 40 CFR part 60, incorporated by reference in s. NR 484.04.

2. Specifications for differential pressure measurement devices used to measure pressure drop across a control system shall be in accordance with manufacturer's accuracy specifications.

(c) The surface tension of electroplating and anodizing baths shall be measured using Method 306B in Appendix A of 40 CFR part 63, "Surface Tension Measurement and Recordkeeping for Tanks Used at Decorative Chromium Electroplating and Anodizing Facilities," incorporated by reference in s. NR 484.04. This method shall also be followed when wetting agent type or combination wetting agent/foam blanket type fume suppressants are used to control chromium emissions from a hard chromium electroplating tank and surface tension measurement is conducted to demonstrate continuous compliance.

(d) The owner or operator of a source required to measure the velocity pressure at the inlet to an add–on air pollution control device in accordance with s. NR 463.07 (2), shall establish the site–specific velocity pressure as follows:

1. Locate a velocity traverse port in a section of straight duct that connects the hooding on the plating tank or tanks with the con-

trol device. The port shall be located as close to the control system as possible, and shall be placed a minimum of 2 duct diameters downstream and 0.5 diameter upstream of any flow disturbance such as a bend, expansion or contraction (see Method 1 in Appendix A of 40 CFR part 60, incorporated by reference in s. NR 484.04). If 2.5 diameters of straight duct work does not exist, locate the port 0.8 of the distance between flow disturbances downstream and 0.2 of the distance between flow disturbances upstream from the respective flow disturbances.

2. A 12–point velocity traverse of the duct to the control device shall be conducted along a single axis according to Method 2 in Appendix A of 40 CFR part 60, incorporated by reference in s. NR 484.04, using an S–type pitot tube; measurement of the barometric pressure and duct temperature at each traverse point is not required, but is suggested. Mark the S–type pitot tube as specified in Method 1 in Appendix A of 40 CFR part 60, incorporated by reference in s. NR 484.04, with 12 points. Measure the velocity pressure (Δp) values for the velocity points and record. Determine the square root of the individual velocity point Δp values and average. The point with the square root value that comes closest to the average square root value is the point of average velocity. The Δp value measured for this point during the performance test shall be used as the reference for future monitoring.

(e) The owner or operator of a source required to measure the pressure drop across the add–on air pollution control device in accordance with s. NR 463.07 (1) to (4) may establish the pressure drop in accordance with the following guidelines:

1. Pressure taps shall be installed at any of the following locations:

a. At the inlet and outlet of the control system. In this case the inlet tap would be installed in the ductwork just prior to the control device and the corresponding outlet pressure tap would be installed on the outlet side of the control device prior to the blower or on the downstream side of the blower.

b. On each side of the packed bed within the control system or on each side of each mesh pad within the control system.

c. On the front side of the first mesh pad and back side of the last mesh pad within the control system.

2. Pressure taps shall be sited at locations that are:

a. As free from pluggage as possible and away from any flow disturbances such as cyclonic demisters.

b. Situated such that no air infiltration at the measurement site will occur that could bias the measurement.

3. Pressure taps shall be constructed of either polyethylene, polybutylene or other nonreactive materials.

4. Nonreactive plastic tubing shall be used to connect the pressure taps to the device used to measure pressure drop.

5. Any of the following pressure gauges may be used to monitor pressure drop: a magnehelic gauge, an inclined manometer or a "U" tube manometer.

6. Prior to connecting any pressure lines to the pressure gauges, each gauge shall be zeroed. No calibration of the pressure gauges is required.

(5) SPECIAL COMPLIANCE PROVISIONS FOR MULTIPLE SOURCES CONTROLLED BY A COMMON ADD–ON AIR POLLUTION CONTROL DEVICE. (a) This subsection identifies procedures for measuring the outlet chromium concentration from an add–on air pollution control device that is used to control multiple sources that may or may not include sources not affected by this chapter.

(b) When multiple affected sources performing the same type of operation (for example, all are performing hard chromium electroplating), and subject to the same emission limitation, are controlled with an add–on air pollution control device that is not controlling emissions from any other type of affected operation or from any sources not affected by this chapter, the applicable emission limitation identified in s. NR 463.04 shall be met at the outlet of the add–on air pollution control device.

(c) When multiple affected sources performing the same type of operation and subject to the same emission limitation are controlled with a common add–on air pollution control device that is also controlling emissions from sources not affected by this chapter, the following procedures shall be followed to determine compliance with the applicable emission limitation in s. NR 463.04:

1. Calculate the cross–sectional area of each inlet duct (uptakes from each hood) including those not affected by this chapter.

2. Determine the total sample time per test run by dividing the total inlet area from all tanks connected to the control system by the total inlet area for all ducts associated with affected sources, and then multiply this number by 2 hours. The calculated time is the minimum sample time required per test run.

3. Perform testing using Method 306 in Appendix A of 40 CFR part 63, incorporated by reference in s. NR 484.04, and calculate an outlet mass emission rate.

4. Determine the total ventilation rate from the affected sources by using equation 1:

$$VR_{tot} \times \frac{IDA_i}{\sum IA_{total}} = VR_{inlet} \qquad \text{Equation (1)}$$

where VR_{tot} is the average total ventilation rate in dscm/min for the 3 test runs as determined at the outlet by means of the Method 306 testing; IDA_i is the total inlet area for all ducts associated with affected sources; IA_{total} is the sum of all inlet duct areas from both affected sources and sources not affected by this chapter; and VR_{inlet} is the total ventilation rate from all inlet ducts associated with affected sources.

5. Establish the allowable mass emission rate of the system (AMR_{sys}) in milligrams of total chromium per hour (mg/hr) using equation 2:

$$\sum VR_{inlet} \times EL \times 60 \text{ minutes/hour} = AMR_{sys} \qquad \text{Equation (2)}$$

where $\sum VR_{inlet}$ is the total ventilation rate in dscm/min from the affected sources, and EL is the applicable emission limitation from s. NR 463.04 in mg/dscm. The allowable mass emission rate (AMR_{sys}) calculated from equation 2 shall be equal to or more than the outlet 3–run average mass emission rate determined from Method 306 testing in order for the source to be in compliance with the standard.

(d) When multiple affected sources performing different types of operations (for example, hard chromium electroplating, decorative chromium electroplating or chromium anodizing) are controlled by a common add–on air pollution control device that may or may not also be controlling emissions from sources not affected by this chapter, or if the affected sources controlled by the common add–on air pollution control device perform the same operation but are subject to different emission limitations (for example, because one is a new hard chromium plating tank and one is an existing small, hard chromium plating tank), the following procedures shall be followed to determine compliance with the applicable emission limitation in s. NR 463.04:

1. Follow the steps outlined in par. (c) 1. to 3.

2. Determine the total ventilation rate for each type of affected source using equation 3:

$$VR_{tot} \times \frac{IDA_{i,a}}{\sum IA_{total}} = VR_{inlet,a} \qquad \text{Equation (3)}$$

where VR_{tot} is the average total ventilation rate in dscm/min for the 3 test runs as determined at the outlet by means of the Method 306 testing; $IDA_{i,a}$ is the total inlet duct area for all ducts conveying chromic acid from each type of affected source performing the same operation, or each type of affected source subject to the same emission limitation; IA_{total} is the sum of all

duct areas from both affected sources and sources not affected by this chapter; and $VR_{inlet,a}$ is the total ventilation rate from all inlet ducts conveying chromic acid from each type of affected source performing the same operation, or each type of affected source subject to the same emission limitation.

3. Establish the allowable mass emission rate in mg/hr for each type of affected source that is controlled by the add–on air pollution control device using equation 4, 5, 6 or 7 as appropriate:

$$VR_{hc1} \times EL_{hc1} \times 60 \text{ minutes/hour} = AMR_{hc1} \quad \text{Equation (4)}$$

$$VR_{hc2} \times EL_{hc2} \times 60 \text{ minutes/hour} = AMR_{hc2} \quad \text{Equation (5)}$$

$$VR_{dc} \times EL_{dc} \times 60 \text{ minutes/hour} = AMR_{dc} \quad \text{Equation (6)}$$

$$VR_{ca} \times EL_{ca} \times 60 \text{ minutes/hour} = AMR_{ca} \quad \text{Equation (7)}$$

where "hc" applies to the total of ventilation rates for all hard chromium electroplating tanks subject to the same emission limitation, "dc" applies to the total of ventilation rates for the decorative chromium electroplating tanks, "ca" applies to the total of ventilation rates for the chromium anodizing tanks, and EL is the applicable emission limitation from s. NR 463.04 in mg/dscm. There are 2 equations for hard chromium electroplating tanks because different emission limitations may apply (for example, a new tank versus an existing, small tank).

4. Establish the allowable mass emission rate (AMR) in mg/hr for the system using equation 8, including each type of affected source as appropriate:

$$AMR_{hc1} + AMR_{hc2} + AMR_{dc} + AMR_{ca} = AMR_{sys} \quad \text{Equation (8)}$$

The allowable mass emission rate calculated from equation 8 shall be equal to or more than the outlet 3–run average mass emission rate determined from Method 306 testing in order for the source to be in compliance with the standards in s. NR 463.04.

(e) Each owner or operator that uses the special compliance provisions of this subsection to demonstrate compliance with the emission limitations of s. NR 463.04 shall submit the measurements and calculations to support these compliance methods with the notification of compliance status required by s. NR 463.106 (5).

(f) Each owner or operator that uses the special compliance provisions of this subsection to demonstrate compliance with the emission limitations of s. NR 463.04 shall repeat these procedures if a tank is added or removed from the control system regardless of whether that tank is not an affected source. If neither the new tank nor the existing tank is an affected source and the new tank replaces an existing tank of the same size and is connected to the control system through the same size inlet duct, then this procedure does not have to be repeated.

(6) COMPLIANCE PROVISIONS FOR MASS RATE EMISSION STANDARD FOR ENCLOSED HARD CHROMIUM ELECTROPLATING TANKS. (a) This subsection identifies procedures for calculating the maximum allowable mass emission rate for owners or operators of affected sources who choose to meet the mass emission rate standard in s. NR 463.04 (3) (b) 4. or 5.

(b) The owner or operator of an enclosed hard chromium electroplating tank that is an affected source other than an existing affected source located at a small hard chromium electroplating facility who chooses to meet the mass emission rate standard in s. NR 463.04 (3) (b) 4. shall determine compliance by not allowing the mass rate of total chromium in the exhaust gas stream discharged to the atmosphere to exceed the maximum allowable mass emission rate calculated using equation 9:

$$MAMER = ETSA \times K \times 0.015 \text{ mg/dscm} \quad \text{Equation (9)}$$

where:

MAMER is the alternative emission rate for enclosed hard chromium electroplating tanks in mg/hr

ETSA is the hard chromium electroplating tank surface area in square feet (ft^2)

K is the conversion factor, 425 dscm/(ft^2 x hr)

(c) Compliance with the alternative mass emission limit in s. NR 463.04 (3) (b) 4. is demonstrated if the 3–run average mass emission rate determined from Method 306 in Appendix A of 40 CFR part 63, incorporated by reference in s. NR 484.04 (25), testing is less than or equal to the maximum allowable mass emission rate calculated from equation 9 in par. (b).

(d) The owner or operator of an enclosed hard chromium electroplating tank that is an existing affected source located at a small hard chromium electroplating facility who chooses to meet the mass emission rate standard in s. NR 463.04 (3) (b) 5. shall determine compliance by not allowing the mass rate of total chromium in the exhaust gas stream discharged to the atmosphere to exceed the maximum allowable mass emission rate calculated using equation 10:

$$MAMER = ETSA \times K \times 0.03 \text{ mg/dscm} \quad \text{Equation (10)}$$

where:

MAMER is the alternative emission rate for enclosed hard chromium electroplating tanks in mg/hr

ETSA is the hard chromium electroplating tank surface area in square feet (ft^2)

K is the conversion factor, 425 dscm/(ft^2 x hr)

(e) Compliance with the alternative mass emission limit in s. NR 463.04 (3) (b) 5. is demonstrated if the 3–run average mass emission rate determined from Method 306 in Appendix A of 40 CFR part 63, incorporated by reference in s. NR 484.04 (25), testing is less than or equal to the maximum allowable mass emission rate calculated from equation 10 in par. (d).

History: Cr. Register, September, 1997, No. 501, eff. 10–1–97; CR 05–039: am. (5) (e), cr. (6) Register February 2006 No. 602, eff. 3–1–06.

NR 463.10 Preconstruction review requirements for new and reconstructed sources. (1) NEW OR RECONSTRUCTED AFFECTED SOURCES. The owner or operator of a new or reconstructed affected source which is exempt from the permit requirements of chs. NR 406 and 407 is subject to this section.

(a) No person may construct a new affected source or reconstruct an affected source subject to this chapter, or reconstruct a source such that it becomes an affected source subject to this chapter, without either meeting the permit application and approval requirements under ch. NR 406 or 407, if applicable, or submitting a notification of construction or reconstruction to the department under this section. Notification under this section shall contain the information identified in pars. (b) and (c), as appropriate.

(b) The notification of construction or reconstruction required under this subsection shall include all of the following:

1. The owner or operator's name, title and address.

2. The address or proposed address where the affected source would be located, if different from the owner's or operator's.

3. A notification of intention to construct a new affected source or make any physical or operational changes to an affected source that may meet or has been determined to meet the criteria for a reconstruction as defined in s. NR 460.02 (32).

4. An identification of this chapter as the basis for the notification.

5. The expected commencement and completion dates of the construction or reconstruction.

6. The anticipated date of initial startup of the affected source.

7. The type of process operation to be performed, hard or decorative chromium electroplating or chromium anodizing.

8. A description of the air pollution control technique to be used to control emissions from the affected source, such as preliminary design drawings and design capacity if an add–on air pollution control device is used.

9. An estimate of emissions from the source based on engineering calculations and vendor information on control device efficiency, expressed in units consistent with the emission limits of this chapter. Calculations of emission estimates shall be in sufficient detail to permit assessment of the validity of the calculations.

(c) If a reconstruction is to occur, the notification required under this subsection shall include the following in addition to the information required in par. (b):

1. A brief description of the affected source and the components to be replaced.

2. A brief description of the present and proposed emission control technique, including the information required by par. (b) 8. and 9.

3. An estimate of the fixed capital cost of the replacements and of constructing a comparable entirely new source.

4. The estimated life of the affected source after the replacements.

5. A discussion of any economic or technical limitations the source may have in complying with relevant standards or other requirements after the proposed replacements. The discussion shall be sufficiently detailed to demonstrate to the department's satisfaction that the technical or economic limitations affect the source's ability to comply with the relevant standard and how they do so.

6. If in the notification of reconstruction, the owner or operator designates the affected source as a reconstructed source and declares that there are no economic or technical limitations to prevent the source from complying with all relevant standards or requirements, the owner or operator need not submit the information required in subds. 3. to 5.

(d) The owner or operator of a new or reconstructed affected source that submits a notification under this subsection is not subject to approval by the department under this chapter. Construction or reconstruction is subject only to notification and may begin upon submission of a complete notification. This paragraph applies only to affected sources which are exempt from permit requirements under chs. NR 406 and 407.

(2) SUBMITTAL TIMEFRAMES. After October 1, 1997, an owner or operator of a new or reconstructed affected source shall submit the notification of construction or reconstruction required by sub. (1) according to the following schedule:

(a) If construction or reconstruction commences after October 1, 1997, the notification shall be submitted as soon as practicable before the construction or reconstruction is planned to commence.

(b) If the construction or reconstruction had commenced and initial startup had not occurred before October 1, 1997, the notification shall be submitted as soon as practicable before startup but no later than 60 days after October 1, 1997.

History: Cr. Register, September, 1997, No. 501, eff. 10–1–97.

NR 463.103 Recordkeeping requirements. (1) The owner or operator of each affected source subject to this chapter shall fulfill all recordkeeping requirements outlined in this section and in the general provisions of ch. NR 460, according to the applicability of ch. NR 460 as identified in Appendix N of ch. NR 460.

(2) The owner or operator of an affected source subject to this chapter shall maintain all of the following records for the source:

(a) Inspection records for the add–on air pollution control device, if such a device is used, and monitoring equipment, to document that the inspection and maintenance required by the work practice standards of s. NR 463.05 and Table 1 of this chapter have taken place. The record may take the form of a checklist and shall identify the device inspected, the date of inspection, a brief description of the working condition of the device during the inspection, and any actions taken to correct deficiencies found during the inspection.

(b) Records of all maintenance performed on the affected source, the add–on air pollution control device and monitoring equipment.

(c) Records of the occurrence, duration and cause, if known, of each malfunction of process, add–on air pollution control and monitoring equipment.

(d) Records of actions taken during periods of malfunction when the actions are inconsistent with the operation and maintenance plan.

(e) Other records, which may take the form of checklists, necessary to demonstrate consistency with the provisions of the operation and maintenance plan required by s. NR 463.05 (2).

(f) Test reports documenting results of all performance tests.

(g) All measurements as may be necessary to determine the conditions of performance tests, including measurements necessary to determine compliance with the special compliance procedures of s. NR 463.09 (5).

(h) Records of monitoring data required by s. NR 463.07 that are used to demonstrate compliance with the standard including the date and time the data are collected.

(i) The specific identification, including date and times, of each period of excess emissions, as indicated by monitoring data, that occurs during malfunction of the process, add–on air pollution control or monitoring equipment.

(j) The specific identification, including date and times, of each period of excess emissions, as indicated by monitoring data, that occurs during periods other than malfunction of the process, add–on air pollution control or monitoring equipment.

(k) The total process operating time of the affected source during the reporting period.

(L) Records of the actual cumulative rectifier capacity of hard chromium electroplating tanks at a facility expended during each month of the reporting period, and the total capacity expended to date for a reporting period, if the owner or operator is using the actual cumulative rectifier capacity to determine facility size in accordance with s. NR 463.04 (3) (b).

(m) For sources using fume suppressants to comply with the standards in s. NR 463.04, records of the date and time that fume suppressants are added to the electroplating or anodizing bath.

(n) For sources complying with s. NR 463.04 (5), records of the bath components purchased, with the wetting agent clearly identified by its chemical name as a bath constituent contained in one of the components.

(o) Any information demonstrating whether a source is meeting the requirements for a waiver of recordkeeping or reporting requirements, if the source has been granted a waiver under s. NR 460.09 (6).

(p) All documentation supporting the notifications and reports required by ss. NR 460.08, 460.09 and 463.106.

(3) All records shall be maintained for a period of 5 years in accordance with s. NR 460.09 (2) (a).

History: Cr. Register, September, 1997, No. 501, eff. 10–1–97; CR 05–039: renum. from NR 463.11 and am. (2) (p) Register February 2006 No. 602, eff. 3–1–06.

NR 463.106 Reporting requirements. The owner or operator of each affected source subject to this chapter shall fulfill

all reporting requirements outlined in this section and in the general provisions of ch. NR 460, according to the applicability of ch. NR 460 as identified in Appendix N of ch. NR 460. Owners or operators complying with the provisions of s. NR 463.04 (5) shall meet the requirements of sub. (9) rather than the requirements of subs. (1) to (8).

(1) REPORT SUBMITTALS. Reports under this section shall be made to the department as follows:

(a) Reports required by ch. NR 460 and this section may be sent by U.S. mail, fax or by another courier.

1. Submittals sent by U.S. mail shall be postmarked on or before the specified date.

2. Submittals sent by other methods shall be received by the department on or before the specified date.

(b) If acceptable to both the department and the owner or operator of an affected source, reports may be submitted on electronic media.

Note: Submittals sent by U.S. mail should be addressed to the Department of Natural Resources, Bureau of Air Management, PO Box 7921, Madison WI 53707. Submittals by another courier should be delivered to department's Bureau of Air Management, 7th floor, 101 South Webster Street, Madison WI 53703. Submittals by fax should be directed to (608) 267–0560.

(2) TIMING OF APPLICABILITY. The reporting requirements of this section apply to the owner or operator of an affected source when the source becomes subject to the provisions of this chapter.

(3) INITIAL NOTIFICATIONS. The owner or operator of a new or reconstructed affected source that has an initial startup after October 1, 1997, shall comply with par. (a) or (b), as applicable.

(a) If no permit application is required under s. NR 406.03 or 407.04 (1) (b) 3., the owner or operator shall submit an initial notification report to the department, in addition to the notification of construction or reconstruction required by s. NR 463.10 (1), as follows:

1. A notification of the date when construction or reconstruction was commenced shall be submitted simultaneously with the notification of construction or reconstruction, if construction or reconstruction was commenced on or before October 1, 1997.

2. A notification of the date when construction or reconstruction was commenced shall be submitted no later than 30 calendar days after that date, if construction or reconstruction was commenced after October 1, 1997.

3. A notification of the actual date of startup of the source shall be submitted within 30 calendar days after that date.

(b) If a permit application is required under s. NR 406.03 or 407.04 (1) (b) 3. prior to construction or reconstruction, submittal of a completed permit application and compliance with the conditions in any permit subsequently issued shall be deemed to meet the notification requirements of par. (a).

(4) NOTIFICATION OF PERFORMANCE TEST. (a) The owner or operator of an affected source shall notify the department in writing of the owner or operator's intention to conduct a performance test at least 60 calendar days before the test is scheduled to begin to allow the department to have an observer present during the test. Observation of the performance test by the department is optional.

(b) In the event the owner or operator is unable to conduct the performance test as scheduled, the provisions of s. NR 439.07 (4) apply.

(5) NOTIFICATION OF COMPLIANCE STATUS. (a) A notification of compliance status is required each time that an affected source becomes subject to the requirements of this chapter.

(b) Each time a notification of compliance status is required under this subsection, the owner or operator of an affected source shall submit to the department a notification of compliance status, signed by the responsible official, as defined in s. NR 400.02 (136), who shall certify its accuracy, attesting to whether the affected source has complied with this chapter. The notification shall list for each affected source the following:

1. The applicable emission limitation and the methods that were used to determine compliance with this limitation.

2. If a performance test is required by this chapter, the test report documenting the results of the performance test, which contains the elements required by s. NR 463.09 (1), including measurements and calculations to support the special compliance provisions of s. NR 463.09 (5) if these are being followed.

3. The type and quantity of hazardous air pollutants emitted by the source reported in mg/dscm or mg/hr if the source is using the special provisions of s. NR 463.09 (5) to comply with the standards in s. NR 463.04. If the owner or operator is subject to the construction and reconstruction provisions of s. NR 463.10 and had previously submitted emission estimates, the owner or operator shall state that this report corrects or verifies the previous estimates. For sources not required to conduct a performance test in accordance with s. NR 463.06 (3), the surface tension measurement may fulfill this requirement.

4. For each monitored parameter for which a compliant value is to be established under s. NR 463.07, the specific operating parameter value, or range of values, that corresponds to compliance with the applicable emission limit.

5. The methods that will be used to determine continuous compliance, including a description of monitoring and reporting requirements, if methods differ from those identified in this chapter.

6. A description of the air pollution control technique for each emission point.

7. A statement that the owner or operator has completed and has on file the operation and maintenance plan as required by the work practice standards in s. NR 463.05.

8. If the owner or operator is determining facility size based on actual cumulative rectifier capacity in accordance with s. NR 463.04 (3) (b), records to support that the facility is small. For existing sources, records from any 12–month period preceding the compliance date shall be used or a description of how operations will change to meet a small designation shall be provided. For new sources, records of projected rectifier capacity for the first 12–month period of tank operation shall be used.

9. A statement by the owner or operator of the affected source as to whether the source has complied with the provisions of this chapter.

(c) For sources required to conduct a performance test by s. NR 463.06 (3), the notification of compliance status shall be submitted to the department no later than 90 calendar days following completion of the compliance demonstration required by ss. NR 460.06 and 463.06 (3).

(d) For sources that are not required to complete a performance test in accordance with s. NR 463.06 (3), the notification of compliance status shall be submitted to the department no later than 30 days after the compliance date specified in s. NR 463.06 (1).

(6) REPORTS OF PERFORMANCE TEST RESULTS. (a) The owner or operator shall report to the department the results of any performance test conducted as required by s. NR 460.06 or 463.06 (3).

(b) Reports of performance test results shall be submitted no later than 90 days following the completion of the performance test, and shall be submitted as part of the notification of compliance status required by sub. (5).

(7) ONGOING COMPLIANCE STATUS REPORTS FOR MAJOR SOURCES. (a) *Documentation requirements.* The owner or operator of an affected source that is located at a major source site shall submit a summary report to the department to document the ongoing compliance status of the affected source. The report shall contain the information identified in par. (c), and shall be submitted semiannually except under one of the following conditions:

1. The department determines on a case–by–case basis that more frequent reporting is necessary to accurately assess the compliance status of the source.

2. The monitoring data collected by the owner or operator of the affected source in accordance with s. NR 463.07 show that the emission limit has been exceeded, in which case quarterly reports shall be submitted. Once an owner or operator of an affected source reports an exceedance, ongoing compliance status reports shall be submitted quarterly until a request to reduce reporting frequency under par. (b) is approved.

(b) *Request to reduce frequency of ongoing compliance status reports.* 1. An owner or operator who is required to submit ongoing compliance status reports on a quarterly or more frequent basis may reduce the frequency of reporting to semiannual if all of the following conditions are met:

a. For one full year, the ongoing compliance status reports, which may, for example, be quarterly or monthly, demonstrate that the affected source is in compliance with the relevant emission limit.

b. The owner or operator continues to comply with all applicable recordkeeping and monitoring requirements of ch. NR 460 and this chapter.

c. The department does not object to a reduced reporting frequency for the affected source, as provided in subds. 2. and 3.

2. The frequency of submitting ongoing compliance status reports may be reduced only after the owner or operator notifies the department in writing of the owner or operator's intention to make such a change, and the department does not object to the intended change. In deciding whether to approve a reduced reporting frequency, the department may review information concerning the source's entire previous performance history during the 5−year recordkeeping period prior to the intended change, or the recordkeeping period since the source's compliance date, whichever is shorter. Records subject to review may include performance test results, monitoring data and evaluations of an owner or operator's conformance with emission limitations and work practice standards. The information may be used by the department to make a judgment about the source's potential for noncompliance in the future. If the department disapproves the owner or operator's request to reduce reporting frequency, the department shall notify the owner or operator in writing within 45 days after receiving notice of the owner or operator's intention. The notification from the department to the owner or operator will specify the grounds on which the disapproval is based. In the absence of a notice of disapproval within 45 days, approval is automatically granted.

3. As soon as the monitoring data required by s. NR 463.07 show that the source is not in compliance with the relevant emission limit, the frequency of reporting shall revert to quarterly, and the owner shall state this exceedance in the ongoing compliance status report for the next reporting period. After demonstrating ongoing compliance with the relevant emission limit for another full year, the owner or operator may again request approval from the department to reduce the reporting frequency as allowed by this paragraph.

(c) *Contents of ongoing compliance status reports.* The owner or operator of an affected source for which compliance monitoring is required in accordance with s. NR 463.07 shall prepare a summary report to document the ongoing compliance status of the source. The report shall contain all of the following information:

1. The company name and address of the affected source.

2. An identification of the operating parameter that is monitored for compliance determination, as required by s. NR 463.07.

3. The relevant emission limitation for the affected source, and the operating parameter value, or range of values, that correspond to compliance with this emission limitation as specified in the notification of compliance status required by sub. (5).

4. The beginning and ending dates of the reporting period.

5. A description of the type of process performed in the affected source.

6. The total operating time of the affected source during the reporting period.

7. If the affected source is a hard chromium electroplating tank and the owner or operator is limiting the maximum cumulative rectifier capacity in accordance with s. NR 463.04 (3) (b), the actual cumulative rectifier capacity expended during the reporting period, on a month−by−month basis.

8. A summary of operating parameter values, including the total duration of excess emissions during the reporting period as indicated by those values, the total duration of excess emissions expressed as a percent of the total source operating time during that reporting period, and a breakdown of the total duration of excess emissions during the reporting period into those that are due to process upsets, control equipment malfunctions, other known causes and unknown causes.

9. A certification by a responsible official that the work practice standards in s. NR 463.05 were followed in accordance with the operation and maintenance plan for the source.

10. If the operation and maintenance plan required by s. NR 463.05 (2) was not followed, an explanation of the reasons for not following the provisions, an assessment of whether any excess emission or parameter monitoring exceedances are believed to have occurred, and a copy of the report or reports required by s. NR 463.05 (2) (d) documenting that the operation and maintenance plan was not followed.

11. A description of any changes in monitoring, processes or controls since the last reporting period.

12. The name, title and signature of the responsible official who is certifying the accuracy of the report.

13. The date of the report.

(d) *Reporting for multiple monitoring devices.* When more than one monitoring device is used to comply with the continuous compliance monitoring required by s. NR 463.07, the owner or operator shall report the results as required for each monitoring device. However, when one monitoring device is used as a backup for the primary monitoring device, the owner or operator shall only report the results from the monitoring device used to meet the monitoring requirements of this chapter. If both devices are used to meet these requirements, then the owner or operator shall report the results from each monitoring device for the relevant compliance period.

(8) ONGOING COMPLIANCE STATUS REPORTS FOR AREA SOURCES. The requirements of this subsection do not alleviate affected area sources from complying with the requirements of state or federal operating permit programs under 40 CFR part 71.

(a) *Annual summary report.* The owner or operator of an affected source that is located at an area source site shall prepare a summary report to document the ongoing compliance status of the affected source. The report shall contain the information identified in sub. (7) (c) and shall be retained on site and made available to the department upon request. The report shall be completed annually except as provided in par. (b).

(b) *Reports of exceedances.* 1. If both of the following conditions are met, semiannual reports shall be prepared and submitted to the department:

a. The total duration of excess emissions, as indicated by the monitoring data collected by the owner or operator of the affected source in accordance with s. NR 463.07, is 1% or greater of the total operating time for the reporting period.

b. The total duration of malfunctions of the add−on air pollution control device and monitoring equipment is 5% or greater of the total operating time.

2. Once an owner or operator of an affected source reports an exceedance as defined in subd. 1., ongoing compliance status reports shall be submitted semiannually until a request to reduce reporting frequency under par. (c) is approved.

3. The department may determine on a case−by−case basis that the summary report shall be completed more frequently and submitted, or that the annual report shall be submitted instead of being retained on site, if these measures are necessary to accurately assess the compliance status of the source.

(c) *Request to reduce frequency of ongoing compliance status reports.* 1. An owner or operator who is required to submit ongoing compliance status reports on a semiannual or more frequent basis, or is required to submit its annual report instead of retaining it on site, may reduce the frequency of reporting to annual or be allowed to maintain the annual report onsite if all of the following conditions are met:

a. For one full year (for 2 semiannual or 4 quarterly reporting periods, for example), the ongoing compliance status reports demonstrate that the affected source is in compliance with the relevant emission limit.

b. The owner or operator continues to comply with all applicable recordkeeping and monitoring requirements of ch. NR 460 and this chapter.

c. The department does not object to a reduced reporting frequency for the affected source, as provided in subds. 2. and 3.

2. The frequency of submitting ongoing compliance status reports may be reduced only after the owner or operator notifies the department in writing of the owner or operator's intention to make such a change, and the department does not object to the intended change. In deciding whether to approve a reduced reporting frequency, the department may review information concerning the source's previous performance history during the 5−year recordkeeping period prior to the intended change, or the recordkeeping period since the source's compliance date, whichever is shorter. Records subject to review may include performance test results, monitoring data, and evaluations of an owner or operator's conformance with emission limitations and work practice standards. The information may be used by the department to make a judgement about the source's potential for noncompliance in the future. If the department disapproves the owner or operator's request to reduce reporting frequency, the department shall notify the owner or operator in writing within 45 days after receiving notice of the owner or operator's intention. The notification from the department to the owner or operator will specify the grounds on which the disapproval is based. In the absence of a notice of disapproval within 45 days, approval is automatically granted.

3. As soon as the monitoring data required by s. NR 463.07 show that the source is not in compliance with the relevant emission limit, the frequency of reporting shall revert to semiannual, and the owner shall state this exceedance in the ongoing compliance status report for the next reporting period. After demonstrating ongoing compliance with the relevant emission limit for another full year, the owner or operator may again request approval from the department to reduce the reporting frequency as allowed by this paragraph.

(9) REPORTS ASSOCIATED WITH TRIVALENT CHROMIUM BATHS. The requirements of this subsection do not alleviate affected sources from complying with the requirements of state or federal operating permit programs under ch. NR 407 or 40 CFR part 70. Owners or operators complying with the provisions of s. NR 463.04 (5) are not subject to subs. (1) to (8), but shall instead submit the following reports:

(a) Within 180 days after October 1, 1997, submit an initial notification that includes all of the following:

1. The same information as is required by 40 CFR 63.347 (c) (1) (i) to (v).

2. A statement that a trivalent chromium process that incorporates a wetting agent will be used to comply with s. NR 463.04 (5).

3. The list of bath components that comprise the trivalent chromium bath, with the wetting agent clearly identified by its chemical name.

(b) Within 30 days after the compliance date specified in s. NR 463.06 (1), a notification of compliance status that contains an update of the information submitted in accordance with par. (a) or a statement that the information is still accurate.

(c) Within 30 days after a change to the trivalent chromium electroplating process, a report that includes all of the following:

1. A description of the manner in which the process has been changed and the emission limitation, if any, now applicable to the affected source.

2. If a different emission limitation applies, the applicable information required by sub. (3) (a).

3. The notification and reporting as required by subs. (4) to (8), which shall be submitted in accordance with the schedules identified in those subsections.

History: Cr. Register, September, 1997, No. 501, eff. 10−1−97; am. (5) (b) (intro.), Register, November, 1999, No. 527, eff. 12−1−99; correction in (9) (a) 1. made under s. 13.93 (2m) (b) 7., Stats., Register, November, 1999, No. 527; CR 05−039: renum. from NR 463.12 Register February 2006 No. 602, eff. 3−1−06.

Subchapter III — Iron and Steel Foundries

NR 463.21 What this subchapter covers. (1) WHAT IS THE PURPOSE OF THIS SUBCHAPTER? This subchapter establishes national emission standards for hazardous air pollutants (NESHAP) for iron and steel foundries. This subchapter also establishes requirements to demonstrate initial and continuous compliance with the emissions limitations, work practice standards and operation and maintenance requirements in this subchapter.

(2) AM I SUBJECT TO THIS SUBCHAPTER? You are subject to this subchapter if you own or operate an iron and steel foundry that is, or is part of, a major source of hazardous air pollutant (HAP) emissions. Your iron and steel foundry is a major source of HAP for purposes of this subchapter if it emits or has the potential to emit any single HAP at a rate of 10 tons or more per year or any combination of HAP at a rate of 25 tons or more per year or if it is located at a facility that emits or has the potential to emit any single HAP at a rate of 10 tons or more per year or any combination of HAP at a rate of 25 tons or more per year.

(3) WHAT PARTS OF MY FOUNDRY DOES THIS SUBCHAPTER COVER? (a) The affected source is a new or existing iron and steel foundry.

(b) This subchapter covers emissions from metal melting furnaces, scrap pre−heaters, pouring areas, pouring stations, automated conveyor and pallet cooling lines, automated shakeout lines and mold and core making lines. This subchapter also covers fugitive emissions from foundry operations.

(c) An affected source is existing if you commenced construction or reconstruction of the affected source before December 23, 2002.

(d) An affected source is new if you commenced construction or reconstruction of the affected source on or after December 23, 2002. An affected source is reconstructed if it meets the definition of ''reconstruction'' in s. NR 463.22.

(4) WHEN DO I HAVE TO COMPLY WITH THIS SUBCHAPTER? (a) Except as specified in par. (b), if you have an existing affected source, you shall comply with each emissions limitation, work practice standard and operation and maintenance requirement in this subchapter that applies to you no later than April 23, 2007. Major source status for existing affected sources shall be determined no later than April 23, 2007.

(b) If you have an existing affected source, you shall comply with the work practice standards in s. NR 463.23 (2) (b) or (c), as applicable, no later than April 22, 2005.

(c) If you have a new affected source for which the initial startup date is on or before April 22, 2004, you shall comply with each emissions limitation, work practice standard and operation

and maintenance requirement in this subchapter that applies to you by April 22, 2004.

(d) If you have a new affected source for which the initial startup date is after April 22, 2004, you shall comply with each emissions limitation, work practice standard and operation and maintenance requirement in this subchapter that applies to you upon initial startup.

(e) If your iron and steel foundry is an area source that becomes a major source of HAP, you shall meet the requirements of s. NR 460.05 (3) (c).

(f) You shall meet the notification and schedule requirements in s. NR 463.27 (1).

Note: Several of these notifications must be submitted before the compliance date for your affected source.

History: CR 06–110: cr. Register July 2007 No. 619, eff. 8–1–07.

NR 463.22 What definitions apply to this subchapter? For terms not defined in this section, the definitions contained in chs. NR 400 and 460 apply to the terms in this subchapter, with definitions in ch. NR 460 taking precedence over definitions in ch. NR 400. If this section defines a term which is also defined in ch. NR 400 or 460, the definition in this section applies in this subchapter. In this subchapter:

(1) "Automated conveyor and pallet cooling line" means any dedicated conveyor line or area used for cooling molds received from pouring stations.

(2) "Automated shakeout line" means any mechanical process unit designed for and dedicated to separating a casting from a mold. These mechanical processes include shaker decks, rotary separators and high–frequency vibration units. Automated shakeout lines do not include manual processes for separating a casting from a mold, such as personnel using a hammer, chisel, pick ax, sledge hammer or jackhammer.

(3) "Bag leak detection system" means a system that is capable of continuously monitoring relative particulate matter loadings in the exhaust of a baghouse to detect bag leaks and other upset conditions. A bag leak detection system includes an instrument that operates on triboelectric, electrodynamic, light scattering, light transmittance or other effect to continuously monitor relative particulate matter loadings.

(4) "Binder chemical" means a component of a system of chemicals used to bind sand together into molds, mold sections and cores through chemical reaction as opposed to pressure.

(5) "Capture system" means the collection of components used to capture gases and fumes released from one or more emissions points and then convey the captured gas stream to a control device or to the atmosphere. A capture system may include the following components as applicable to a given capture system design: duct intake devices, hoods, enclosures, ductwork, dampers, manifolds, plenums and fans.

(6) "Cold box mold or core making line" means a mold or core making line in which the formed aggregate is hardened by catalysis with a gas.

(7) "Combustion device" means an afterburner, thermal incinerator or scrap preheater.

(8) "Conveyance" means the system of equipment that is designed to capture pollutants at the source, convey them through ductwork and exhaust them using forced ventilation. A conveyance may include control equipment designed to reduce emissions of the pollutants. Emissions that are released through windows, vents or other general building ventilation or exhaust systems are not considered to be discharged through a conveyance.

(9) "Cooling" means the process of molten metal solidification within the mold and subsequent temperature reduction prior to shakeout.

(10) "Cupola" means a vertical cylindrical shaft furnace that uses coke and forms of iron and steel such as scrap and foundry returns as the primary charge components and melts the iron and steel through combustion of the coke by a forced upward flow of heated air.

(11) "Deviation" means any instance in which an affected source or an owner or operator of an affected source fails to meet any of the following:

(a) Any requirement or obligation established by this subchapter, including any emission limitation, operating limit, work practice standard or operation and maintenance requirement.

(b) Any term or condition that is adopted to implement an applicable requirement in this subchapter and that is included in the operating permit for any iron and steel foundry required to obtain an operating permit.

(c) Any emission limitation, operating limit or work practice standard in this subchapter during startup, shutdown or malfunction, regardless of whether or not the failure is permitted by this subchapter.

(12) "Electric arc furnace" means a vessel in which forms of iron and steel, such as scrap and foundry returns, are melted through resistance heating by an electric current flowing through the arcs formed between the electrodes and the surface of the metal and also flowing through the metal between the arc paths.

(13) "Electric induction furnace" means a vessel in which forms of iron and steel, such as scrap and foundry returns, are melted though resistance heating by an electric current that is induced in the metal by passing an alternating current through a coil surrounding the metal charge or surrounding a pool of molten metal at the bottom of the vessel.

(14) "Emissions limitation" has the meaning given in s. 285.01 (16), Stats., and includes any operating limit specified in this subchapter.

(15) "Exhaust stream" means gases emitted from a process through a conveyance, as defined in sub. (8).

(16) "Free organic liquids" means material that fails the paint filter test by Method 9095A, "Paint Filter Liquids Test", Revision 1, December 1996, as published in EPA Publication SW–846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", incorporated by reference in s. NR 484.06 (4) (e). If any portion of the material passes through and drops from the filter within the 5–minute test period, the material contains free liquids.

(17) "Fresh acid solution" means a sulfuric acid solution used for the control of triethylamine emissions that has a pH of 2.0 or less.

(18) "Fugitive emissions" means any pollutant released to the atmosphere that is not discharged through a conveyance, as defined in sub. (8).

(19) "Furan warm box mold or core making line" means a mold or core making line in which the binder chemical system used is that system commonly designated as a furan warm box system by the foundry industry.

(20) "Iron and steel foundry" means a facility or portion of a facility that melts one or more of the following: scrap, ingot or other forms of iron and steel, and pours the resulting molten metal into molds to produce final or near final shape products for introduction into commerce. Research and development facilities and operations that only produce non–commercial castings are not included in this definition.

(21) "Metal melting furnace" means a cupola, electric arc furnace or electric induction furnace that converts one or more of the following: scrap, foundry returns and other solid forms of iron and steel to a liquid state. Metal melting furnace does not include a holding furnace, an argon oxygen decarburization vessel or ladle that receives molten metal from a metal melting furnace, and to which metal ingots or other material may be added to adjust the metal chemistry.

(22) "Mold or core making line" means the collection of equipment that is used to mix an aggregate of sand and binder chemicals, form the aggregate into final shape and harden the

formed aggregate. A mold or core making line does not include a line for making green sand molds or cores.

(23) "Mold vent" means an intentional opening in a mold through which gases containing pyrolysis products of organic mold and core constituents produced by contact with or proximity to molten metal normally escape the mold during and after metal pouring.

(24) "Monitoring malfunction" means any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

(25) "Pouring area" means an area, generally associated with floor and pit molding operations, in which molten metal is brought to each individual mold. Pouring areas include all pouring operations that are not a pouring station.

(26) "Pouring station" means the fixed location to which molds are brought in a continuous or semi−continuous manner to receive molten metal, after which the molds are moved to a cooling area.

(27) "Responsible official" has the meaning given in s. NR 400.02 (136).

(28) "Scrap preheater" means a vessel or other piece of equipment in which metal scrap that is to be used as melting furnace feed is heated to a temperature high enough to eliminate moisture and other volatile impurities or tramp materials by direct flame heating or similar means of heating.

(29) "Scrubber blowdown" means liquor or slurry discharged from a wet scrubber that is either removed as a waste stream or processed to remove impurities or adjust its composition or pH before being returned to the scrubber.

(30) "Work practice standard" means any design, equipment, work practice, operational standard or combination thereof, that is promulgated pursuant to section 112 (h) of the Clean Air Act (42 USC 7412 (h)).

(31) "You" or "your" means the owner or operator of an iron and steel foundry.

History: CR 06−110: cr. Register July 2007 No. 619, eff. 8−1−07.

NR 463.23 Emissions limitations, work practice standards and operation and maintenance requirements. (1) WHAT EMISSION LIMITS MUST I MEET? (a) You shall meet each of the following emission limits or standards that applies to you:

1. For each electric arc metal melting furnace, electric induction metal melting furnace or scrap preheater at an existing iron and steel foundry, as described in s. NR 463.21 (3) (c), you may not discharge emissions through a conveyance to the atmosphere that exceed either the limit for particulate matter (PM) in subd. 1. a. or the limit for total metal HAP in subd. 1. b.:

a. 0.005 gr/dscf of PM.

b. 0.0004 gr/dscf of total metal HAP.

2. For each cupola metal melting furnace at an existing iron and steel foundry, as described in s. NR 463.21 (3) (c), you may not discharge emissions through a conveyance to the atmosphere that exceed either the limit for PM in subd. 2. a. or the limit for total metal HAP in subd. 2. b.:

a. 0.006 gr/dscf of PM.

b. 0.0005 gr/dscf of total metal HAP.

3. For each cupola metal melting furnace or electric arc metal melting furnace at a new iron and steel foundry, as described in s. NR 463.21 (3) (d), you may not discharge emissions through a conveyance to the atmosphere that exceed either the limit for PM in subd. 3. a. or, alternatively, the limit for total metal HAP in subd. 3. b.:

a. 0.002 gr/dscf of PM.

b. 0.0002 gr/dscf of total metal HAP.

4. For each electric induction metal melting furnace or scrap preheater at a new iron and steel foundry, as described in s. NR 463.21 (3) (d), you may not discharge emissions through a conveyance to the atmosphere that exceed either the limit for PM in subd. 4. a. or, alternatively, the limit for total metal HAP in subd. 4. b.:

a. 0.001 gr/dscf of PM.

b. 0.00008 gr/dscf of total metal HAP.

5. For each pouring station at an existing iron and steel foundry, as described in s. NR 463.21 (3) (c), you may not discharge emissions through a conveyance to the atmosphere that exceed either the limit for PM in subd. 5. a. or, alternatively, the limit for total metal HAP in subd. 5. b.:

a. 0.010 gr/dscf of PM.

b. 0.0008 gr/dscf of total metal HAP.

6. For each pouring area or pouring station at a new iron and steel foundry, as described in s. NR 463.21 (3) (d), you may not discharge emissions through a conveyance to the atmosphere that exceed either the limit for PM in subd. 6. a. or, alternatively, the limit for total metal HAP in subd. 6. b.:

a. 0.002 gr/dscf of PM.

b. 0.0002 gr/dscf of total metal HAP.

7. For each building or structure housing any emissions source at the iron and steel foundry, you may not discharge any fugitive emissions to the atmosphere that exhibit opacity greater than 20% averaged over 6 minutes except for one 6−minute average per hour that does not exceed 27% opacity.

8. For each cupola metal melting furnace at a new or existing iron and steel foundry, you may not discharge emissions of volatile organic hazardous air pollutants (VOHAP) through a conveyance to the atmosphere that exceed 20 parts per million by volume (ppmv) corrected to 10% oxygen.

9. As an alternative to the work practice standard in sub. (2) (e) for a scrap preheater at an existing iron and steel foundry or in sub. (2) (f) for a scrap preheater at a new iron and steel foundry, as described in s. NR 463.21 (3) (d), you may not discharge emissions of VOHAP through a conveyance to the atmosphere that exceed 20 ppmv.

10. For one or more automated conveyor and pallet cooling lines that use a sand mold system, or one or more automated shakeout lines that use a sand mold system, at a new iron and steel foundry, as described in s. NR 463.21 (3) (d), you may not discharge emissions of VOHAP through a conveyance to the atmosphere that exceed a flow−weighted average of 20 ppmv.

11. For each triethylamine (TEA) cold box mold or core making line at a new or existing iron and steel foundry, you shall meet either the emission limit in subd. 11. a. or the emission standard in subd. 11. b.:

a. You may not discharge emissions of TEA through a conveyance to the atmosphere that exceed 1 ppmv, as determined when scrubbing with fresh acid solution.

b. You shall reduce emissions of TEA from each TEA cold box mold or core making line by at least 99%, as determined when scrubbing with fresh acid solution.

(b) You shall meet each of the following operating limits that applies to you:

1. You shall install, operate and maintain a capture and collection system for all emission sources subject to an emission limit or standard for VOHAP or TEA in par. (a) 8. to 11. in accordance with both of the following:

a. Each capture and collection system shall meet accepted engineering standards, such as those published by the American Conference of Governmental Industrial Hygienists.

Note: Publications of the American Conference of Governmental Industrial Hygienists may be obtained at:

American Conference of Governmental Industrial Hygienists
1330 Kemper Meadow Drive
Cincinnati, Ohio 45240
(513) 742–2020
mail@acgih.org
www.acgih.org

b. You shall operate each capture system at or above the lowest value or settings established as operating limits in your operation and maintenance plan.

2. You shall operate each wet scrubber applied to emissions from a metal melting furnace, scrap preheater, pouring area or pouring station subject to an emission limit for PM or total metal HAP in par. (a) 1. to 6. to insure that the 3–hour average pressure drop and scrubber water flow rate does not fall below the minimum levels established during the initial or subsequent performance test.

3. You shall operate each combustion device applied to emissions from a cupola metal melting furnace subject to the emission limit for VOHAP in par. (a) 8. to insure that the 15–minute average combustion zone temperature does not fall below 1,300ºF. Periods when the cupola is off blast and for 15 minutes after going on blast from an off blast condition are not included in the 15–minute average.

4. You shall operate each combustion device applied to emissions from a scrap preheater subject to the emission limit for VOHAP in par. (a) 9. or from a TEA cold box mold or core making line subject to the emission limit for TEA in par. (a) 11. to insure that the 3–hour average combustion zone temperature does not fall below the minimum level established during the initial or subsequent performance test.

5. You shall operate each wet acid scrubber applied to emissions from a TEA cold box mold or core making line subject to the emission limit for TEA in par. (a) 11. to insure both of the following:

a. The 3–hour average scrubbing liquid flow rate does not fall below the minimum level established during the initial or subsequent performance test.

b. The 3–hour average pH of the scrubber blowdown, as measured by a continuous parameter monitoring system (CPMS), does not exceed 4.5 or the pH of the scrubber blowdown, as measured once every 8 hours during process operations, does not exceed 4.5.

(c) If you use a control device other than a baghouse, wet scrubber, wet acid scrubber or combustion device, you shall prepare and submit a monitoring plan. The monitoring plan is subject to approval by the department and shall contain all of the following:

1. A description of the device.

2. Test results collected in accordance with s. NR 463.25 (3) verifying the performance of the device for reducing emissions of PM, total metal HAP, VOHAP or TEA to the levels required by this subchapter.

3. A copy of the operation and maintenance plan required by sub. (3) (b).

4. A list of appropriate operating parameters that will be monitored to maintain continuous compliance with the applicable emissions limitations.

5. Operating parameter limits based on monitoring data collected during the performance test.

(2) WHAT WORK PRACTICE STANDARDS MUST I MEET? (a) For each segregated scrap storage area, bin or pile, you shall either comply with the certification requirements in par. (b) or prepare and implement a plan for the selection and inspection of scrap according to the requirements in par. (c). You may have certain scrap subject to par. (b) and other scrap subject to par. (c) at your facility, provided the scrap remains segregated until being aggregated to make up the charge for the furnace.

(b) If you elect to meet this paragraph as allowed under par. (a), you shall prepare, and operate at all times according to, a written certification that the foundry purchases and uses only metal ingots, pig iron, slitter or other materials that do not include post–consumer automotive body scrap, post–consumer engine blocks, post–consumer oil filters, oily turnings, lead components, mercury switches, plastics or free organic liquids, as defined in s. NR 463.22 (16). Any post–consumer engine blocks, post–consumer oil filters or oily turnings that are processed and cleaned, to the extent practicable, such that the materials do not include lead components, mercury switches, plastics or free organic liquids may be included in this certification.

(c) If you elect to meet this paragraph as allowed under par. (a), you shall prepare and operate at all times according to a written plan for the selection and inspection of iron and steel scrap to minimize, to the extent practicable, the amount of organics and HAP metals in the charge materials used by the iron and steel foundry. This scrap selection and inspection plan is subject to approval by the department. You shall keep a copy of the plan onsite and readily available to all plant personnel with materials acquisition or inspection duties. You shall provide a copy of the material specifications to each of your scrap vendors. Each plan shall include all of the following information:

1. A materials acquisition program to limit organic contaminants according to the following requirements as applicable:

a. For scrap charged to a scrap preheater, electric arc metal melting furnace or electric induction metal melting furnaces, specifications for scrap materials to be depleted, to the extent practicable, of the presence of used oil filters, plastic parts and organic liquids, and a program to ensure the scrap materials are drained of free liquids.

b. For scrap charged to a cupola metal melting furnace, specifications for scrap materials to be depleted, to the extent practicable, of the presence of plastic, and a program to ensure the scrap materials are drained of free liquids.

2. A materials acquisition program specifying that the scrap supplier remove accessible mercury switches from the trunks and hoods of any automotive bodies contained in the scrap and remove accessible lead components such as batteries and wheel weights. You shall obtain and maintain onsite a copy of the procedures used by the scrap supplier for either removing accessible mercury switches or for purchasing automobile bodies that have had mercury switches removed, as applicable.

3. Procedures for visual inspection of a representative portion, but not less than 10%, of all incoming scrap shipments to ensure the materials meet the specifications. The inspection procedures shall do all of the following:

a. Identify the locations where inspections are to be performed for each type of shipment. Inspections may be performed at the scrap supplier's facility. The selected locations shall provide a reasonable vantage point, considering worker safety, for visual inspection.

b. Include recordkeeping requirements for the documentation of each visual inspection including the results.

c. Include provisions for rejecting or returning entire or partial scrap shipments that do not meet specifications and limiting purchases from vendors whose shipments fail to meet specifications for more than 3 inspections in one calendar year.

d. If the inspections are performed at the scrap supplier's facility, include an explanation of how the periodic inspections ensure that not less than 10% of scrap purchased from each supplier is subject to inspection.

(d) For each furan warm box mold or core making line in a new or existing iron and steel foundry, you shall use a binder chemical formulation that does not contain methanol as a specific ingredient of the catalyst formulation as determined by the material

safety data sheet. This requirement does not apply to the resin portion of the binder system.

(e) For each scrap preheater at an existing iron and steel foundry, you shall meet either of the following requirements, or, as an alternative, you may meet the VOHAP emissions limit in sub. (1) (a) 9.:

1. You shall install, operate and maintain a gas–fired preheater where the flame directly contacts the scrap charged.

2. You shall charge only material that is subject to and in compliance with the scrap certification requirement in par. (b).

(f) For each scrap preheater at a new iron and steel foundry, you shall charge only material that is subject to, and in compliance with, the scrap certification requirement in par. (b). As an alternative to this requirement, you may meet the VOHAP emissions limit in sub. (1) (a) 9.

(3) WHAT ARE MY OPERATION AND MAINTENANCE REQUIREMENTS? (a) As required by s. NR 460.05 (4) (a) 1., you shall always operate and maintain your iron and steel foundry, including air pollution control and monitoring equipment, in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels required by this subchapter.

(b) You shall prepare, and operate at all times according to, a written operation and maintenance plan for each capture and collection system and control device for an emissions source subject to an emissions limit in sub. (1) (a). Your operation and maintenance plan shall also include procedures for igniting gases from mold vents in pouring areas and pouring stations that use a sand mold system. The operation and maintenance plan is subject to approval by the department and shall contain all of the following elements:

1. Monthly inspections of the equipment that is important to the performance of the total capture system, such as pressure sensors, dampers and damper switches. The inspections shall include observations of the physical appearance of the equipment, such as the presence of holes in the ductwork or hoods, flow constrictions caused by dents or accumulated dust in the ductwork and fan erosion. The operation and maintenance plan shall also include requirements to repair the defect or deficiency as soon as practicable.

2. Operating limits for each capture system for an emissions source subject to an emissions limit or standard for VOHAP or TEA in sub. (1) (a) 8. to 11. You shall establish the operating limits according to all of the following requirements:

a. You shall select operating limit parameters appropriate for the capture system design that are representative and reliable indicators of the performance of the capture system. At a minimum, you shall use appropriate operating limit parameters that indicate the level of the ventilation draft and damper position settings for the capture system when operating to collect emissions, including revised settings for seasonal variations. Appropriate operating limit parameters for ventilation draft include volumetric flow rate through each separately ducted hood, total volumetric flow rate at the inlet to the control device to which the capture system is vented, fan motor amperage or static pressure. Any parameter for damper position setting may be used that indicates the duct damper position related to the fully open setting.

b. For each operating limit parameter selected in subd. 2. a., you shall designate the value or setting for the parameter at which the capture system operates during the process operation. If your operation allows for more than one process to be operating simultaneously, you shall designate the value or setting for the parameter at which the capture system operates during each possible configuration that you may operate, for example the operating limits with one furnace melting or 2 melting, as applicable to your plant.

c. You shall include documentation in your plan to support your selection of the operating limits established for your capture system. This documentation shall include a description of the capture system design, a description of the capture system operating during production, a description of each selected operating limit parameter, a rationale for why you chose the parameter, a description of the method used to monitor the parameter according to the requirements of s. NR 463.26 (1) (a) and the data used to establish the value or setting for the parameter for each of your process configurations.

3. A preventive maintenance plan for each control device, including a preventive maintenance schedule that is consistent with the manufacturer's instructions for routine and long–term maintenance.

4. A site–specific monitoring plan for each bag leak detection system. For each bag leak detection system that operates on the triboelectric effect, the monitoring plan shall be consistent with the recommendations contained in the U.S. Environmental Protection Agency guidance document "Fabric Filter Bag Leak Detection Guidance", EPA–454/R–98–015, incorporated by reference in s. NR 484.06 (4) (c). The owner or operator shall operate and maintain the bag leak detection system according to the site–specific monitoring plan at all times. The baghouse monitoring plan is subject to approval by the department and shall address all of the following items:

a. Installation of the bag leak detection system.

b. Initial and periodic adjustment of the bag leak detection system, including how the alarm set–point will be established.

c. Operation of the bag leak detection system including quality assurance procedures.

d. How the bag leak detection system will be maintained, including a routine maintenance schedule and spare parts inventory list.

e. How the bag leak detection system output will be recorded and stored.

5. A corrective action plan for each baghouse. The plan shall include the requirement that, in the event a bag leak detection system alarm is triggered, you shall initiate corrective action to determine the cause of the alarm within one hour of the alarm, initiate corrective action to correct the cause of the problem within 24 hours of the alarm and complete the corrective action as soon as practicable. Corrective actions taken may include any of the following:

a. Inspecting the baghouse for air leaks, torn or broken bags or filter media or any other condition that may cause an increase in emissions.

b. Sealing off defective bags or filter media.

c. Replacing defective bags or filter media or otherwise repairing the control device.

d. Sealing off a defective baghouse compartment.

e. Cleaning the bag leak detection system probe or otherwise repairing the bag leak detection system.

f. Making process changes.

g. Shutting down the process producing the PM emissions.

6. Procedures for providing an ignition source to mold vents of sand mold systems in each pouring area and pouring station unless you determine the mold vent gases either are not ignitable, ignite automatically or cannot be ignited due to accessibility or safety issues. You shall document and maintain records of the determination of ignitability, accessibility and safety. The determination may encompass multiple casting patterns provided the castings utilize similar sand–to–metal ratios, binder formulations and coating materials. The determination of ignitability shall be based on observations of the mold vents within 5 minutes of pouring, and the flame shall be present for at least 15 seconds for the mold vent to be considered ignited. For the purpose of the determination made under this subdivision, both of the following apply:

a. Mold vents that ignite more than 75% of the time without the presence of an auxiliary ignition source are considered to ignite automatically.

b. Mold vents that do not ignite automatically and cannot be ignited in the presence of an auxiliary ignition source more than 25% of the time are considered to be not ignitable.

History: CR 06−110: cr. Register July 2007 No. 619, eff. 8−1−07.

NR 463.24 General compliance requirements. (1) WHAT ARE MY GENERAL REQUIREMENTS FOR COMPLYING WITH THIS SUBCHAPTER? (a) You shall be in compliance with the emissions limitations, work practice standards and operation and maintenance requirements in this subchapter at all times, except during periods of startup, shutdown or malfunction.

(b) During the period between the compliance date specified for your iron and steel foundry in s. NR 463.21 (4) and the date when applicable operating limits have been established during the initial performance test, you shall maintain a log detailing the operation and maintenance of the process and emissions control equipment.

(c) You shall develop a written startup, shutdown and malfunction plan according to the provisions in s. NR 460.05 (4) (c). The startup, shutdown and malfunction plan shall also specify what constitutes a shutdown of a cupola and how to determine that operating conditions are normal following startup of a cupola.

(2) WHAT PARTS OF THE GENERAL PROVISIONS APPLY TO ME? You shall comply with the applicable general provisions requirements in ch. NR 460. Appendix EEEEE in ch. NR 460 shows which parts of the general provisions in ch. NR 460 apply to you.

History: CR 06−110: cr. Register July 2007 No. 619, eff. 8−1−07.

NR 463.25 Initial compliance requirements. (1) BY WHAT DATE MUST I CONDUCT INITIAL PERFORMANCE TESTS OR OTHER INITIAL COMPLIANCE DEMONSTRATIONS? (a) As required by s. NR 460.06 (1) (b), you shall conduct a performance test no later than 180 calendar days after the compliance date that is specified in s. NR 463.21 (4) for your iron and steel foundry to demonstrate initial compliance with each emission limitation in s. NR 463.23 (1) that applies to you.

(b) For each work practice standard in s. NR 463.23 (2) and each operation and maintenance requirement in s. NR 463.23 (3) that applies to you where initial compliance is not demonstrated using a performance test, you shall demonstrate initial compliance no later than 30 calendar days after the compliance date that is specified for your iron and steel foundry in s. NR 463.21 (4).

(c) If you commenced construction or reconstruction between December 23, 2002 and April 22, 2004, you shall demonstrate initial compliance with either the proposed emissions limit or the promulgated emissions limit no later than October 19, 2004 or no later than 180 calendar days after startup of the source, whichever is later, according to s. NR 460.06 (1) (c).

(d) If you commenced construction or reconstruction between December 23, 2002 and April 22, 2004, and you chose to comply with the proposed emissions limit when demonstrating initial compliance, you shall conduct a second performance test to demonstrate compliance with the promulgated emissions limit by October 19, 2007 or after startup of the source, whichever is later, according to s. NR 460.06 (1) (c).

(2) WHEN MUST I CONDUCT SUBSEQUENT PERFORMANCE TESTS? (a) You shall conduct subsequent performance tests to demonstrate compliance with all applicable PM or total metal HAP, VOHAP and TEA emissions limitations in s. NR 463.23 (1) for your iron and steel foundry no less frequently than every 5 years. The requirement to conduct performance tests every 5 years does not apply to an emissions source for which a continuous emissions monitoring system (CEMS) is used to demonstrate continuous compliance.

(b) You shall conduct subsequent performance tests to demonstrate compliance with the opacity limit in s. NR 463.23 (1) (a) 7. for your iron and steel foundry no less frequently than once every 6 months.

(3) WHAT TEST METHODS AND OTHER PROCEDURES MUST I USE TO DEMONSTRATE INITIAL COMPLIANCE WITH THE EMISSION LIMITATIONS? You shall conduct each performance test that applies to your iron and steel foundry according to the requirements in s. NR 460.06 (4) (a) and the following conditions, as applicable:

(a) *Particulate matter.* To determine compliance with the applicable emission limit for PM in s. NR 463.23 (1) (a) 1. to 6. for a metal melting furnace, scrap preheater, pouring station or pouring area, you shall use the following test methods and procedures:

1. Determine the concentration of PM according to the test methods in 40 CFR part 60, Appendix A, incorporated by reference in s. NR 484.04 (13), that are specified in subd. 1. a. to e.:

a. Method 1 or 1A to select sampling port locations and the number of traverse points in each stack or duct. Sampling sites shall be located at the outlet of the control device, or at the outlet of the emission source if no control device is present, prior to any releases to the atmosphere.

b. Method 2, 2A, 2C, 2D, 2F or 2G to determine the volumetric flow rate of the stack gas.

c. Method 3, 3A or 3B to determine the dry molecular weight of the stack gas.

d. Method 4 to determine the moisture content of the stack gas.

e. Method 5, 5B, 5D, 5F or 5I, as applicable, to determine the PM concentration. The PM concentration is determined using only the front−half, probe rinse and filter, of the PM catch.

2. Collect a minimum sample volume of 60 dscf of gas during each PM sampling run. A minimum of 3 valid test runs are needed to comprise a performance test.

3. For cupola metal melting furnaces, sample only during times when the cupola is on blast.

4. For electric arc and electric induction metal melting furnaces, sample only when metal is being melted.

5. For scrap preheaters, sample only when scrap is being preheated.

(b) *Total metal HAP.* To determine compliance with the applicable emission limit for total metal HAP in s. NR 463.23 (1) (a) 1. to 6. for a metal melting furnace, scrap preheater, pouring station, or pouring area, you shall use the following test methods and procedures:

1. Determine the concentration of total metal HAP according to the test methods in 40 CFR part 60, Appendix A, incorporated by reference in s. NR 484.04 (13), that are specified in subd. 1. a. to e.:

a. Method 1 or 1A to select sampling port locations and the number of traverse points in each stack or duct. Sampling sites shall be located at the outlet of the control device, or at the outlet of the emissions source if no control device is present, prior to any releases to the atmosphere.

b. Method 2, 2A, 2C, 2D, 2F or 2G to determine the volumetric flow rate of the stack gas.

c. Method 3, 3A or 3B to determine the dry molecular weight of the stack gas.

d. Method 4 to determine the moisture content of the stack gas.

e. Method 29 to determine the total metal HAP concentration.

2. Collect a minimum sample volume of 60 dscf of gas during each total metal HAP sampling run. A minimum of 3 valid test runs are needed to comprise a performance test.

3. For cupola metal melting furnaces, sample only during times when the cupola is on blast.

4. For electric arc and electric induction metal melting furnaces, sample only when metal is being melted.

5. For scrap preheaters, sample only when scrap is being preheated.

(c) *Fugitive emissions.* To determine compliance with the opacity limit in s. NR 463.23 (1) (a) 7. for fugitive emissions from buildings or structures housing any emissions source at the iron and steel foundry, you shall use the following test method and procedures:

1. Using a certified observer, conduct each opacity test according to the requirements in Method 9 in 40 CFR part 60, Appendix A, incorporated by reference in s. NR 484.04 (13) and the requirements in s. NR 460.05 (6) (d).

2. Conduct each test such that the opacity observations overlap with the PM performance tests.

(d) *Volatile organic HAP emissions from cupola furnaces and scrap preheaters.* To determine compliance with the applicable VOHAP emissions limit in s. NR 463.23 (1) (a) 8. for a cupola metal melting furnace or in s. NR 463.23 (1) (a) 9. for a scrap preheater, you shall use the following test methods and procedures:

1. Determine the VOHAP concentration for each test run according to the test methods in 40 CFR part 60, Appendix A, incorporated by reference in s. NR 484.04 (13), that are specified in subd. 1. a. to e.:

a. Method 1 or 1A to select sampling port locations and the number of traverse points in each stack or duct. Sampling sites shall be located at the outlet of the control device, or at the outlet of the emissions source if no control device is present, prior to any releases to the atmosphere.

b. Method 2, 2A, 2C, 2D, 2F or 2G to determine the volumetric flow rate of the stack gas.

c. Method 3, 3A or 3B to determine the dry molecular weight of the stack gas.

d. Method 4 to determine the moisture content of the stack gas.

e. Method 18 to determine the VOHAP concentration. Alternatively, you may use Method 25 to determine the concentration of total gaseous nonmethane organics (TGNMO) or Method 25A to determine the concentration of total organic compounds (TOC), using hexane as the calibration gas.

2. Determine the average VOHAP, TGNMO or TOC concentration using a minimum of 3 valid test runs. Each test run shall include a minimum of 60 continuous operating minutes.

3. For a cupola metal melting furnace, correct the measured concentration of VOHAP, TGNMO or TOC for oxygen content in the gas stream using Equation 1:

$$C_{VOHAP,\ 10\%0_2} = C_{VOHAP}\left(\frac{10.9\%}{20.9\% - \%O_2}\right) \quad \text{Equation 1}$$

where:

C_{VOHAP} is the concentration of VOHAP in ppmv as measured by Method 18 in 40 CFR part 60, Appendix A, incorporated by reference in s. NR 484.04 (16) or the concentration of TGNMO or TOC in ppmv as hexane as measured by Method 25 or 25A in 40 CFR part 60, Appendix A, incorporated by reference in s. NR 484.04 (19) or (20)

$\%O_2$ is the oxygen concentration in gas stream, percent by volume (dry basis)

4. For a cupola metal melting furnace, measure the combustion zone temperature of the combustion device with the CPMS required in s. NR 463.26 (1) (d) during each sampling run in 15−minute intervals. Determine and record the 15−minute average of the 3 runs.

(e) *Volatile organic HAP emissions from automated pallet cooling lines or automated shakeout lines.* To determine compliance with the VOHAP emissions limit in s. NR 463.23 (1) (a) 10. for automated pallet cooling lines or automated shakeout lines you shall use either the procedures in subds. 1. and 3. or subds. 2. and 3.

1. To demonstrate compliance by direct measurement of total hydrocarbons, a surrogate for VOHAP, use all of the following procedures:

a. Using the VOC CEMS required in s. NR 463.26 (1) (g), measure and record the concentration of total hydrocarbons, as hexane, for 180 continuous operating minutes. You shall measure emissions at the outlet of the control device, or at the outlet of the emissions source if no control device is present, prior to any releases to the atmosphere.

b. Reduce the monitoring data to hourly averages as specified in s. NR 460.07 (7) (b).

c. Compute and record the 3−hour average of the monitoring data.

2. To demonstrate compliance by establishing a site−specific TOC emissions limit that is correlated to the VOHAP emissions limit, use the following procedures:

a. Determine the VOHAP concentration for each test run according to the test methods in 40 CFR part 60, Appendix A, incorporated by reference in s. NR 484.04 (13), that are specified in this subdivision.

1) Method 1 or 1A to select sampling port locations and the number of traverse points in each stack or duct. Sampling sites shall be located at the outlet of the control device, or at the outlet of the emissions source if no control device is present, prior to any releases to the atmosphere.

2) Method 2, 2A, 2C, 2D, 2F or 2G to determine the volumetric flow rate of the stack gas.

3) Method 3, 3A or 3B to determine the dry molecular weight of the stack gas.

4) Method 4 to determine the moisture content of the stack gas.

5) Method 18 to determine the VOHAP concentration. Alternatively, you may use Method 25 to determine the concentration of TGNMO using hexane as the calibration gas.

b. Using the CEMS required in s. NR 463.26 (1) (g), measure and record the concentration of total hydrocarbons, as hexane, during each of the Method 18 or Method 25 sampling runs. You shall measure emissions at the outlet of the control device, or at the outlet of the emissions source if no control device is present, prior to any releases to the atmosphere.

c. Calculate the average VOHAP or TGNMO concentration for the source test as the arithmetic average of the concentrations measured for the individual test runs and determine the average concentration of total hydrocarbon, as hexane, as measured by the CEMS during all test runs.

d. Calculate the site−specific VOC emissions limit using Equation 2:

$$VOC_{limit} = 20 \times \frac{C_{VOHAP,\ avg}}{C_{CEM}} \quad \text{Equation 2}$$

where:

$C_{VOHAP,avg}$ is the average concentration of VOHAP for the source test in ppmv as measured by Method 18 in 40 CFR part 60, Appendix A, incorporated by reference in s. NR 484.04 (16), or the average concentration of TGNMO for the source test in ppmv as hexane as measured by Method 25 in 40 CFR part 60, Appendix A, incorporated by reference in s. NR 484.04 (19)

C_{CEM} is the average concentration of total hydrocarbons in ppmv as hexane as measured using the CEMS during the source test

3. For 2 or more exhaust streams from one or more automated conveyor and pallet cooling lines or automated shakeout lines, compute the flow−weighted average concentration of VOHAP emissions for each combination of exhaust streams using Equation 3:

$$C_W = \frac{\sum_{i=1}^{n} C_i Q_i}{\sum_{i=1}^{n} Q_i}$$ Equation 3

where:

C_W is the flow−weighted concentration of VOHAP or VOC, ppmv, as hexane

C_i is the concentration of VOHAP or VOC from exhaust stream i, ppmv, as hexane

n is the number of exhaust streams sampled

Q_i is the volumetric flow rate of effluent gas from exhaust stream i in dscfm

(f) *Triethylamine emissions.* To determine compliance with the emissions limit or standard in s. NR 463.23 (1) (a) 11. for a TEA cold box mold or core making line, you shall use the following test methods and procedures:

1. Determine the TEA concentration for each test run according to the test methods in 40 CFR part 60, Appendix A, incorporated by reference in s. NR 484.04 (13), that are specified in subd. 1. a. to e.

a. Method 1 or 1A to select sampling port locations and the number of traverse points in each stack or duct. If you elect to meet the 99% reduction standard, sampling sites shall be located both at the inlet to the control device and at the outlet of the control device prior to any releases to the atmosphere. If you elect to meet the concentration limit, the sampling site shall be located at the outlet of the control device, or at the outlet of the emissions source if no control device is present, prior to any releases to the atmosphere.

b. Method 2, 2A, 2C, 2D, 2F or 2G to determine the volumetric flow rate of the stack gas.

c. Method 3, 3A or 3B to determine the dry molecular weight of the stack gas.

d. Method 4 to determine the moisture content of the stack gas.

e. Method 18 to determine the TEA concentration. The Method 18 sampling time shall be sufficiently long such that either the TEA concentration in the field sample is at least 5 times the limit of detection for the analytical method or the test results calculated using the laboratory's reported analytical detection limit for the specific field samples are less than 1/5 of the applicable emissions limit. The adsorbent tube approach, as described in Method 18, may be required to achieve the necessary analytical detection limits. The sampling time shall be at least one hour in all cases.

2. Conduct the test as soon as practicable after adding fresh acid solution and the system has reached normal operating conditions.

3. If you use a wet acid scrubber that is subject to the operating limit in s. NR 463.23 (1) (b) 5. b. for pH level, determine the pH of the scrubber blowdown using one of the following procedures:

a. Measure the pH of the scrubber blowdown with the CPMS required in s. NR 463.26 (1) (f) 2. during each TEA sampling run in intervals of no more than 15 minutes. Determine and record the 3−hour average.

b. Measure and record the pH level using the probe and meter required in s. NR 463.26 (1) (f) 2. once each sampling run. Determine and record the average pH level for the 3 runs.

4. If you are subject to the 99% reduction standard, calculate the mass emissions reduction using Equation 4:

$$\%\ \text{reduction} = \frac{E_i - E_o}{E_i} \times 100\%$$ Equation 4

where

E_i is the mass emissions rate of TEA at control device inlet, kg/hr

E_o is the mass emissions rate of TEA at control device outlet, kg/hr

(g) *Combined emission sources.* To determine compliance with the PM or total metal HAP emission limits in s. NR 463.23 (1) (a) 1. to 6. when one or more regulated emissions sources are combined with either another regulated emissions source subject to a different emissions limit or other non−regulated emissions sources, you may demonstrate compliance using one of the following procedures:

1. You shall meet the most stringent applicable emission limit for the regulated emission sources included in the combined emissions stream for the combined emissions stream.

2. You shall do all of the following:

a. Determine the volumetric flow rate of the individual regulated streams for which emissions limits apply.

b. Calculate the flow−weighted average emissions limit, considering only the regulated streams, using Equation 3 in par. (e) 3., except C_w is the flow−weighted average emissions limit for PM or total metal HAP in the exhaust stream, gr/dscf; and C_i is the concentration of PM or total metal HAP in exhaust stream i, gr/dscf.

c. Meet the calculated flow−weighted average emissions limit for the regulated emissions sources included in the combined emissions stream for the combined emissions stream.

3. You shall do all of the following:

a. Determine the PM or total metal HAP concentration of each of the regulated streams prior to the combination with other exhaust streams or control device.

b. Measure the flow rate and PM or total metal HAP concentration of the combined exhaust stream both before and after the control device and calculate the mass removal efficiency of the control device using Equation 4 in par. (f) 4., except E_i is the mass emissions rate of PM or total metal HAP at the control device inlet, lb/hr, and E_o is the mass emissions rate of PM or total metal HAP at the control device outlet, lb/hr.

c. Meet the applicable emissions limit based on the calculated PM or total metal HAP concentration for the regulated emissions source using Equation 5 of this section:

$$C_{released} = C_i \times \left(1 - \frac{\%\ \text{reduction}}{100}\right)$$ Equation 5

where

$C_{released}$ is the calculated concentration of PM or total metal HAP predicted to be released to the atmosphere from the regulated emission source, in gr/dscf

C_i is the concentration of PM or total metal HAP in the uncontrolled regulated exhaust stream, in gr/dscf

(4) WHAT PROCEDURES MUST I USE TO ESTABLISH OPERATING LIMITS? (a) For each capture system subject to operating limits in s. NR 463.23 (1) (b) 1. b., you shall establish site−specific operating limits in your operation and maintenance plan according to all of the following procedures:

1. Concurrent with applicable emissions and opacity tests, measure and record values for each of the operating limit parameters in your capture system operation and maintenance plan according to the monitoring requirements in s. NR 463.26 (1) (a).

2. For any dampers that are manually set and remain at the same position at all times the capture system is operating, visually check and record the damper position at the beginning and end of each run.

3. Review and record the monitoring data. Identify and explain any times the capture system operated outside the applicable operating limits.

(b) For each wet scrubber subject to the operating limits in s. NR 463.23 (1) (b) 2. for pressure drop and scrubber water flow rate, you shall establish site−specific operating limits according to both of the following procedures:

1. Using the CPMS required in s. NR 463.26 (1) (c), measure and record the pressure drop and scrubber water flow rate in intervals of no more than 15 minutes during each PM test run.

2. Compute and record the 3−hour average pressure drop and average scrubber water flow rate for each sampling run in which the applicable emissions limit is met.

(c) For each combustion device applied to emissions from a scrap preheater or TEA cold box mold or core making line subject to the operating limit in s. NR 463.23 (1) (b) 4. for combustion zone temperature, you shall establish a site−specific operating limit according to both of the following procedures:

1. Using the CPMS required in s. NR 463.26 (1) (e), measure and record the combustion zone temperature during each sampling run in intervals of no more than 15 minutes.

2. Compute and record the 3−hour average combustion zone temperature for each sampling run in which the applicable emissions limit is met.

(d) For each acid wet scrubber subject to the operating limit in s. NR 463.23 (1) (b) 5., you shall establish a site−specific operating limit for scrubbing liquid flow rate according to both of the following procedures:

1. Using the CPMS required in s. NR 463.26 (1) (f), measure and record the scrubbing liquid flow rate during each TEA sampling run in intervals of no more than 15 minutes.

2. Compute and record the 3−hour average scrubbing liquid flow rate for each sampling run in which the applicable emissions limit is met.

(e) You may change the operating limits for a capture system, wet scrubber, acid wet scrubber or combustion device if you do all of the following:

1. Submit a written notification to the department of your request to conduct a new performance test to revise the operating limit.

2. Conduct a performance test to demonstrate compliance with the applicable emissions limitation in s. NR 463.23 (1).

3. Establish revised operating limits according to the applicable procedures in pars. (a) to (d).

(f) You may use a previous performance test conducted since December 22, 2002 to establish an operating limit, provided the test meets the requirements of this subchapter.

(5) HOW DO I DEMONSTRATE INITIAL COMPLIANCE WITH THE EMISSION LIMITATIONS THAT APPLY TO ME? (a) You have demonstrated initial compliance with the emissions limits in s. NR 463.23 (1) (a) if you do the following, as applicable:

1. For each electric arc metal melting furnace, electric induction metal melting furnace, or scrap preheater at an existing iron and steel foundry you demonstrate one of the following:

a. The average PM concentration in the exhaust stream, determined according to the performance test procedures in sub. (3) (a), did not exceed 0.005 gr/dscf.

b. The average total metal HAP concentration in the exhaust stream, determined according to the performance test procedures in sub. (3) (b), did not exceed 0.0004 gr/dscf.

2. For each cupola metal melting furnace at an existing iron and steel foundry you demonstrate one of the following:

a. The average PM concentration in the exhaust stream, determined according to the performance test procedures in sub. (3) (a), did not exceed 0.006 gr/dscf.

b. The average total metal HAP concentration in the exhaust stream, determined according to the performance test procedures in sub. (3) (b), did not exceed 0.0005 gr/dscf.

3. For each cupola metal melting furnace or electric arc metal melting furnace at a new iron and steel foundry you demonstrate one of the following:

a. The average PM concentration in the exhaust stream, determined according to the performance test procedures in sub. (3) (a), did not exceed 0.002 gr/dscf.

b. The average total metal HAP concentration in the exhaust stream, determined according to the performance test procedures in sub. (3) (b), did not exceed 0.0002 gr/dscf.

4. For each electric induction metal melting furnace or scrap preheater at a new iron and steel foundry you demonstrate one of the following:

a. The average PM concentration in the exhaust stream, determined according to the performance test procedures in sub. (3) (a), did not exceed 0.001 gr/dscf.

b. The average total metal HAP concentration in the exhaust stream, determined according to the performance test procedures in sub. (3) (b), did not exceed 0.00008 gr/dscf.

5. For each pouring station at an existing iron and steel foundry you demonstrate one of the following:

a. The average PM concentration in the exhaust stream, measured according to the performance test procedures in sub. (3) (a), did not exceed 0.010 gr/dscf.

b. The average total metal HAP concentration in the exhaust stream, determined according to the performance test procedures in sub. (3) (b), did not exceed 0.0008 gr/dscf.

6. For each pouring area or pouring station at a new iron and steel foundry you demonstrate one of the following:

a. The average PM concentration in the exhaust stream, measured according to the performance test procedures in sub. (3) (a), did not exceed 0.002 gr/dscf.

b. The average total metal HAP concentration in the exhaust stream, determined according to the performance test procedures in sub. (3) (b), did not exceed 0.0002 gr/dscf.

7. For each building or structure housing any emission source at the iron and steel foundry, the opacity of fugitive emissions discharged to the atmosphere, determined according to the performance test procedures in sub. (3) (c), did not exceed 20% averaged over 6−minutes, except for one 6−minute average per hour that did not exceed 27% opacity.

8. For each cupola metal melting furnace at a new or existing iron and steel foundry, the average VOHAP concentration, determined according to the performance test procedures in sub. (3) (d), did not exceed 20 ppmv corrected to 10% oxygen.

9. For each scrap preheater at an existing iron and steel foundry that does not meet the work practice standards in s. NR 463.23 (2) (e) 1. or 2., and for each scrap preheater at a new iron and steel foundry that does not meet the work practice standard in s. NR 463.23 (2) (f), the average VOHAP concentration determined according to the performance test procedures in sub. (3) (d), did not exceed 20 ppmv.

10. For one or more automated conveyor and pallet cooling lines that use a sand mold system or automated shakeout lines that use a sand mold system at a new foundry you demonstrate both of the following:

a. You have reduced the data from the CEMS to 3−hour averages according to the performance test procedures in sub. (3) (e).

b. The 3−hour flow−weighted average VOHAP concentration, measured according to the performance test procedures in sub. (3) (e), did not exceed 20 ppmv.

11. For each TEA cold box mold or core making line in a new or existing iron and steel foundry, the average TEA concentration, determined according to the performance test procedures in sub. (3) (f) did not exceed 1 ppmv or was reduced by 99%.

(b) You have demonstrated initial compliance with the operating limits in s. NR 463.23 (1) (b) if you do the following, as applicable:

1. For each capture system subject to the operating limit in s. NR 463.23 (1) (b) 1. a., you have established appropriate site–specific operating limits in your operation and maintenance plan according to the requirements in s. NR 463.23 (3) (b) and have a record of the operating parameter data measured during the performance test in accordance with sub. (4) (a).

2. For each wet scrubber subject to the operating limits in s. NR 463.23 (1) (b) 2. for pressure drop and scrubber water flow rate, you have established appropriate site–specific operating limits and have a record of the pressure drop and scrubber water flow rate measured during the performance test in accordance with sub. (4) (b).

3. For each combustion device subject to the operating limit in s. NR 463.23 (1) (b) 3. for combustion zone temperature, you have a record of the combustion zone temperature measured during the performance test in accordance with sub. (3) (d) 4.

4. For each combustion device subject to the operating limit in s. NR 463.23 (1) (b) 4. for combustion zone temperature, you have established appropriate site–specific operating limits and have a record of the combustion zone temperature measured during the performance test in accordance with sub. (4) (c).

5. For each acid wet scrubber subject to the operating limits in s. NR 463.23 (1) (b) 5. for scrubbing liquid flow rate and scrubber blowdown pH, you satisfy both of the following:

a. You have established appropriate site–specific operating limits for the scrubbing liquid flow rate and have a record of the scrubbing liquid flow rate measured during the performance test in accordance with sub. (4) (d).

b. You have a record of the pH of the scrubbing liquid blowdown measured during the performance test in accordance with sub. (3) (g) 3.

(6) HOW DO I DEMONSTRATE INITIAL COMPLIANCE WITH THE WORK PRACTICE STANDARDS THAT APPLY TO ME? (a) For each iron and steel foundry subject to the certification requirement in s. NR 463.23 (2) (b), you have demonstrated initial compliance if you have certified in your notification of compliance status that: "At all times, your foundry will purchase and use only metal ingots, pig iron, slitter or other materials that do not include post–consumer automotive body scrap, post–consumer engine blocks, post–consumer oil filters, oily turnings, lead components, mercury switches, plastics or free organic liquids."

(b) For each iron and steel foundry subject to the requirements in s. NR 463.23 (2) (c) for a scrap inspection and selection plan, you have demonstrated initial compliance if you have certified both of the following in your notification of compliance status:

1. That you have submitted a written plan to the department for approval according to the requirements in s. NR 463.23 (2) (c).

2. That you will operate at all times according to the plan requirements.

(c) For each furan warm box mold or core making line in a new or existing foundry subject to the work practice standard in s. NR 463.23 (2) (d), you have demonstrated initial compliance if you have certified both of the following in your notification of compliance status:

1. That you will meet the no methanol requirement for the catalyst portion of each binder chemical formulation.

2. That you have records documenting your certification of compliance, such as a material safety data sheet, provided that it contains appropriate information, a certified product data sheet or a manufacturer's hazardous air pollutant data sheet, onsite and available for inspection.

(d) For each scrap preheater at an existing iron and steel foundry subject to the work practice standard in s. NR 463.23 (2) (e) 1. or 2., you have demonstrated initial compliance if you have certified one of the following in your notification of compliance status:

1. That you have installed a gas–fired preheater where the flame directly contacts the scrap charged, you will operate and maintain each gas–fired scrap preheater so that the flame directly contacts the scrap charged and you have records documenting your certification of compliance that are onsite and available for inspection.

2. That you will charge only material that is subject to and in compliance with the scrap certification requirements in s. NR 463.23 (2) (b) and you have records documenting your certification of compliance that are onsite and available for inspection.

(e) For each scrap preheater at a new iron and steel foundry subject to the work practice standard in s. NR 463.23 (2) (f), you have demonstrated initial compliance if you have certified in your notification of compliance status that you will charge only material that is subject to and in compliance with the scrap certification requirements in s. NR 463.23 (2) (b) and you have records documenting your certification of compliance that are onsite and available for inspection.

(7) HOW DO I DEMONSTRATE INITIAL COMPLIANCE WITH THE OPERATION AND MAINTENANCE REQUIREMENTS THAT APPLY TO ME? (a) For each capture system subject to an operating limit in s. NR 463.23 (1) (b), you have demonstrated initial compliance if you have done both of the following:

1. Certified both of the following in your notification of compliance status:

a. That you have submitted the capture system operation and maintenance plan to the department for approval according to the requirements of s. NR 463.23 (3) (b).

b. That you will inspect, operate and maintain each capture system according to the procedures in the plan.

2. Certified in your performance test report that the system operated during the test at the operating limits established in your operation and maintenance plan.

(b) For each control device subject to an operating limit in s. NR 463.23 (1) (b), you have demonstrated initial compliance if you have certified both of the following in your notification of compliance status:

1. That you have submitted the control device operation and maintenance plan to the department for approval according to the requirements of s. NR 463.23 (3) (b).

2. That you will inspect, operate and maintain each control device according to the procedures in the plan.

(c) For each bag leak detection system, you have demonstrated initial compliance if you have certified all of the following in your notification of compliance status:

1. That you have submitted the bag leak detection system monitoring plan to the department for approval according to the requirements of s. NR 463.23 (3) (b).

2. That you will inspect, operate and maintain each bag leak detection system according to the procedures in the plan.

3. That you will follow the corrective action procedures for bag leak detection system alarms according to the requirements in the plan.

(d) For each pouring area and pouring station in a new or existing foundry, you have demonstrated initial compliance if you have certified both of the following in your notification of compliance status report:

1. That you have submitted the mold vent ignition plan to the department for approval according to the requirements in s. NR 463.23 (3) (b).

2. That you will follow the procedures for igniting mold vent gases according to the requirements in the plan.

History: CR 06−110: cr. Register July 2007 No. 619, eff. 8−1−07.

NR 463.26 Continuous compliance requirements.

(1) WHAT ARE MY MONITORING REQUIREMENTS? (a) For each capture system subject to an operating limit in s. NR 463.23 (1) (b) 1., you shall install, operate and maintain a CPMS according to the requirements in sub. (2) (a) and both of the following requirements, as applicable:

1. If you use a flow measurement device to monitor the operating limit parameter, you shall at all times monitor the hourly average rate.

Note: For example, the hourly average actual volumetric flow rate through each separately ducted hood or the average hourly total volumetric flow rate at the inlet to the control device.

2. For dampers that are not manually set and remain in the same position, you shall make a visual check at least once every 24 hours to verify that each damper for the capture system is in the same position as during the initial performance test. Dampers that are manually set and remain in the same position are exempt from the requirement to install and operate a CPMS.

(b) For each negative pressure baghouse or positive pressure baghouse equipped with a stack that is applied to meet any PM or total metal HAP emissions limitation in this subchapter, you shall at all times monitor the relative change in PM loadings using a bag leak detection system according to the requirements in sub. (2) (b) and do all of the following:

1. Monitor the pressure drop across each baghouse cell each day to ensure pressure drop is within the normal operating range identified in the manual.

2. Confirm that dust is being removed from hoppers through weekly visual inspections or other means of ensuring the proper functioning of removal mechanisms.

3. Check the compressed air supply for pulse−jet baghouses each day.

4. Monitor cleaning cycles to ensure proper operation using an appropriate methodology.

5. Check bag cleaning mechanisms for proper functioning through monthly visual inspection or equivalent means.

6. Make monthly visual checks of bag tension on reverse air and shaker−type baghouses to ensure that bags are not kinked, kneed or bent, or lying on their sides. You do not have to make this check for shaker−type baghouses using self−tensioning, spring−loaded, devices.

7. Confirm the physical integrity of the baghouse through quarterly visual inspections of the baghouse interior for air leaks.

8. Inspect fans for wear, material buildup and corrosion through quarterly visual inspections, vibration detectors or equivalent means.

(c) For each wet scrubber subject to the operating limits in s. NR 463.23 (1) (b) 2., you shall at all times monitor the 3−hour average pressure drop and scrubber water flow rate using CPMS according to the requirements in sub. (2) (c).

(d) For each combustion device subject to the operating limit in s. NR 463.23 (1) (b) 3., you shall at all times monitor the 15−minute average combustion zone temperature using a CPMS according to the requirements of sub. (2) (d).

(e) For each combustion device subject to the operating limit in s. NR 463.23 (1) (b) 4., you shall at all times monitor the 3−hour average combustion zone temperature using CPMS according to the requirements in sub. (2) (d).

(f) For each wet acid scrubber subject to the operating limits in s. NR 463.23 (1) (b) 5., you shall do both of the following at all times:

1. Monitor the 3−hour average scrubbing liquid flow rate using CPMS according to the requirements of sub. (2) (e) 1.

2. Monitor the 3−hour average pH of the scrubber blowdown using CPMS according to the requirements in sub. (2) (e) 1., or measure and record the pH of the scrubber blowdown once per production cycle using a pH probe and meter according to the requirements in sub. (2) (e) 2.

(g) For one or more automated conveyor and pallet cooling lines and automated shakeout lines at a new iron and steel foundry subject to the VOHAP emissions limit in s. NR 463.23 (1) (a) 10., you shall at all times monitor the 3−hour average VOHAP concentration using a CEMS according to the requirements of sub. (2) (g).

(2) WHAT ARE THE INSTALLATION, OPERATION AND MAINTENANCE REQUIREMENTS FOR MY MONITORS? (a) For each capture system subject to an operating limit in s. NR 463.23 (1) (b) 1., you shall install, operate and maintain each CPMS according to the following requirements, as applicable:

1. If you use a flow measurement device to monitor an operating limit parameter for a capture system, you shall do all of the following:

a. Locate the flow sensor and other necessary equipment, such as straightening vanes, in a position that provides a representative flow and that reduces swirling flow or abnormal velocity distributions due to upstream and downstream disturbances.

b. Use a flow sensor with a minimum measurement sensitivity of 2% of the flow rate.

c. Conduct a flow sensor calibration check at least semiannually.

d. At least monthly, inspect all components for integrity, all electrical connections for continuity and all mechanical connections for leakage.

e. Record the results of each inspection, calibration and validation check required under this subdivision.

2. If you use a pressure measurement device to monitor the operating limit parameter for a capture system, you shall do all of the following:

a. Locate the pressure sensors in, or as close as possible, to a position that provides a representative measurement of the pressure and that minimizes or eliminates pulsating pressure, vibration, and internal and external corrosion.

b. Use a gauge with a minimum measurement sensitivity of 0.5 inch of water or a transducer with a minimum measurement sensitivity of one percent of the pressure range.

c. Check the pressure tap for blockage or plugging daily.

d. Using a manometer, check gauge calibration quarterly and transducer calibration monthly.

e. Conduct calibration checks any time the sensor exceeds the manufacturer's specified maximum operating pressure range or install a new pressure sensor.

f. At least monthly, inspect all components for integrity, all electrical connections for continuity and all mechanical connections for leakage.

g. Record the results of each inspection, calibration and validation check required under this subdivision.

(b) You shall install, operate and maintain a bag leak detection system according to all of the following requirements:

1. The system shall be certified by the manufacturer to be capable of detecting emissions of particulate matter at concentrations of 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less.

2. The bag leak detection system sensor shall provide output of relative particulate matter loadings, and the owner or operator shall continuously record the output from the bag leak detection system using electronic or other means such as a strip chart recorder or a data logger.

3. The system shall be equipped with an alarm that will sound when an increase in relative particulate loadings is detected over the alarm set point established in the operation and maintenance plan. The alarm shall be located such that it can be heard by the appropriate plant personnel.

4. The initial adjustment of the system shall, at a minimum, consist of establishing the baseline output by adjusting the sensitivity or range and the averaging period of the device and establishing the alarm set points and the alarm delay time, if applicable.

5. Following the initial adjustment, the sensitivity or range, averaging period, alarm set point or alarm delay time may not be adjusted without approval from the department. Except, once per quarter, you may adjust the sensitivity of the bag leak detection system to account for seasonal effects, including temperature and humidity, according to the procedures in the operation and maintenance plan required by s. NR 463.23 (3) (b).

6. For negative pressure induced air baghouses and positive pressure baghouses that are discharged to the atmosphere through a stack, the bag leak detector sensor shall be installed downstream of the baghouse and upstream of any wet scrubber.

7. Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.

(c) For each wet scrubber subject to the operating limits in s. NR 463.23 (1) (b) 2., you shall install and maintain CPMS to measure and record the pressure drop and scrubber water flow rate according to the requirements in subds. 1. and 2.:

1. For each CPMS for pressure drop, you shall do all of the following:

a. Locate the pressure sensor in, or as close as possible to, a position that provides a representative measurement of the pressure drop and that minimizes or eliminates pulsating pressure, vibration and internal and external corrosion.

b. Use a gauge with a minimum measurement sensitivity of 0.5 inch of water or a transducer with a minimum measurement sensitivity of one percent of the pressure range.

c. Check the pressure tap for blockage or plugging daily.

d. Using a manometer, check gauge calibration quarterly and transducer calibration monthly.

e. Conduct calibration checks any time the sensor exceeds the manufacturer's specified maximum operating pressure range or install a new pressure sensor.

f. At least monthly, inspect all components for integrity, all electrical connections for continuity and all mechanical connections for leakage.

2. For each CPMS for scrubber liquid flow rate, you shall do all of the following:

a. Locate the flow sensor and other necessary equipment in a position that provides a representative flow and that reduces swirling flow or abnormal velocity distributions due to upstream and downstream disturbances.

b. Use a flow sensor with a minimum measurement sensitivity of 2% of the flow rate.

c. Conduct a flow sensor calibration check at least semiannually according to the manufacturer's instructions.

d. At least monthly, inspect all components for integrity, all electrical connections for continuity and all mechanical connections for leakage.

(d) For each combustion device subject to the operating limit in s. NR 463.23 (1) (b) 3. or 4., you shall install and maintain a CPMS to measure and record the combustion zone temperature according to the following requirements, as applicable:

1. Locate the temperature sensor in a position that provides a representative temperature.

2. For a non−cryogenic temperature range, use a temperature sensor with a minimum tolerance of 2.2°C or 0.75% of the temperature value, whichever is larger.

3. For a cryogenic temperature range, use a temperature sensor with a minimum tolerance of 2.2°C or 2% of the temperature value, whichever is larger.

4. Shield the temperature sensor system from electromagnetic interference and chemical contaminants.

5. If you use a chart recorder, it shall have a sensitivity in the minor division of at least 20°F.

6. Perform an electronic calibration at least semiannually according to the procedures in the manufacturer's owners manual. Following the electronic calibration, conduct a temperature sensor validation check, in which a second or redundant temperature sensor placed nearby the process temperature sensor shall yield a reading within 16.7°C of the process temperature sensor's reading.

7. Conduct calibration and validation checks any time the sensor indicates a temperature that exceeds the manufacturer's specified maximum operating temperature range, or install a new temperature sensor.

8. At least monthly, inspect all components for integrity and all electrical connections for continuity, oxidation and galvanic corrosion.

(e) For each wet acid scrubber subject to the operating limits in s. NR 463.23 (1) (b) 5., you shall install and maintain CPMS to measure and record the scrubbing liquid flow rate according to the requirements in par. (c) 2. and do either of the following:

1. Install and maintain CPMS to measure and record the pH of the scrubber blowdown according to all of the following requirements:

a. Locate the pH sensor in a position that provides a representative measurement of the pH and that minimizes or eliminates internal and external corrosion.

b. Use a gauge with a minimum measurement sensitivity of 0.1 pH unit or a transducer with a minimum measurement sensitivity of 5% of the pH range.

c. Check gauge calibration quarterly or transducer calibration monthly using a manual pH gauge.

d. At least monthly, inspect all components for integrity, all electrical connections for continuity and all mechanical connections for leakage.

2. Extract a sample for analysis by a pH meter that has all of the following:

a. A range of at least 1 to 5 pH units or more.

b. An accuracy of 0.1 pH unit.

c. A resolution of at least 0.1 pH unit.

(f) You shall operate each CPMS used to meet the requirements of this subchapter according to all of the following requirements:

1. Each CPMS shall complete a minimum of one cycle of operation for each successive 15−minute period. You shall have a minimum of 3 of the required 4 data points to constitute a valid hour of data.

2. Each CPMS shall have valid hourly data for 100% of every averaging period.

3. Each CPMS shall calculate and record the hourly average of all recorded readings and the 3−hour average of all recorded readings.

(g) For each automated conveyor and pallet cooling line and automated shakeout line at a new iron and steel foundry subject to the VOHAP emission limit in s. NR 463.23 (1) (a) 10., you shall install, operate and maintain a CEMS to measure and record the

concentration of VOHAP emissions according to all of the following requirements:

1. You shall install, operate and maintain each CEMS according to performance specification 8 in 40 CFR part 60, Appendix B, incorporated by reference in s. NR 484.04 (21).

2. You shall conduct a performance evaluation of each CEMS according to the requirements of s. NR 460.07 and performance specification 8 in 40 CFR part 60, Appendix B.

3. As specified in s. NR 460.07 (3) (d) 2., each CEMS shall complete a minimum of one cycle of operation, which includes sampling, analyzing and data recording, for each successive 15−minute period.

4. You shall reduce CEMS data as specified in s. NR 460.07 (7) (b).

5. Each CEMS shall calculate and record the 3−hour average emissions using all the hourly averages collected for periods during which the CEMS is not out−of−control.

6. You shall record the results of each inspection, calibration and validation check required under this paragraph.

(3) HOW DO I MONITOR AND COLLECT DATA TO DEMONSTRATE CONTINUOUS COMPLIANCE? (a) Except for monitoring malfunctions, associated repairs and required quality assurance or control activities, including, as applicable, calibration checks and required zero and span adjustments, you shall monitor continuously or collect data at all required intervals any time a source of emissions is operating.

(b) You may not use data recorded during monitoring malfunctions, associated repairs and required quality assurance or control activities in data averages and calculations used to report emissions or operating levels or to fulfill a minimum data availability requirement, if applicable. You shall use all the data collected during all other periods in assessing compliance.

(4) HOW DO I DEMONSTRATE CONTINUOUS COMPLIANCE WITH THE EMISSION LIMITATIONS THAT APPLY TO ME? (a) You shall demonstrate continuous compliance by meeting the following requirements, as applicable:

1. For each electric arc metal melting furnace, electric induction metal melting furnace or scrap preheater at an existing iron and steel foundry, you shall do one of the following:

a. Maintain the average PM concentration in the exhaust stream at or below 0.005 gr/dscf.

b. Maintain the average total metal HAP concentration in the exhaust stream at or below 0.0004 gr/dscf.

2. For each cupola metal melting furnace at an existing iron and steel foundry, you shall do one of the following:

a. Maintain the average PM concentration in the exhaust stream at or below 0.006 gr/dscf.

b. Maintain the average total metal HAP concentration in the exhaust stream at or below 0.0005 gr/dscf.

3. For each cupola metal melting furnace or electric arc metal melting furnace at new iron and steel foundry, you shall do one of the following:

a. Maintain the average PM concentration in the exhaust stream at or below 0.002 gr/dscf.

b. Maintain the average total metal HAP concentration in the exhaust stream at or below 0.0002 gr/dscf.

4. For each electric induction metal melting furnace or scrap preheater at a new iron and steel foundry, you shall do one of the following:

a. Maintain the average PM concentration in the exhaust stream at or below 0.001 gr/dscf.

b. Maintain the average total metal HAP concentration in the exhaust stream at or below 0.00008 gr/dscf.

5. For each pouring station at an existing iron and steel foundry, you shall do one of the following:

a. Maintain the average PM concentration in the exhaust stream at or below 0.010 gr/dscf.

b. Maintain the average total metal HAP concentration in the exhaust stream at or below 0.0008 gr/dscf.

6. For each pouring area or pouring station at a new iron and steel foundry, you shall do one of the following:

a. Maintain the average PM concentration in the exhaust stream at or below 0.002 gr/dscf.

b. Maintain the average total metal HAP concentration in the exhaust stream at or below 0.0002 gr/dscf.

7. For each building or structure housing any emission source at the iron and steel foundry, you shall maintain the opacity of any fugitive emissions discharged to the atmosphere at or below 20% opacity (6−minute average), except for one 6−minute average per hour that does not exceed 27% opacity.

8. For each cupola metal melting furnace at a new or existing iron and steel foundry, you shall maintain the average VOHAP concentration in the exhaust stream at or below 20 ppmv corrected to 10% oxygen.

9. For each scrap preheater at an existing iron and steel foundry that does not comply with the work practice standard in s. NR 463.23 (2) (e) 1. or 2. and for each scrap preheater at a new iron and steel foundry that does not comply with the work practice standard in s. NR 463.23 (2) (f), you shall maintain the average VOHAP concentration in the exhaust stream at or below 20 ppmv.

10. For one or more automated conveyor and pallet cooling lines or automated shakeout lines that use a sand mold system at a new iron and steel foundry, you shall do all of the following:

a. Maintain the 3−hour flow−weighted average VOHAP concentration in the exhaust stream at or below 20 ppmv.

b. Inspect and maintain each CEMS according to the requirements of sub. (2) (g) and record all information needed to document conformance with these requirements.

c. Collect and reduce monitoring data according to the requirements of sub. (2) (g) and record all information needed to document conformance with these requirements.

11. For each TEA cold box mold or core making line at a new or existing iron and steel foundry, you shall maintain a 99% reduction in the VOHAP concentration in the exhaust stream or maintain the average VOHAP concentration in the exhaust stream at or below 1 ppmv.

12. You shall conduct subsequent performance tests at least every 5 years for each emission source subject to an emission limit for PM, total metal HAP, VOHAP or TEA in s. NR 463.23 (1) (a) and subsequent performance tests at least every 6 months for each building or structure subject to the opacity limit in s. NR 463.23 (1) (a) 7.

(b) You shall demonstrate continuous compliance for each capture system subject to an operating limit in s. NR 463.23 (1) (b) 1. by doing both of the following:

1. Operate the capture system at or above the lowest values or settings established for the operating limits in your operation and maintenance plan.

2. Monitor the capture system according to the requirements in sub. (1) (a) and collect, reduce and record the monitoring data for each of the operating limit parameters according to the applicable requirements in this subchapter.

(c) You shall demonstrate continuous compliance for each baghouse equipped with a bag leak detection system doing both of the following:

1. Maintain records of the times the bag leak detection system alarm sounded, and for each valid alarm, the time you initiated corrective action, the corrective action taken and the date on which corrective action was completed.

2. Inspect and maintain each baghouse according to the requirements of sub. (1) (b) 1. to 8., and record all information needed to document conformance with these requirements.

(d) You shall demonstrate continuous compliance for each wet scrubber that is subject to the operating limits in s. NR 463.23 (1) (b) 2., by doing all of the following:

1. Maintaining the 3–hour average pressure drop and 3–hour average scrubber water flow rate at levels no lower than those established during the initial or subsequent performance test.

2. Inspecting and maintaining each CPMS according to the requirements of sub. (2) (c) and recording all information needed to document conformance with the requirements.

3. Collecting and reducing monitoring data for pressure drop and scrubber water flow rate according to the requirements of sub. (2) (f) and recording all information needed to document conformance with the requirements.

(e) You shall demonstrate continuous compliance for each combustion device that is subject to the operating limit in s. NR 463.23 (1) (b) 3., by doing all of the following:

1. Maintaining the 15–minute average combustion zone temperature at a level no lower than 1,300°F.

2. Inspecting and maintaining each CPMS according to the requirements of sub. (2) (d) and recording all information needed to document conformance with the requirements.

3. Collecting and reducing monitoring data for combustion zone temperature according to the requirements of sub. (2) (f) and recording all information needed to document conformance with the requirements.

(f) You shall demonstrate continuous compliance for each combustion device that is subject to the operating limit in s. NR 463.23 (1) (b) 4., by doing all of the following:

1. Maintaining the 3–hour average combustion zone temperature at a level no lower than that established during the initial or subsequent performance test.

2. Inspecting and maintaining each CPMS according to the requirements of sub. (2) (d) and recording all information needed to document conformance with these requirements.

3. Collecting and reducing monitoring data for combustion zone temperature according to the requirements of sub. (2) (f) and recording all information needed to document conformance with these requirements.

(g) You shall demonstrate continuous compliance for each acid wet scrubber subject to the operating limits in s. NR 463.23 (1) (b) 5., by doing all of the following:

1. Maintaining the 3–hour average scrubbing liquid flow rate at a level no lower than the level established during the initial or subsequent performance test.

2. Maintaining the 3–hour average pH of the scrubber blowdown at a level no higher than 4.5, if measured by a CPMS, or maintaining the pH level of the scrubber blowdown during each production shift no higher than 4.5.

3. Inspecting and maintaining each CPMS according to the requirements of sub. (2) (e) and recording all information needed to document conformance with the requirements.

4. Collecting and reducing monitoring data for scrubbing liquid flow rate and scrubber blowdown pH according to the requirements of sub. (2) (f) and recording all information needed to document conformance with the requirements. If the pH level of the scrubber blowdown is measured by a probe and meter, you shall demonstrate continuous compliance by maintaining records that document the date, time and results of each sample taken for each production shift.

(5) HOW DO I DEMONSTRATE CONTINUOUS COMPLIANCE WITH THE WORK PRACTICE STANDARDS THAT APPLY TO ME? (a) You shall maintain records that document continuous compliance with the certification requirements in s. NR 463.23 (2) (b) or with the procedures in your scrap selection and inspection plan required in s. NR 463.23 (2) (c). Your records documenting compliance with the scrap selection and inspection plan shall include a copy kept onsite of the procedures used by the scrap supplier for either removing accessible mercury switches or for purchasing automobile bodies that have had mercury switches removed, as applicable.

(b) You shall keep records of the chemical composition of all catalyst binder formulations applied in each furan warm box mold or core making line at a new or existing iron and steel foundry to demonstrate continuous compliance with the requirements in s. NR 463.23 (2) (d).

(c) For a scrap preheater at an existing iron and steel foundry, you shall operate and maintain each gas–fired preheater so that the flame directly contacts the scrap charged to demonstrate continuous compliance with the requirement s. NR 463.23 (2) (e) 1. If you choose to meet the work practice standard in s. NR 463.23 (2) (e) 2., you shall keep records to document that the scrap preheater charges only material that is subject to and in compliance with the scrap certification requirements in s. NR 463.23 (2) (b).

(d) For a scrap preheater at a new iron and steel foundry, you shall keep records to document that each scrap preheater charges only material that is subject to and in compliance with the scrap certification requirements in s. NR 463.23 (2) (b) to demonstrate continuous compliance with the requirement in s. NR 463.23 (2) (f).

(6) HOW DO I DEMONSTRATE CONTINUOUS COMPLIANCE WITH THE OPERATION AND MAINTENANCE REQUIREMENTS THAT APPLY TO ME? (a) For each capture system and control device for an emission source subject to an emission limit in s. NR 463.23 (1) (a), you shall demonstrate continuous compliance with the operation and maintenance requirements of s. NR 463.23 (3) by doing all of the following:

1. Making monthly inspections of capture systems and initiating corrective action according to s. NR 463.23 (3) (b) 1., and recording all information needed to document conformance with the requirements.

2. Performing preventive maintenance for each control device according to the preventive maintenance plan required by s. NR 463.23 (3) (b) 3., and recording all information needed to document conformance with the requirements.

3. Operating and maintaining each bag leak detection system according to the site–specific monitoring plan required by s. NR 463.23 (3) (b) 4., and recording all information needed to demonstrate conformance with the requirements.

4. Initiating and completing corrective action for a bag leak detection system alarm according to the corrective action plan required by s. NR 463.23 (3) (b) 5., and recording all information needed to document conformance with the requirements.

5. Igniting gases from mold vents according to the procedures in the plan required by s. NR 463.23 (3) (b) 6.

(b) Any instance where you fail to follow the procedures in par. (a) is a deviation that shall be included in your semiannual compliance report.

(c) You shall maintain a current copy of the operation and maintenance plans required by s. NR 463.23 (3) (b) onsite and available for inspection upon request. You shall keep the plans for the life of the iron and steel foundry or until the iron and steel foundry is no longer subject to the requirements of this subchapter.

(7) WHAT OTHER REQUIREMENTS MUST I MEET TO DEMONSTRATE CONTINUOUS COMPLIANCE? (a) *Deviations.* You shall report each instance in which you did not meet each emission limitation in s. NR 463.23 (1), including each operating limit, that applies to you. This requirement includes periods of startup, shutdown and malfunction. You also shall report each instance in which you did not meet each work practice standard in s. NR 463.23 (2) and each operation and maintenance requirement of s. NR 463.23 (3) that applies to you. Failure to meet the requirements described in this

paragraph are deviations from the emission limitations, work practice standards and operation and maintenance requirements in this subchapter and shall be reported according to the requirements of s. NR 463.27 (2).

(b) *Startups, shutdowns and malfunctions.* 1. Consistent with the requirements of ss. NR 460.05 (4) and 460.06 (4) (a), deviations that occur during a period of startup, shutdown or malfunction are not violations if you demonstrate to the department's satisfaction that you were operating in accordance with s. NR 460.05 (4) (a).

2. The department shall determine whether deviations that occur during a period of startup, shutdown or malfunction are violations according to the provisions in s. NR 460.05 (4).

(8) HOW DO I APPLY FOR ALTERNATIVE MONITORING REQUIREMENTS FOR A CONTINUOUS EMISSIONS MONITORING SYSTEM? (a) You may submit a request to the administrator for an alternative monitoring method to demonstrate compliance with the VOHAP emission limits in s. NR 463.23 (1) (a) 10. for automated pallet cooling lines or automated shakeout lines at a new iron and steel foundry according to the procedures in this section.

(b) You may request approval to use an alternative monitoring method in the notification of construction or for new sources, or at any time.

(c) You shall submit a monitoring plan to the administrator that includes a description of the control technique or pollution prevention technique, a description of the continuous monitoring system or method, including appropriate operating parameters that will be monitored, test results demonstrating compliance with the emission limit, operating limits, if applicable, determined according to the test results, and the frequency of measuring and recording to establish continuous compliance. If applicable, you shall also include operation and maintenance requirements for the monitors.

(d) The monitoring plan is subject to approval by the administrator. Use of the alternative monitoring method may not begin until approval is granted by the administrator.

Note: The Administrator of the US Environmental Protection Agency retains the authority to approve major alternatives to monitoring according to 40 CFR 63.7761 (c) (3).

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NR 463.27 Notifications, reports and records.

(1) WHAT NOTIFICATIONS MUST I SUBMIT AND WHEN? (a) You shall submit all of the notifications to the department required by ss. NR 460.05 (6) (c) and (d), 460.06 (2), 460.07 (5) (b) and (6) (c) and (e), and 460.08 (2) to (8) that apply to you by the following specified dates:

(b) As specified in s. NR 460.08 (2) (b), if you start up your iron and steel foundry before April 22, 2004, you shall submit your initial notification no later than August 20, 2004.

(c) If you start up your new iron and steel foundry on or after April 22, 2004, you shall submit your initial notification no later than 120 calendar days after you become subject to this subchapter.

(d) If you are required to conduct a performance test, you shall submit a notification of intent to conduct a performance test at least 20 business days before the performance test is scheduled to begin, as required by s. NR 460.06 (2).

(e) If you are required to conduct a performance test or other initial compliance demonstration, you shall submit a notification of compliance status according to the requirements of s. NR 460.08 (8) and either of the following, as applicable:

1. For each initial compliance demonstration that does not include a performance test, you shall submit the notification of compliance status before the close of business on the 30th calendar day following completion of the initial compliance demonstration.

2. For each initial compliance demonstration that does include a performance test, you shall submit the notification of compliance status, including the performance test results, before the close of business on the 60th calendar day following the completion of the performance test according to the requirement specified in s. NR 460.09 (4) (b).

(2) WHAT REPORTS MUST I SUBMIT AND WHEN? (a) *Compliance report due dates.* Unless the department has approved a different schedule, you shall submit a semiannual compliance report to the department according to the following requirements:

1. The first compliance report shall cover the period beginning on the compliance date that is specified for your iron and steel foundry in s. NR 463.21 (4) and ending on June 30 or December 31, whichever date comes first after the compliance date that is specified for your iron and steel foundry.

2. The first compliance report shall be postmarked or delivered no later than July 31 or January 31, whichever date comes first after your first compliance report is due.

3. Each subsequent compliance report shall cover the semiannual reporting period from January 1 to June 30 or the semiannual reporting period from July 1 to December 31.

4. Each subsequent compliance report shall be postmarked or delivered no later than July 31 or January 31, whichever date comes first after the end of the semiannual reporting period.

5. For each iron and steel foundry that is subject to permitting regulations pursuant to ch. NR 407, and if the department has established dates for submitting semiannual reports pursuant to s. NR 407.09 (1) (c) 3. a., you may submit the first and subsequent compliance reports according to the dates the department has established instead of the dates specified in subds. 1. to 4.

(b) *Compliance report contents.* Each compliance report shall include the information specified in subds. 1. to 3. and, as applicable, subds. 4. to 8.

1. The company name and address.

2. A statement by a responsible official, with that official's name, title and signature, certifying the truth, accuracy and completeness of the content of the report.

3. The date of the report and the beginning and ending dates of the reporting period.

4. If you had a startup, shutdown or malfunction during the reporting period and you took action consistent with your startup, shutdown and malfunction plan, the information in s. NR 460.09 (4) (e) 1.

5. If there were no deviations from any emission limitation, operating limit, work practice standard or operation and maintenance requirement, a statement that there were no deviations from any emission limitation, work practice standard or operation and maintenance requirement during the reporting period.

6. If there were no periods during which a continuous monitoring system, including a CPMS or CEMS, was out−of−control as specified by s. NR 460.07 (3) (g), a statement that there were no periods during which the CPMS or CEMS was out−of−control during the reporting period.

7. For each deviation from an emission limitation, including an operating limit, that occurs at an iron and steel foundry for which you are not using a continuous monitoring system, including a CPMS or CEMS, to comply with an emission limitation or work practice standard required in this subchapter, the information specified in subds. 1. to 4. and in this subdivision. This requirement applies to periods of startup, shutdown and malfunction.

a. The total operating time of each emissions source during the reporting period.

b. Information on the number, duration and cause of deviations, including unknown cause, as applicable, and the corrective action taken.

8. For each deviation from an emission limitation, including an operating limit, or work practice standard occurring at an iron and steel foundry where you are using a continuous monitoring

system, including a CPMS or CEMS, to comply with the emission limitation or work practice standard in this subchapter, the information specified in subds. 1. to 4. and in this subdivision. This requirement applies to periods of startup, shutdown and malfunction.

a. The date and time that each malfunction started and stopped.

b. The date and time that each continuous monitoring system was inoperative, except for zero, low–level and high–level checks.

c. The date, time and duration that each continuous monitoring system was out–of–control, including the information required in s. NR 460.07 (3) (h).

d. The date and time that each deviation started and stopped and whether each deviation occurred during a period of startup, shutdown or malfunction or during another period.

e. A summary of the total duration of the deviations during the reporting period and the total duration as a percent of the total source operating time during that reporting period.

f. A breakdown of the total duration of the deviations during the reporting period into those that are due to startup, shutdown, control equipment problems, process problems, other known causes and unknown causes.

g. A summary of the total duration of continuous monitoring system downtime during the reporting period and the total duration of continuous monitoring system downtime as a percent of the total source operating time during the reporting period.

h. A brief description of the process units.

i. A brief description of the continuous monitoring system.

j. The date of the latest continuous monitoring system certification or audit.

k. A description of any changes in continuous monitoring systems, processes or controls since the last reporting period.

(c) *Immediate startup, shutdown and malfunction report.* If you had a startup, shutdown or malfunction during the semiannual reporting period that was not consistent with your startup, shutdown and malfunction plan, you shall submit an immediate startup, shutdown and malfunction report according to the requirements of s. NR 460.09 (4) (e) 2.

(d) *Part 70 monitoring report.* If you have obtained a title V operating permit for an iron and steel foundry pursuant to ch. NR 407, you shall report all deviations as defined in this subchapter in the semiannual monitoring report required by s. NR 407.09 (1) (c) 3. a. If you submit a compliance report for an iron and steel foundry along with, or as part of, the semiannual monitoring report required by s. NR 407.09 (1) (c) 3. a., and the compliance report includes all the required information concerning deviations from any emissions limitation or operation and maintenance requirement in this subchapter, submission of the compliance report satisfies any obligation to report the same deviations in the semiannual monitoring report. However, submission of a compliance report does not otherwise affect any obligation you may have to report deviations from permit requirements for an iron and steel foundry to the department.

(3) WHAT RECORDS MUST I KEEP? (a) You shall keep all of the following records:

1. A copy of each notification and report that you submitted to comply with this subchapter, including all documentation supporting any initial notification or notification of compliance status that you submitted, according to the requirements of s. NR 460.09 (2) (b) 14.

2. The records specified in s. NR 460.05 (4) (c) 3. to 5. related to startup, shutdown and malfunction.

3. Records of performance tests and performance evaluations as required by s. NR 460.09 (2) (b) 8.

4. Records of the annual quantity of each chemical binder or coating material used to make molds and cores, the material data safety sheet or other documentation that provides the chemical composition of each component and the annual quantity of HAP used at the foundry.

(b) You shall keep all of the following records for each CEMS:

1. Records described in s. NR 460.09 (2) (b) 6. to 11.

2. If the performance evaluation plan is revised, previous versions of the performance evaluation plan as required in s. NR 460.07 (4) (c).

3. Any request for alternatives to relative accuracy tests for CEMS, as allowed by s. NR 460.07 (6) (e).

4. Records of the date and time that each deviation started and stopped, and whether the deviation occurred during a period of startup, shutdown or malfunction or during another period.

(c) You shall keep the records required by s. NR 463.26 (4) to (6) to show continuous compliance with each emission limitation, work practice standard and operation and maintenance requirement that applies to you.

(4) IN WHAT FORM AND FOR HOW LONG MUST I KEEP MY RECORDS.? (a) You shall keep your records in a form suitable and readily available for expeditious review, according to the requirements of s. NR 460.09 (2) (a).

(b) As specified in s. NR 460.09 (2) (a), you shall keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report or record.

(c) You shall keep each record onsite for at least 2 years immediately after the date of each occurrence, measurement, maintenance, corrective action, report or record according to the requirements in s. NR 460.09 (2) (a). You may keep the records for the previous 3 years offsite.

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