ORDER OF THE STATE OF WISCONSIN
NATURAL RESOURCES BOARD
AMENDING AND CREATING RULES

The Wisconsin Natural Resources Board proposes an order to **amend** NR 460.02(intro.), 463.07(7)(a), 463.103(2)(a) and 484.11(2)(d); and to **create** NR 406.04(1)(zi), 407.04(7), 460 Appendix RRR, subch. II of ch. NR 463 and 484.05(10) and (12), relating to national emission standards for hazardous air pollutants for facilities engaged in the secondary production of aluminum.

AM-38-03

Analysis Prepared by the Department of Natural Resources

Statutes interpreted: s. 285.11(6), Stats.

Statutory authority: ss. 227.11(2)(a), 227.14(1m) and 285.11(1), Stats.

Explanation of agency authority: Section 285.27(2), Stats., requires that the Department promulgate National Emission Standards for Hazardous Air Pollutants (NESHAP) by rule. In addition, since this NESHAP affects more than ten facilities in Wisconsin, promulgation into state rule is consistent with the Maximum Achievable Control Technology (MACT) Streamlining Policy approved by the Natural Resources Board in 1996.

Related statute or rule: NESHAP regulations for other source categories are contained in chapters NR 460 to 469. Chapter NR 463 contains the NESHAP rules relating to metals treating and processing.

Plain language analysis: The US EPA promulgated the NESHAP for secondary aluminum production, 40 CFR 63 Subpart RRR, on March 23, 2000 (65 FR 15690). US EPA amended the NESHAP on December 19, 2005 (70 FR 75346) to exempt area sources from the requirement to obtain a Title V operating permit. US EPA also revised the rule on September 3, 2004 (171 FR 53980) and October 3, 2005 (FR 70 57516) to correct some minor errors and on April 20, 2006 (71 FR 20461) to change the requirements regarding startup, shutdown and malfunction plans. The NESHAP establishes maximum achievable control technology (MACT) requirements for this source category. The proposed rule will incorporate this NESHAP along with the revisions into the Wisconsin Administrative Code.

Sources effected are new and existing facilities that do secondary processing of aluminum. Both large (major) and small (area) sources are covered by these rules. Examples of the facilities covered by this rule are aluminum foundries and salvage recovery operations that reclaim aluminum. Compliance options include control equipment and pollution prevention methods for the substitution of non-toxic materials.

The order includes related changes in chs. NR 460, 463 subchapter I and 484. The consent of the Attorney General and the Revisor of Statutes will be requested for the incorporation by reference of new test methods in ch. NR 484.

Summary of, and comparison with, existing or proposed federal regulation: As noted above, the federal NESHAP for this source category is an existing federal regulation. While some changes to the federal rule language and organization were made to accommodate state administrative rule format and style, no substantive changes were made other than requiring a state operation permit for area sources. In most parts

of the proposed rule, the federal format and language was retained as allowed under s. 227.14(1m)(a), Stats., and the proposed state rule is essentially identical to the federal rule.

Comparison with similar rules in adjacent states: The federal NESHAP regulation for this source category is in effect in every state in the nation, and all affected sources in any state are required to comply with the federal rule. The U.S. Environmental Protection Agency has delegated authority to most states to enforce the federal NESHAP regulations, which generally means that those states adopt the federal regulations as state regulations. Thus, the NESHAP regulations in adjacent states, if any, are identical to the federal regulations and the proposed Wisconsin rule.

Summary of factual data and analytical methodologies: Since the Department is merely adopting a federal regulation, the Department has not compiled any factual data nor used any analytical methodologies. Please see the federal documentation supporting the development and promulgation of the federal regulation at http://www.epa.gov/ttn/atw/alum2nd/alum2pg.html.

Analysis and supporting documentation used to determine any effect on small business or in preparation of an economic impact report: Cost estimates and economic impact analyses were prepared by the US Environmental Protection Agency when they promulgated this regulation. See http://www.epa.gov/ttn/atw/alum2nd/alum2pg.html.

Anticipated costs incurred by the private sector: Because the federal regulation is in effect and all affected sources must comply with it, no additional costs will be incurred by the private sector as a result of the promulgation of the state rule other than the cost to submit a state operation permit application.

Effect on small business: Because the federal regulation is in effect and all affected sources must comply with it, there will be no additional effect on small business as a result of the promulgation of the state rules other than the cost to submit a state operation permit application.

Agency contact person (including e-mail address and telephone number):
Roger Fritz - 608-266-1201, Roger.Fritz@wisconsin.gov.

SECTION 1. NR 406.04(1)(zi) is created to read:

NR 406.04(1)(zi) Secondary aluminum production facilities as defined by s. NR 463.12(36).

SECTION 2. NR 407.04(7) is created to read:

NR 407.04(7) SECONDARY ALUMINUM PROCESSING UNITS. Notwithstanding sub. (1), the owner or operator of any facility which has a secondary aluminum processing unit as defined in s. NR 463.12(35) that is not a major source and is not required to obtain a construction permit under ch. NR 406, shall submit an operation permit application for a non-part 70 source on application forms available from the department no later than one year after the effective date of this subsection…[LRB insert date].

SECTION 3. NR 460.02(intro.) is amended to read:

NR 460.02 Definitions. (intro.) For terms not defined in this section, the definitions contained in ch. NR 400 apply to the terms used in this chapter. In addition, the definitions in this section apply to the terms used in this chapter and, for terms not defined in chs. NR 462 to 464 and 466 to 469 or the subchapters of ~~ch.~~ chs. NR 463 and 465, to the terms used in those chapters or subchapters as well. If this section defines a term which is also defined in ch. NR 400, the definition in this section applies in this chapter and in chs. NR 462 to 464 and 466 to 469 and the subchapters of ~~ch.~~ chs. NR 463 and 465 rather than the definition in ch. NR 400, except that when one of those chapters or subchapters has its own definition of the term, that definition applies in that chapter or subchapter.

SECTION 4. NR 460 Appendix RRR is created to read:

Chapter NR 460
Appendix RRR
General Provisions Applicable to Subchapter II of Chapter NR 463

The general provisions of this chapter listed under the column heading "Reference" apply to sources subject to ch. NR 463 subch. II only if a Yes appears in the same row under the column heading "Applies to Subchapter II of Chapter NR 463?". Certain provisions in other chapters which correspond to federal provisions in 40 CFR part 63 Subpart A are also included in the Reference column.

Reference	Requirement	Applies to Subchapter II of Chapter NR 463?	Comment
NR 2	Availability of Information and Confidentiality	Yes	
NR 406	Construction and Reconstruction – Applicability and Requirements	Yes	
NR 407.04(1)(b)3.		Yes	
NR 460.02	Definitions	Yes	Additional definitions in s. NR 463.12.
NR 460.03	Units and Abbreviations	Yes	
NR 460.04(1)(a) to (c)	Prohibited Activities	Yes	
NR 460.04(1)(d)		Yes	
NR 460.04(2)	Circumvention and Severability	Yes	
NR 460.05(1)	Compliance with Standards and	Yes	

	Maintenance Applicability		
NR 460.05(2)(a) to (e)	New and Reconstructed Source – Dates	Yes	
NR 460.05(2)(f)		Yes	
NR 460.05(3)(a)	Existing source dates	Yes	Section NR 463.115 specifies dates
NR 460.05(3)(b)		Yes	
NR 460.05(3)(c)1. and 2.		Yes	
NR 460.05(4)(a) and (b)	Operation & Maintenance Requirements	Yes	Section NR 463.15 requires plan
NR 460.05(4)(c)	Startup, Shutdown and Malfunction Plan	Yes	
NR 460.05(5)	Compliance with Emission Standards	Yes	
NR 460.05(6)	Compliance with Opacity and Visual Emission Standards	Yes	
NR 460.05(7)	Extension of Compliance	Yes	
NR 460.06	Performance Test Requirements – Applicability and Dates	Yes	Except s. NR 463.16 establishes dates for initial performance tests, with repeat tests every 5 years for major sources
NR 460.06 (2)	Notification and Quality Assurance and Test Plan	Yes	
NR 460.06(3)	Testing facilities	Yes	
NR 460.06(4)	Conduct of Test	Yes	
NR 460.06(5)	Alternative Test Method	Yes	
NR 460.06(6)	Data Analysis	Yes	
NR 460.06(7)	Waiver of Tests	Yes	
NR 460.07(1)(a)	Monitoring Requirements – Applicability	Yes	
NR 460.07(1)(b)		Yes	
NR 460.07(1)(c)		Yes	
NR 460.07(2)	Conduct of Monitoring	Yes	
NR 460.07(3)(a) to (c)	CMS Operation and Maintenance	Yes	
NR 460.07(3)(d) to (h)		Yes	
NR 460.07(4)	Quality Control	Yes	
NR 460.07(5)	CMS Performance Evaluation		
NR 460.07(6)(a) to (d)	Alternative Monitoring Method	No	Section NR 463.15(23) includes provisions for monitoring alternatives
NR 460.07(6)(e)	Alternative to RATA Test	Yes	
NR 460.07(7)(a)	Data Reduction		
NR 460.07(7)(b)		No	Section NR 463.163 requires 5 6-minute averages for an aluminum scrap shredder
NR 460.07(7)(c) to (e)		Yes	
NR 460.08	Notification requirements	Yes	Except s. NR 463.17 establishes dates for

			notifications of compliance status reports
NR 460.09(1)	Recordkeeping and Reporting – Applicability	Yes	
NR 460.09(2)	General Requirements	Yes	Section NR 463.19 includes additional requirements
NR 460.09(3)(a)	Additional CMS Recordkeeping	Yes	
NR 460.09(4)	General Reporting Requirements,Performance Test Results,Opacity or Visual Emission Observations,Progress Reports, and Startup, Shutdown and Malfunction Reports	Yes	
NR 460.09(5)(a) and (b)	Additional CMS Reports	Yes	
NR 460.09(5)(c)	Excess Emissions, CMS Performance Reports	Yes	Reporting deadline given in s. NR 466.18
NR 460.09(5)(d)	COMS Data reports	Yes	
NR 460.09(6)	Recordkeeping and Reporting Waiver	Yes	
NR 460.10(1) and (2)	Control Device Requirements	No	Flares not applicable
NR 484	Incorporation by Reference	Yes	Chapters 3 and 5 of ACGIH Industrial Ventilation Manual for capture and collection systems, incorporated by reference in s. NR 484.11(2)(d); and Interim Procedures for Estimating Risk Associated with Exposure to Mixtures of Chlorinated Dibenzofurans (CDDs and CDFs) and 1989 Update, incorporated by reference in s. NR 484.05(12).

SECTION 5. NR 463.07(7)(a) is amended to read:

NR 463.07(7)(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~~ subchapter, apply for each of the control techniques used.

SECTION 6. NR 463.103(2)(a) is amended to read:

NR 463.103(2)(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~~ subchapter 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.

SECTION 7. Subchapter II of ch. NR 463 to follow s. NR 463.106 is created to read:

Subchapter II

Secondary Aluminum Production

NR 463.11 Applicability. (**1**) The requirements of this subchapter apply to the owner or operator of each secondary aluminum production facility.

Note: This subchapter is based on the federal regulations contained in 40 CFR part 63 Subpart RRR, created March 23, 2000, as last revised on April 20, 2006.

(**2**) The requirements of this subchapter apply to the following affected sources, located at a secondary aluminum production facility that is a major source of hazardous air pollutants (HAPs) as defined in s. NR 460.02(22):

(a) Each new and existing aluminum scrap shredder.

(b) Each new and existing thermal chip dryer.

(c) Each new and existing scrap dryer, delacquering kiln and decoating kiln.

(d) Each new and existing group 2 furnace.

(e) Each new and existing sweat furnace.

(f) Each new and existing dross-only furnace.

(g) Each new and existing rotary dross cooler.

(h) Each new and existing secondary aluminum processing unit.

(**3**) The requirements of this subchapter pertaining to dioxin and furan emissions and associated operating, monitoring, reporting and recordkeeping requirements apply to the following affected sources, located at a secondary aluminum production facility that is an area source of HAPs as defined in s. NR 460.02(5):

(a) Each new and existing thermal chip dryer.

(b) Each new and existing scrap dryer, delacquering kiln and decoating kiln.

(c) Each new and existing sweat furnace.

(d) Each new and existing secondary aluminum processing unit, containing one or more group 1 furnace emission units processing other than clean charge.

(**4**) The requirements of this subchapter do not apply to facilities and equipment used for research and development that are not used to produce a salable product.

(**5**) An aluminum die casting facility, aluminum foundry or aluminum extrusion facility shall be considered to be an area source if it does not emit, or have the potential to emit, considering controls, 10 tons per year or more of any single listed HAP or 25 tons per year of any combination of listed HAP from all emission sources which are located in a contiguous area and under common control, without regard to whether or not the sources are regulated under this subchapter or any other subchapter. In the case of an aluminum die casting facility, aluminum foundry or aluminum extrusion facility which is an area source and is subject to regulation under this subchapter only because it operates a thermal chip dryer, no furnace operated by such a facility shall be deemed to be subject to the requirements of this subchapter if it melts only clean charge, internal scrap or customer returns.

NR 463.115 Dates. (1) The owner or operator of an existing affected source shall comply with the requirements of this subchapter by March 24, 2003.

(**2**) Except as provided in sub. (3), the owner or operator of a new affected source that commences construction or reconstruction after February 11, 1999 shall comply with the requirements of this subchapter by March 24, 2000 or upon startup, whichever is later.

(**3**) The owner or operator of any affected source which is constructed or reconstructed at any existing aluminum die casting facility, aluminum foundry or aluminum extrusion facility which otherwise meets the applicability criteria in s. NR 463.11 shall comply with the requirements of this subchapter by March 24, 2003 or upon startup, whichever is later.

NR 463.12 Definitions. 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 priority 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) "Add-on air pollution control device" means equipment installed on a process vent that reduces the quantity of a pollutant that is emitted to the air.

(2) "Afterburner" means an air pollution control device that uses controlled flame combustion to convert combustible materials to noncombustible gases; also known as an incinerator or a thermal oxidizer.

(3) "Aluminum scrap" means fragments of aluminum stock removed during manufacturing, manufactured aluminum articles or parts rejected or discarded and useful only as material for reprocessing, and waste and discarded material made of aluminum.

(4) "Aluminum scrap shredder" means a unit that crushes, grinds or breaks aluminum scrap into a more uniform size prior to processing or charging to a scrap dryer, delacquering kiln, decoating kiln or furnace. A bale breaker is not an aluminum scrap shredder.

(5) "Bag leak detection system" means an instrument that is capable of monitoring particulate matter loadings in the exhaust of a baghouse in order to detect bag failures. A bag leak detection system may operate on triboelectric, light scattering, light transmittance or other effect to monitor relative particulate matter loadings.

(6) "Chips" means small, uniformly-sized, unpainted pieces of aluminum scrap, typically below 1¼ inches in any dimension, primarily generated by turning, milling, boring and machining of aluminum parts.

(7) “Clean charge” means furnace charge materials, including molten aluminum; T-bar; sow; ingot; billet; pig; alloying elements; aluminum scrap known by the owner or operator to be entirely free of paints, coatings and lubricants; uncoated and unpainted aluminum chips that have been thermally dried or treated by a centrifugal cleaner; aluminum scrap dried at 343 °C (650 °F) or higher; aluminum scrap delacquered and decoated at 482 °C (900 °F) or higher, and runaround scrap.

(8) “Cover flux” means salt added to the surface of molten aluminum in a group 1 or group 2 furnace, without agitation of the molten aluminum, for the purpose of preventing oxidation.

(9) “Customer returns” means any aluminum product which is returned by a customer to the aluminum company that originally manufactured the product prior to resale of the product or further distribution in commerce, and which contains no paint or other solid coatings.

(10) "Dioxins and furans" or “D&F” means tetra-, penta-, hexa- and octachlorinated dibenzo dioxins and furans.

(11) “Dross” means the slags and skimmings from aluminum melting and refining operations consisting of fluxing agents, impurities or oxidized and non-oxidized aluminum, from scrap aluminum charged into the furnace.

(12) “Dross-only furnace” means a furnace, typically of rotary barrel design, dedicated to the reclamation of aluminum from dross formed during melting, holding, fluxing or alloying operations carried out in other process units. Dross and salt flux are the sole feedstocks to this type of furnace.

(13) “Emission unit” means a group 1 furnace or in-line fluxer at a secondary aluminum production facility.

(14) “Fabric filter” means an add-on air pollution control device used to capture particulate matter by filtering gas streams through filter media; also known as a baghouse.

(15) “Feed or charge” means, for a furnace or other process unit that operates in batch mode, the total weight of material, including molten aluminum, T-bar, sow, ingot, other material and alloying agents that enter the furnace during an operating cycle. For a furnace or other process unit that operates continuously, feed or charge means the weight of material, including molten aluminum, T-bar, sow, ingot, other material and

alloying agents that enter the process unit within a specified time period, such as a time period equal to the performance test period. The feed or charge for a dross-only furnace includes the total weight of dross and solid flux.

(16) "Fluxing" means refining of molten aluminum to improve product quality, achieve product specifications, or reduce material loss, including the addition of solvents to remove impurities and the injection of gases such as chlorine or chlorine mixtures to remove magnesium (demagging) or hydrogen bubbles (degassing). Fluxing may be performed in the furnace or outside the furnace by an in-line fluxer.

(17) "Furnace hearth" means the combustion zone of a furnace in which the molten metal is contained.

(18) "Group 1 furnace" means a furnace of any design that melts, holds or processes aluminum that contains paint, lubricants, coatings or other foreign materials with or without reactive fluxing or processes clean charge with reactive fluxing.

(19) "Group 2 furnace" means a furnace of any design that melts, holds or processes only clean charge and that performs no fluxing or performs fluxing using only nonreactive, non-HAP-containing, non-HAP-generating gases or agents.

(20) "HCl" means, for the purposes of this subchapter, emissions of hydrogen chloride that serve as a surrogate measure of the total emissions of the HAPs hydrogen chloride, hydrogen fluoride and chlorine.

(21) "In-line fluxer" means a device exterior to a furnace, located in a transfer line from a furnace, used in fluxing molten aluminum; also known as a flux box, degassing box or demagging box.

(22) "Internal scrap" means all aluminum scrap regardless of the level of contamination which originates from castings or extrusions produced by an aluminum die casting facility, aluminum foundry or aluminum extrusion facility, and which remains at all times within the control of the company that produced the castings or extrusions.

(23) "Lime" means calcium oxide or other alkaline reagent.

(24) "Lime-injection" means the continuous addition of lime upstream of a fabric filter.

(25) "Melting and holding furnace" means a group 1 furnace that processes only clean charge,

performs melting, holding, and fluxing functions, and does not transfer molten aluminum to or from another furnace except for the purposes of alloy changes, off-specification product drains or maintenance activities.

(26) "Operating cycle" means for a batch process, the period beginning when the feed material is first charged to the operation and ending when all feed material charged to the operation has been processed. For a batch melting and holding furnace process, operating cycle means the period including the charging and melting of scrap aluminum and the fluxing, refining, alloying and tapping of molten aluminum.

(27) "PM" means, for the purposes of this subchapter, emissions of particulate matter that serve as a measure of total particulate emissions and as a surrogate for metal HAPs contained in the particulates, including antimony, arsenic, beryllium, cadmium, chromium, cobalt, lead, manganese, mercury, nickel and selenium.

(28) "Pollution prevention" means source reduction as defined under the Pollution Prevention Act of 1990 (42 USC 13101 to 13109) including equipment or technology modifications, process or procedure modifications, reformulation or redesign of products, substitution of raw materials, and improvements in housekeeping, maintenance, training, or inventory control, and other practices that reduce or eliminate the creation of pollutants through increased efficiency in the use of raw materials, energy, water or other resources or protection of natural resources by conservation.

(29) "Reactive fluxing" means the use of any gas, liquid, or solid flux, other than cover flux, that results in a HAP emission. Argon and nitrogen are not reactive and do not produce HAPs.

(30) "Reconstruction" means the replacement of components of an affected source or emission unit such that the fixed capital cost of the new components exceeds 50% of the fixed capital cost that would be required to construct a comparable new affected source, and it is technologically and economically feasible for the reconstructed source to meet relevant standards established in this subchapter. Replacement of the refractory in a furnace is routine maintenance and is not a reconstruction. The repair and replacement of in-line fluxer components, such as rotors, shafts, burner tubes, refractory or warped steel, is considered to be routine maintenance and is not considered a reconstruction. In-line fluxers are typically removed to a maintenance or repair area and are replaced with repaired units. The replacement of an existing in-line fluxer with a repaired

unit is not considered a reconstruction.

(31) "Residence time" means, for an afterburner, the duration of time required for gases to pass through the afterburner combustion zone. Residence time is calculated by dividing the afterburner combustion zone volume in cubic feet by the volumetric flow rate of the gas stream in actual cubic feet per second.

(32) "Rotary dross cooler" means a water-cooled rotary barrel device that accelerates cooling of dross.

(33) "Runaround scrap" means scrap materials generated on-site by aluminum casting, extruding, rolling, scalping, forging, forming, stamping, cutting and trimming operations and that do not contain paint or solid coatings. Uncoated and unpainted aluminum chips generated by turning, boring, milling and similar machining operations may be clean charge if they have been thermally dried or treated by a centrifugal cleaner, but are not considered to be runaround scrap.

(34) "Scrap dryer, delacquering kiln or decoating kiln" means a unit used primarily to remove various organic contaminants such as oil, paint, lacquer, ink, plastic or rubber from aluminum scrap, including used beverage containers, prior to melting.

(35) "Secondary aluminum processing unit" or "SAPU" means one of the following:

(a) An existing SAPU means all existing group 1 furnaces and all existing in-line fluxers within a secondary aluminum production facility. Each existing group 1 furnace or existing in-line fluxer is considered an emission unit within a secondary aluminum processing unit.

(b) A new SAPU means any combination of individual group 1 furnaces and in-line fluxers within a secondary aluminum processing facility which either were constructed or reconstructed after February 11, 1999, or have been permanently redesignated as new emission units pursuant to s. NR 463.13(11). Each of the group 1 furnaces or in-line fluxers within a new SAPU is considered an emission unit within that secondary aluminum processing unit.

(36) "Secondary aluminum production facility" means any establishment using clean charge, aluminum scrap or dross from aluminum production as the raw material and performing one or more of the following processes: scrap shredding, scrap drying, delacquering or decoating, thermal chip drying, recovery of aluminum from dross, in-line fluxing, dross cooling or furnace operations such as melting, holding, sweating,

refining, fluxing or alloying. A secondary aluminum production facility may be independent or part of a primary aluminum production facility. For purposes of this subchapter, aluminum die casting facilities, aluminum foundries and aluminum extrusion facilities are not considered to be secondary aluminum production facilities if the only materials they melt are clean charge, customer returns or internal scrap, and if they do not operate sweat furnaces, thermal chip dryers, scrap dryers, delacquering kilns or decoating kilns. The determination of whether a facility is a secondary aluminum production facility is only for purposes of this subchapter and any regulatory requirements which are derived from the applicability of this subchapter, and is separate from any determination which may be made under other environmental laws and regulations, including whether the same facility is a "secondary metal production facility" as that term is used in 42 USC 7479(1) or a "secondary metal production plant" as that term is used in s. NR 405.02(22)(a)1.

(37) "Sidewell" means an open well adjacent to the hearth of a furnace with connecting arches between the hearth and the open well through which molten aluminum is circulated between the hearth, where heat is applied by burners, and the open well, which is used for charging scrap and solid flux or salt to the furnace, injecting fluxing agents and skimming dross.

(38) "Sweat furnace" means a furnace used exclusively to reclaim aluminum from scrap that contains substantial quantities of iron by using heat to separate the low-melting point aluminum from the scrap while the higher melting-point iron remains in solid form.

(39) "TEQ" means the international method of expressing toxicity equivalents for dioxins and furans as defined in Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxins and -Dibenzofurans (CDDs and CDFs) and 1989 Update (EPA-625/3-89-016), incorporated by reference in s. NR 484.05(12).

(40) "THC" means total hydrocarbon emissions that also serve as a surrogate for the emissions of organic HAP compounds.

(41) "Thermal chip dryer" means a device that uses heat to evaporate oil or oil and water mixtures from unpainted or uncoated aluminum chips. Pre-heating boxes or other dryers which are used solely to remove water from aluminum scrap are not considered to be thermal chip dryers.

(42) "Three-day, 24-hour rolling average" means daily calculations of the average 24-hour emission rate in lb/ton of feed or charge over the 3 most recent consecutive 24-hour periods, for a secondary aluminum processing unit.

(43) "Total reactive chlorine flux injection rate" means the sum of the total weight of chlorine in the gaseous or liquid reactive flux and the total weight of chlorine in the solid reactive chloride flux, divided by the total weight of feed or charge, as determined by the procedure in s. NR 463.163(16)

NR 463.13 Emission standards for affected sources and emission units. (1) SUMMARY. The owner or operator of a new or existing affected source shall comply with each applicable limit in this section**.** The following table summarizes the emission standards for each type of source:

Table 1
Emission Standards for New and Existing Affected Sources

Affected source/ Emission Unit	Pollutant	Limit	Units
All new and existing affected sources and emission units that are controlled with a PM add-on control device and that choose to monitor with a COM; and all new and existing aluminum scrap shredders that choose to monitor with a COM or to monitor visible emissions	Opacity	10	percent
New and existing aluminum scrap shredder	PM	0.01	gr/dscf
New and existing thermal chip dryer	THC D&F [a]	0.80 2.50	lb/ton of feed µg TEQ/Mg of feed
New and existing scrap dryer, delacquering kiln, or decoating kiln OR Alternative limits if afterburner has a design residence time of at least 1 second and operates at a temperature of least 1400° F	PM HCl THC D&F [a] PM HCl THC D&F [a]	0.08 0.80 0.06 0.25 0.30 1.50 0.20 5.0	lb/ton of feed lb/ton of feed lb/ton of feed µg TEQ/Mg of feed lb/ton of feed lb/ton of feed lb/ton of feed µg TEQ/Mg of feed
New and existing sweat furnace	D&F [a]	0.80	ng TEQ/dscm @ 11% O_2 [b]
New and existing dross-only furnace	PM	0.30	lb/ton of feed
New and existing in-line fluxer [c]	HCl PM	0.04 0.01	lb/ton of feed lb/ton of feed
New and existing inline fluxer with no reactive fluxing		No Limit	Work practice: no reactive fluxing

New and existing rotary dross cooler	PM	0.04	gr/dscf
New and existing clean furnace (Group 2)		No Limit	Work practices: clean charge only and no reactive fluxing
New and existing group 1 melting and holding furnace (processing only clean charge)[c]	PM HCl or D&F [a]	0.80 0.40 10 15.0	lb/ton of feed lb/ton of feed percent of the HCl upstream of an add-on control device µg TEQ/Mg of feed
New and existing group 1 furnace [c]	PM HCl or D&F [a]	0.40 0.40 10 15.0	lb/ton of feed lb/ton of feed percent of the HCl upstream of an add-on control device µg TEQ/Mg of feed
New and existing group 1 furnace [c] with clean charge only	PM HCl or D&F [a]	0.40 0.40 10 No Limit	lb/ton of feed lb/ton of feed percent of the HCl upstream of an add-on control device Clean charge only
New and existing secondary aluminum processing unit [a,d] (consists of all existing group 1 furnaces and existing in-line flux boxes at the facility, or all simultaneously constructed new group 1 furnaces and new inline fluxers)	PM [e]	$L_{t_{PM}} = \frac{\sum_{i=1}^{n}\left(L_{i_{PM}} \times T_i\right)}{\sum_{i=1}^{n}\left(T_i\right)}$	
	HCl [f]	$L_{t_{HCl}} = \frac{\sum_{i=1}^{n}\left(L_{i_{HCl}} \times T_i\right)}{\sum_{i=1}^{n}\left(T_i\right)}$	
	D&F [g]	$L_{t_{D/F}} = \frac{\sum_{i=1}^{n}\left(L_{i_{D/F}} \times T_i\right)}{\sum_{i=1}^{n}\left(T_i\right)}$	

[a] D&F limit applies to a unit at a major or area source.

[b] Sweat furnaces equipped with afterburners meeting the specifications of s. NR 463.13(6)(a) are not required

to conduct a performance test.

[c] These limits are also used to calculate the limits applicable to secondary aluminum processing units.

[d] Equation definitions:

L_{iPM} is the PM emission limit for individual emission unit i in the secondary aluminum processing unit [kg/Mg (lb/ton) of feed]

T_i is the feed rate for individual emission unit i in the secondary aluminum processing unit

L_{tPM} is the overall PM emission limit for the secondary aluminum processing unit [kg/Mg (lb/ton) of feed]

L_{iHCl} is the HCl emission limit for individual emission unit i in the secondary aluminum processing unit [kg/Mg (lb/ton) of feed]

L_{tHCl} is the overall HCl emission limit for the secondary aluminum processing unit [kg/Mg (lb/ton) of feed]

$L_{i\ D\&F}$ is the D&F emission limit for individual emission unit i [µg TEQ/Mg (gr TEQ/ton) of feed]

$L_{t\ D\&F}$ is the overall D&F emission limit for the secondary aluminum processing unit [µg TEQ/Mg (gr TEQ/ton) of feed]

n is the number of units in the secondary aluminum processing unit

[e] In-line fluxers using no reactive flux materials cannot be included in this calculation since they are not subject to the PM limit.

[f] In-line fluxers using no reactive flux materials cannot be included in this calculation since they are not subject to the HCl limit.

[g] Clean charge furnaces cannot be included in this calculation since they are not subject to the D&F limit.

(2) ALUMINUM SCRAP SHREDDER. On and after the compliance date established by s. NR 463.115, the owner or operator of an aluminum scrap shredder at a secondary aluminum production facility that is a major source may not discharge or cause to be discharged to the atmosphere either of the following:

(a) Emissions in excess of 0.023 grams of PM per dry standard cubic meter (0.010 grain of PM per dry standard cubic foot).

(b) Visible emissions in excess of 10% opacity from any PM add-on air pollution control device if a continuous opacity monitor (COM) or visible emissions monitoring is chosen as the monitoring option.

(3) THERMAL CHIP DRYER. On and after the compliance date established by s. NR 463.115, the owner or operator of a thermal chip dryer may not discharge or cause to be discharged to the atmosphere emissions in excess of either of the following:

(a) 0.40 kilogram (kg) of THC, as propane, per megagram (Mg) (0.80 lb of THC, as propane, per ton)

of feed or charge from a thermal chip dryer at a secondary aluminum production facility that is a major source.

(b) 2.50 micrograms (µg) of D&F TEQ per Mg (3.5×10^{-5} gr per ton) of feed or charge from a thermal chip dryer at a secondary aluminum production facility that is a major or area source.

(4) SCRAP DRYER, DELACQUERING KILN, DECOATING KILN. On and after the compliance date established by s. NR 463.115:

(a) The owner or operator of a scrap dryer, delacquering kiln or decoating kiln may not discharge or cause to be discharged to the atmosphere emissions in excess of any of the following:

1. 0.03 kg of THC, as propane, per Mg (0.06 lb of THC, as propane, per ton) of feed or charge from a scrap dryer, delacquering kiln or decoating kiln at a secondary aluminum production facility that is a major source.

2. 0.04 kg of PM per Mg (0.08 lb per ton) of feed or charge from a scrap dryer, delacquering kiln or decoating kiln at a secondary aluminum production facility that is a major source.

3. 0.25 µg of D&F TEQ per Mg (3.5×10^{-6} gr of D&F TEQ per ton) of feed or charge from a scrap dryer, delacquering kiln or decoating kiln at a secondary aluminum production facility that is a major or area source.

4. 0.40 kg of HCl per Mg (0.80 lb per ton) of feed or charge from a scrap dryer, delacquering kiln or decoating kiln at a secondary aluminum production facility that is a major source.

(b) The owner or operator of a scrap dryer, delacquering kiln or decoating kiln at a secondary aluminum production facility that is a major source may not discharge or cause to be discharged to the atmosphere visible emissions in excess of 10% opacity from any PM add-on air pollution control device if a COM is chosen as the monitoring option.

(5) SCRAP DRYER, DELACQUERING KILN AND DECOATING KILN: ALTERNATIVE LIMITS. The owner or operator of a scrap dryer, delacquering kiln or decoating kiln may choose to comply with the emission limits in this subsection as an alternative to the limits in sub. (4) if the scrap dryer, delacquering kiln or decoating kiln is equipped with an afterburner having a design residence time of at least one second and the afterburner is operated at a temperature of at least 760 °C (1400 °F) at all times. On and after the compliance date established by s. NR 463.115:

(a) The owner or operator of a scrap dryer, delacquering kiln or decoating kiln may not discharge or cause to be discharged to the atmosphere emissions in excess of any of the following:

1. 0.10 kg of THC, as propane, per Mg (0.20 lb of THC, as propane, per ton) of feed or charge from a scrap dryer, delacquering kiln or decoating kiln at a secondary aluminum production facility that is a major source.

2. 0.15 kg of PM per Mg (0.30 lb per ton) of feed or charge from a scrap dryer, delacquering kiln or decoating kiln at a secondary aluminum production facility that is a major source.

3. 5.0 µg of D&F TEQ per Mg (7.0×10^{-5} gr of D&F TEQ per ton) of feed or charge from a scrap dryer, delacquering kiln or decoating kiln at a secondary aluminum production facility that is a major or area source.

4. 0.75 kg of HCl per Mg (1.50 lb per ton) of feed or charge from a scrap dryer, delacquering kiln or decoating kiln at a secondary aluminum production facility that is a major source.

(b) The owner or operator of a scrap dryer, delacquering kiln or decoating kiln at a secondary aluminum production facility that is a major source may not discharge or cause to be discharged to the atmosphere visible emissions in excess of 10% opacity from any PM add-on air pollution control device if a COM is chosen as the monitoring option.

(6) SWEAT FURNACE. On and after the compliance date established by s. NR 463.115, the owner or operator of a sweat furnace at a secondary aluminum production facility that is a major or area source may not discharge or cause to be discharged to the atmosphere emissions in excess of 0.80 nanogram (ng) of D&F TEQ per dscm (3.5×10^{-10} gr per dscf) at 11% oxygen. A performance test is not required under s. NR 463.163(6) to demonstrate compliance with this emission standard provided that the owner or operator operates and maintains an afterburner with a design residence time of 0.8 seconds or greater and an operating temperature of 1600˚F or greater.

(7) DROSS-ONLY FURNACE. On and after the compliance date established by s. NR 463.115, the owner or operator of a dross-only furnace at a secondary aluminum production facility that is a major source may not discharge or cause to be discharged to the atmosphere either of the following:

(a) Emissions in excess of 0.15 kg of PM per Mg (0.30 lb of PM per ton) of feed or charge.

(b) Visible emissions in excess of 10% opacity from any PM add-on air pollution control device if a COM is chosen as the monitoring option.

(8) ROTARY DROSS COOLER. On and after the compliance date established by s. NR 463.115, the owner or operator of a rotary dross cooler at a secondary aluminum production facility that is a major source may not discharge or cause to be discharged to the atmosphere either of the following:

(a) Emissions in excess of 0.09 g of PM per dscm (0.04 gr per dscf).

(b) Visible emissions in excess of 10% opacity from any PM add-on air pollution control device if a COM is chosen as the monitoring option.

(9) GROUP 1 FURNACE. The owner or operator of a group 1 furnace shall use the limits in this subsection to determine the emission standards for a SAPU under sub. (11).

(a) 0.20 kg of PM per Mg (0.40 lb of PM per ton) of feed or charge from a group 1 furnace, that is not a melting and holding furnace processing only clean charge, at a secondary aluminum production facility that is a major source.

(b) 0.40 kg of PM per Mg (0.80 lb of PM per ton) of feed or charge from a group 1 melting and holding furnace processing only clean charge at a secondary aluminum production facility that is a major source.

(c) 15 µg of D&F TEQ per Mg (2.1×10^{-4} gr of D&F TEQ per ton) of feed or charge from a group 1 furnace at a secondary aluminum production facility that is a major or area source. This limit does not apply if the furnace processes only clean charge.

(d) 0.20 kg of HCl per Mg (0.40 lb of HCl per ton) of feed or charge or, if the furnace is equipped with an add-on air pollution control device, 10% of the uncontrolled HCl emissions, by weight, for a group 1 furnace at a secondary aluminum production facility that is a major source.

(e) The owner or operator of a group 1 furnace at a secondary aluminum production facility that is a major source may not discharge or cause to be discharged to the atmosphere visible emissions in excess of 10% opacity from any PM add-on air pollution control device if a COM is chosen as the monitoring option.

(f) The owner or operator may determine the emission standards for a SAPU by applying the group 1 furnace limits on the basis of the aluminum production weight in each group 1 furnace, rather than on the

basis of feed or charge.

(g) The owner or operator of a sidewell group 1 furnace that conducts reactive fluxing, except for cover flux, in the hearth, or that conducts reactive fluxing in the sidewell at times when the level of molten metal falls below the top of the passage between the sidewell and the hearth, shall comply with the emission limits of pars. (a) to (d) on the basis of the combined emissions from the sidewell and the hearth.

(10) IN-LINE FLUXER. Except as provided in par. (c) for an in-line fluxer using no reactive flux material, the owner or operator of an in-line fluxer shall use the limits in this subsection to determine the emission standards for a SAPU under sub. (11).

(a) 0.02 kg of HCl per Mg (0.04 lb of HCl per ton) of feed or charge.

(b) 0.005 kg of PM per Mg (0.01 lb of PM per ton) of feed or charge.

(c) The emission limits in pars. (a) and (b) do not apply to an in-line fluxer that uses no reactive flux materials.

(d) The owner or operator of an in-line fluxer at a secondary aluminum production facility that is a major source may not discharge or cause to be discharged to the atmosphere visible emissions in excess of 10% opacity from any PM add-on air pollution control device used to control emissions from the in-line fluxer, if a COM is chosen as the monitoring option.

(e) The owner or operator may determine the emission standards for a SAPU by applying the in-line fluxer limits on the basis of the aluminum production weight in each in-line fluxer, rather than on the basis of feed or charge.

(11) SECONDARY ALUMINUM PROCESSING UNIT. On and after the compliance date established by s. NR 463.115, the owner or operator shall comply with the emission limits calculated using the equations for PM and HCl in pars. (a) and (b) for each secondary aluminum processing unit at a secondary aluminum production facility that is a major source. The owner or operator shall comply with the emission limit calculated using the equation for D&F in par. (c) for each secondary aluminum processing unit at a secondary aluminum production facility that is a major or area source.

(a) The owner or operator may not discharge or allow to be discharged to the atmosphere any 3-day,

24-hour rolling average emissions of PM in excess of:

$$L_{c_{PM}} = \frac{\sum_{i=1}^{n}\left(L_{ti_{PM}} \times T_{ti}\right)}{\sum_{i=1}^{n}\left(T_{ti}\right)} \qquad \text{(Equation 1)}$$

where:

$L_{ti_{PM}}$ is the PM emission limit for individual emission unit i in sub. (9)(a) and (b) for a group 1 furnace or in sub. (10)(b) for an in-line fluxer

T_{ti} is the feed or charge rate for individual emission unit i

$L_{c_{PM}}$ is the PM emission limit for the secondary aluminum processing unit

Note: In-line fluxers using no reactive flux materials cannot be included in this calculation since they are not subject to the PM limit.

(b) The owner or operator may not discharge or allow to be discharged to the atmosphere any 3-day, 24-hour rolling average emissions of HCl in excess of:

$$L_{c_{HCl}} = \frac{\sum_{i=1}^{n}\left(L_{ti_{HCl}} \times T_{ti}\right)}{\sum_{i=1}^{n}\left(T_{ti}\right)} \qquad \text{(Equation 2)}$$

where:

$L_{ti_{HCl}}$ is the HCl emission limit for individual emission unit i in sub. (9)(d) for a group 1 furnace or in sub. (10)(a) for an in-line fluxer

$L_{c_{HCl}}$ is the HCl emission limit for the secondary aluminum processing unit

Note: In-line fluxers using no reactive flux materials cannot be included in this calculation since they

are not subject to the HCl limit.

(c) The owner or operator may not discharge or allow to be discharged to the atmosphere any 3-day, 24-hour rolling average emissions of D&F in excess of:

$$L_{c_{D\&F}} = \frac{\sum_{i=1}^{n}\left(L_{ti_{D\&F}} \times T_{ti}\right)}{\sum_{i=1}^{n}\left(T_{ti}\right)} \qquad \text{(Equation 3)}$$

where:

$L_{ti_{D\&F}}$ is the D&F emission limit for individual emission unit i in sub. (9)(c) for a group 1 furnace

$L_{c_{D\&F}}$ is the D&F emission limit for the secondary aluminum processing unit

Note: Clean charge furnaces cannot be included in this calculation since they are not subject to the D&F limit.

(d) The owner or operator of a SAPU at a secondary aluminum production facility that is a major source may demonstrate compliance with the emission limits of pars. (a) to (c) by demonstrating that each emission unit within the SAPU is in compliance with the applicable emission limits of subs. (9) and (10).

(e) The owner or operator of a SAPU at a secondary aluminum production facility that is an area source may demonstrate compliance with the emission limits of par. (c) by demonstrating that each emission unit within the SAPU is in compliance with the emission limit of sub. (9)(c).

(f) With the prior approval of the department, an owner or operator may redesignate any existing group 1 furnace or in-line fluxer at a secondary aluminum production facility as a new emission unit. Any emission unit so redesignated may thereafter be included in a new SAPU at that facility. Any redesignation shall be solely for the purpose of this MACT standard and shall be irreversible.

NR 463.14 Operating requirements. (**1**) SUMMARY. (a) On and after the compliance date established by s. NR 463.115, the owner or operator shall operate all new and existing affected sources and control equipment according to the requirements in this section.

(b) The owner or operator of an existing sweat furnace that meets the specifications of s. NR 463.13(6)(a) shall operate the sweat furnace and control equipment according to the requirements of this section on and after the compliance date established by s. NR 463.115.

(c) The owner or operator of a new sweat furnace that meets the specifications of s. NR 463.13(6)(a) shall operate the sweat furnace and control equipment according to the requirements of this section by March 23, 2000 or upon startup, whichever is later.

(d) Operating requirements are summarized in the following table.

Table 2

Summary of Operating Requirements for New and Existing Affected Sources and Emission Units

Affected Source Or emission unit	Monitor type, operation, process	Operating Requirements
All affected sources and emission units with an add-on air pollution control device	Emission capture and collection system	Design and install in accordance with Industrial Ventilation: A Manual of Recommended Practice, incorporated by reference in s. NR 484.11(2)(d); operate in accordance with OM&M plan. [b]
All affected sources and emission units subject to production-based (lb/ton of feed) emission limits [a]	Charge or feed weight or production weight	Operate a device that records the weight of each charge; operate in accordance with OM&M plan. [b]
Group 1 furnace, group 2 furnace, in-line fluxer, scrap dryer, delacquering kiln or decoating kiln	Labeling	Identification, operating parameter ranges and operating requirements posted at affected sources and emission units; control device temperature and residence time requirements posted at scrap dryer, delacquering kiln or decoating kiln.
Aluminum scrap shredder with fabric filter	Bag leak detector or	Initiate corrective action within one hour of alarm and complete in accordance with OM&M plan[b;] operate such that alarm does not sound more than 5% of operating time in 6-month period.
	Continuous opacity monitor or	Initiate corrective action within one hour of a 6-minute average opacity reading of 5% or more and complete in accordance with OM&M plan. [b]
	Visual emissions	Initiate corrective action within one hour of any observed visual emissions and complete in accordance with the

Affected Source Or emission unit	Monitor type, operation, process	Operating Requirements
		OM&M plan.[b]
Thermal chip dryer with afterburner	Afterburner operating temperature	Maintain average temperature for each 3-hr period at or above average operating temperature during the performance test.
	Afterburner operation	Operate in accordance with OM&M plan.[b]
	Feed material	Operate using only unpainted aluminum chips
Scrap dryer, delacquering kiln, decoating kiln with afterburner and lime-injected fabric filter	Afterburner operating temperature	Maintain average temperature for each 3-hr period at or above average operating temperature during the performance test.
	Afterburner operation	Operate in accordance with OM&M plan.[b]
	Bag leak detector or	Initiate corrective action within one hour of alarm and complete in accordance with the OM&M plan[b]; operate such that the alarm does not sound more than 5% of operating time in 6-month period.
	Continuous opacity monitor	Initiate corrective action within one hour of a 6-minute average opacity reading of 5% or more and complete in accordance with the OM&M plan.[b]
	Fabric filter inlet temperature	Maintain average fabric filter inlet temperature for each 3-hr period at or below average temperature during the performance test +14 ^{o}C (+25 ^{o}F).
	Lime injection rate	Maintain free-flowing lime in the feed hopper or silo at all times for continuous injection systems; maintain feeder setting at level established during the performance test for continuous injection systems.
Sweat furnace with afterburner	Afterburner operating temperature	If a performance test was conducted, maintain average temperature for each 3-hr period at or above average operating temperature during the performance test; if a performance test was not conducted, and afterburner meets specifications of s. NR 463.13(6)(a), maintain average temperature for each 3-hr period at or above 1600 ^{o}F.
	Afterburner operation	Operate in accordance with OM&M plan.[b]
Dross-only furnace with fabric filter	Bag leak detector or	Initiate corrective action within one hour of alarm and complete in accordance with the OM&M plan;[b] operate such that alarm does not sound more than 5% of operating time in 6-month period.
	Continuous opacity monitor	Initiate corrective action within one hour of a 6-minutes average opacity reading of 5% or more and complete in accordance with the OM&M plan.[b]

Affected Source Or emission unit	Monitor type, operation, process	Operating Requirements
	Feed or charge material	Operate using only dross as the feed material.
Rotary dross cooler with fabric filter	Bag leak detector or	Initiate corrective action within one hour of alarm and complete in accordance with the OM&M plan;[b] operate such that alarm does not sound more than 5% of operating time in 6-month period.
	Continuous opacity monitor	Initiate corrective action within one hour of a 6-minute average opacity reading of 5% or more and complete in accordance with the OM&M plan.[b]
In-line fluxer with lime-injected fabric filter, including those that are part of a secondary aluminum processing unit	Bag leak detector	Initiate corrective action within one hour of alarm and complete in accordance with OM&M plan;[b] operate such that alarm does not sound more than 5% or of operating time in a 6-month period.
	Continuous opacity monitor	Initiate corrective action within one hour of 6-minute average opacity reading of 5% or more and complete in accordance with the OM&M plan.[b]
	Lime injection rate	Maintain free-flowing lime in the feed hopper or silo at all times for continuous injection systems; maintain feeder setting at level established during performance test for continuous injection systems.
	Reactive flux injection rate	Maintain reactive flux injection rate at or below rate used during the performance test for each operating cycle or time period used in the performance test.
In-line fluxer using no reactive flux	Flux material	Use no reactive flux
Group 1 furnace with lime-injected fabric filter, including those that are part of a secondary aluminum processing unit	Bag leak detector or	Initiate corrective action within one hour of alarm; operate such that alarm does not sound more than 5% of operating time in 6-month period; complete corrective action in accordance with the OM&M plan.[b]
	Continuous opacity monitor	Initiate corrective action within one hour of a 6-minute average opacity reading of 5% or more; complete corrective action in accordance with the OM&M plan.[b]
	Fabric filter inlet temperature	Maintain average fabric filter inlet temperature for each 3-hour period at or below average temperature during the performance test +14°C (+25 °F)
	Reactive flux injection rate	Maintain reactive flux injection rate (lb/ton) at or below the rate used during the performance test for each furnace cycle.
	Lime injection rate	Maintain free-flowing lime in the feed hopper or silo at all times for continuous injection systems; maintain feeder setting at level established at performance test for

Affected Source Or emission unit	Monitor type, operation, process	Operating Requirements
		continuous injection systems.
	Maintain molten aluminum level	Operate sidewell furnaces such that the level of molten metal is above the top of the passage between sidewell and hearth during reactive flux injection unless the hearth is also controlled.
	Fluxing in sidewell furnace hearth	Add reactive flux only to the sidewell of the furnace unless the hearth is also controlled
Group 1 furnace without add-on controls, including those that are part of a secondary aluminum processing unit	Reactive flux injection	Maintain reactive flux injection rate (lb/ton) at or below rate used during the performance test for each operating cycle or time period used in the performance test.
	Site-specific monitoring plan[c]	Operate furnace within the range of charge materials, contaminant levels, and parameter values established in the site-specific monitoring plan
	Feed material, melting and holding furnace	Use only clean charge
Clean group 2 furnace	Charge and flux materials	Use only clean charge. Use no reactive flux.

[a] Thermal chip dryers, scrap dryers, delacquering kilns, dross-only furnaces, in-line fluxers and group 1 furnaces including melting and holding furnaces.
[b] OM&M plan- Operation, maintenance, and monitoring plan.
[c] Site-specific monitoring plan. Owners and operators of group 1 furnaces without control devices shall include a section in their OM&M plan that documents work practices and pollution prevention measures, including procedures for scrap inspection, by which compliance is achieved with emission limits and process or feed parameter-based operating requirements. This plan and the testing to demonstrate adequacy of the monitoring plan shall be developed in coordination with and approved by the department.

(**2**) LABELING. The owner or operator shall provide and maintain easily visible labels posted at each group 1 furnace, group 2 furnace, in-line fluxer, scrap dryer, delacquering kiln and decoating kiln that identify the applicable emission limits and means of compliance, including all of the following:

(a) The type of affected source or emission unit, such as a scrap dryer, delacquering kiln or decoating kiln, group 1 furnace, group 2 furnace or in-line fluxer.

(b) The applicable operational standards and control methods, including work practice or control device. This includes the type of charge to be used for a furnace, including clean scrap only, all scrap, or other, flux materials and addition practices, and the applicable operating parameter ranges and requirements as

incorporated in the operations maintenance and monitoring plan required by s. NR 463.15(2).

(c) The afterburner operating temperature and design residence time for a scrap dryer, delacquering kiln or decoating kiln.

(**3**) CAPTURE AND COLLECTION SYSTEMS. For each affected source or emission unit equipped with an add-on air pollution control device, the owner or operator shall do all of the following:

(a) Design and install a system for the capture and collection of emissions to meet the engineering standards for minimum exhaust rates as published by the American Conference of Governmental Industrial Hygienists in chapters 3 and 5 of Industrial Ventilation: A Manual of Recommended Practice, incorporated by reference in s. NR 484.11(2)(d).

(b) Vent captured emissions through a closed system, except that dilution air may be added to emission streams for the purpose of controlling temperature at the inlet to a fabric filter.

(c) Operate each capture and collection system according to the procedures and requirements in the operation, maintenance and monitoring (OM&M) plan.

(**4**) FEED OR CHARGE WEIGHT. The owner or operator of each affected source or emission unit subject to an emission limit in kg/Mg (lb/ton) or µg/Mg (gr/ton) of feed or charge shall comply with both pars. (a) and (b).

(a) Except as provided in par. (c), install and operate a device that measures and records or otherwise determine the weight of feed or charge (or throughput) for each operating cycle or time period used in the performance test.

(b) Operate each weight measurement system or other weight determination procedure in accordance with the OM&M plan.

(c) The owner or operator may chose to measure and record aluminum production weight from an affected source or emission unit rather than feed or charge weight to an affected source or emission unit, provided that both of the following conditions are met:

1. The aluminum production weight, rather than feed or charge weight is measured and recorded for all emission units within a SAPU.

2. All calculations to demonstrate compliance with the emission limits for SAPUs are based on aluminum production weight rather than feed or charge weight.

(**5**) ALUMINUM SCRAP SHREDDER. The owner or operator of a scrap shredder with emissions controlled by a fabric filter shall operate a bag leak detection system or a continuous opacity monitor or conduct visible emissions observations.

(a) If a bag leak detection system is used to meet the monitoring requirements in s. NR 463.15, the owner or operator shall do all of the following:

1. Initiate corrective action within one hour of a bag leak detection system alarm and complete the corrective action procedures in accordance with the OM&M plan.

2. Operate each fabric filter system such that the bag leak detection system alarm does not sound more than 5% of the operating time during a 6-month block reporting period. In calculating this operating time fraction, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time shall be counted. If corrective action is required, each alarm shall be counted as a minimum of one hour. If the owner or operator takes longer than one hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by the owner or operator to initiate corrective action.

(b) If a continuous opacity monitoring system is used to meet the monitoring requirements in s. NR 463.15, the owner or operator shall initiate corrective action within one hour of any 6-minute average reading of 5% or more opacity and complete the corrective action procedures in accordance with the OM&M plan.

(c) If visible emission observations are used to meet the monitoring requirements in s. NR 463.15, the owner or operator shall initiate corrective action within one hour of any observation of visible emissions during a daily visible emissions test and complete the corrective action procedures in accordance with the OM&M plan.

(**6**) THERMAL CHIP DRYER. The owner or operator of a thermal chip dryer with emissions controlled by an afterburner shall do all of the following:

(a) Maintain the 3-hour block average operating temperature of each afterburner at or above the average temperature established during the performance test.

(b) Operate each afterburner in accordance with the OM&M plan.

(c) Operate each thermal chip dryer using only unpainted aluminum chips as the feedstock.

(**7**) SCRAP DRYER, DELACQUERING KILN OR DECOATING KILN. The owner or operator of a scrap dryer, delacquering kiln or decoating kiln with emissions controlled by an afterburner and a lime-injected fabric filter shall meet pars. (a), (d) and (e) and either par. (b) or (c) as applicable:

(a) For each afterburner, do both of the following:

1. Maintain the 3-hour block average operating temperature of each afterburner at or above the average temperature established during the performance test.

2. Operate each afterburner in accordance with the OM&M plan.

(b) If a bag leak detection system is used to meet the fabric filter monitoring requirements in s. NR 463.15, do both of the following:

1. Initiate corrective action within one hour of a bag leak detection system alarm and complete any necessary corrective action procedures in accordance with the OM&M plan.

2. Operate each fabric filter system such that the bag leak detection system alarm does not sound more than 5% of the operating time during a 6-month block reporting period. In calculating this operating time fraction, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time shall be counted. If corrective action is required, each alarm shall be counted as a minimum of one hour. If the owner or operator takes longer than one hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by the owner or operator to initiate corrective action.

(c) If a continuous opacity monitoring system is used to meet the monitoring requirements in s. NR 463.15, initiate corrective action within one hour of any 6-minute average reading of 5% or more opacity and complete the corrective action procedures in accordance with the OM&M plan.

(d) Maintain the 3-hour block average inlet temperature for each fabric filter at or below the sum of the average temperature established during the performance test, plus 14°C (25°F).

(e) For a continuous injection device, maintain free-flowing lime in the hopper to the feed device at all times and maintain the lime feeder setting at the same level established during the performance test.

(**8**) SWEAT FURNACE. The owner or operator of a sweat furnace with emissions controlled by an afterburner shall do both of the following:

(a) Maintain the 3-hour block average operating temperature of each afterburner at or above one of the following, as appropriate:

1.The average temperature established during the performance test.

2. 871°C (1600˚F) if a performance test was not conducted, and the afterburner meets the specifications of s. NR 463.13(6)(a).

(b) Operate each afterburner in accordance with the OM&M plan.

(**9**) DROSS-ONLY FURNACE. The owner or operator of a dross-only furnace with emissions controlled by a fabric filter shall meet par. (c) and either par. (a) or (b) as appropriate:

(a) If a bag leak detection system is used to meet the monitoring requirements in s. NR 463.15, do both of the following:

1. Initiate corrective action within one hour of a bag leak detection system alarm and complete the corrective action procedures in accordance with the OM&M plan.

2. Operate each fabric filter system such that the bag leak detection system alarm does not sound more than 5% of the operating time during a 6-month block reporting period. In calculating this operating time fraction, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time shall be counted. If corrective action is required, each alarm shall be counted as a minimum of one hour. If the owner or operator takes longer than one hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by the owner or operator to initiate corrective action.

(b) If a continuous opacity monitoring system is used to meet the monitoring requirements in s. NR 463.15, initiate corrective action within one hour of any 6-minute average reading of 5% or more opacity and complete the corrective action procedures in accordance with the OM&M plan.

(c) Operate each furnace using dross and salt flux as the sole feedstock.

(**10**) ROTARY DROSS COOLER. The owner or operator of a rotary dross cooler with emissions controlled by a fabric filter shall do one of the following:

(a) If a bag leak detection system is used to meet the monitoring requirements in s. NR 463.15, do both of the following:

1. Initiate corrective action within one hour of a bag leak detection system alarm and complete the corrective action procedures in accordance with the OM&M plan.

2. Operate each fabric filter system such that the bag leak detection system alarm does not sound more than 5% of the operating time during a 6-month block reporting period. In calculating this operating time fraction, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time shall be counted. If corrective action is required, each alarm shall be counted as a minimum of one hour. If the owner or operator takes longer than one hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by the owner or operator to initiate corrective action.

(b) If a continuous opacity monitoring system is used to meet the monitoring requirements in s. NR 463.15, initiate corrective action within one hour of any 6-minute average reading of 5% or more opacity and complete the corrective action procedures in accordance with the OM&M plan.

(**11**) IN-LINE FLUXER. The owner or operator of an in-line fluxer with emissions controlled by a lime-injected fabric filter shall meet pars. (c) and (d) and either par. (a) or (b) as applicable:

(a) If a bag leak detection system is used to meet the monitoring requirements in s. NR 463.15, do both of the following:

1. Initiate corrective action within one hour of a bag leak detection system alarm and complete the corrective action procedures in accordance with the OM&M plan.

2. Operate each fabric filter system such that the bag leak detection system alarm does not sound more than 5% of the operating time during a 6-month block reporting period. In calculating this operating time fraction, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time shall be counted. If corrective action is required, each alarm shall be counted as a minimum of one hour. If the owner or operator takes longer than one hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by the owner or operator to initiate corrective action.

(b) If a continuous opacity monitoring system is used to meet the monitoring requirements in s. NR

463.15, initiate corrective action within one hour of any 6-minute average reading of 5% or more opacity and complete the corrective action procedures in accordance with the OM&M plan.

(c) For a continuous injection system, maintain free-flowing lime in the hopper to the feed device at all times and maintain the lime feeder setting at the same level established during the performance test.

(d) Maintain the total reactive chlorine flux injection rate for each operating cycle or time period at or below the average rate established during the performance test for the operating cycle or time period.

(**12**) IN-LINE FLUXER USING NO REACTIVE FLUX MATERIAL. The owner or operator of a new or existing in-line fluxer using no reactive flux materials shall operate each in-line fluxer using no reactive flux materials.

(**13**) GROUP 1 FURNACE WITH ADD-ON AIR POLLUTION CONTROL DEVICES. The owner or operator of a group 1 furnace with emissions controlled by a lime-injected fabric filter shall meet pars. (c) to (f) and either par. (a) or (b) as applicable:

(a) If a bag leak detection system is used to meet the monitoring requirements in s. NR 463.15 do all of the following:

1. Initiate corrective action within one hour of a bag leak detection system alarm.

2. Complete the corrective action procedures in accordance with the OM&M plan.

3. Operate each fabric filter system such that the bag leak detection system alarm does not sound more than 5% of the operating time during a 6-month block reporting period. In calculating this operating time fraction, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time shall be counted. If corrective action is required, each alarm shall be counted as a minimum of one hour. If the owner or operator takes longer than one hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by the owner or operator to initiate corrective action.

(b) If a continuous opacity monitoring system is used to meet the monitoring requirements in s. NR 463.15, do both of the following:

1. Initiate corrective action within one hour of any 6-minute average reading of 5% or more opacity.

2. Complete the corrective action procedures in accordance with the OM&M plan.

(c) Maintain the 3-hour block average inlet temperature for each fabric filter at or below the sum of the average temperature established during the performance test, plus 14˚C (25˚F).

(d) For a continuous lime injection system, maintain free-flowing lime in the hopper to the feed device at all times and maintain the lime feeder setting at the same level established during the performance test.

(e) Maintain the total reactive chlorine flux injection rate for each operating cycle or time period at or below the average rate established during the performance test for the operating cycle or time period.

(f) Operate each sidewell furnace such that both of the following are met:

1.The level of molten metal remains above the top of the passage between the sidewell and hearth during reactive flux injection, unless emissions from both the sidewell and the hearth are included in demonstrating compliance with all applicable emission limits.

2. Reactive flux is added only in the sidewell, unless emissions from both the sidewell and the hearth are included in demonstrating compliance with all applicable emission limits.

(**14**) GROUP 1 FURNACE WITHOUT ADD-ON AIR POLLUTION CONTROL DEVICES. The owner or operator of a group 1 furnace, including a group 1 furnace that is part of a secondary aluminum processing unit, without add-on air pollution control devices shall do all of the following:

(a) Maintain the total reactive chlorine flux injection rate for each operating cycle or time period at or below the average rate established during the performance test for the operating cycle or time period.

(b) Operate each furnace in accordance with the work practice and pollution prevention measures documented in the OM&M plan and within the parameter values or ranges established in the OM&M plan.

(c) Operate each group 1 melting and holding furnace subject to the emission standards in s. NR 463.13(9)(b) using only clean charge as the feedstock.

(**15**) GROUP 2 FURNACE. The owner or operator of a new or existing group 2 furnace shall do both of the following:

(a) Operate each furnace using only clean charge as the feedstock.

(b) Operate each furnace using no reactive flux.

(**16**) CORRECTIVE ACTION. When a process parameter or add-on air pollution control device

operating parameter deviates from the value or range established during the performance test and incorporated in the OM&M plan, the owner or operator shall initiate corrective action. Corrective action shall restore operation of the affected source or emission unit, including the process or control device, to its normal or usual mode of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. Corrective actions taken shall include follow-up actions necessary to return the process or control device parameter level to the value or range of values established during the performance test and steps to prevent the likely recurrence of the cause of a deviation.

NR 463.15 Monitoring requirements. (**1**) SUMMARY. On and after the compliance date established by s. NR 463.115, the owner or operator of a new or existing affected source or emission unit shall monitor all control equipment and processes according to the requirements in this section. Monitoring requirements for each type of affected source and emission unit are summarized in the following table.

Table 3

Summary of Monitoring Requirements for New and Existing Affected Sources and Emission Units

Affected Source and emission unit	**Monitor type, operation, process**	**Monitoring Requirements**
All affected sources and emission units with an add-on air pollution control device	Emission capture and collection system	Annual inspection of all emission capture, collection, and transport systems to ensure that systems continue to operate in accordance with Industrial Ventilation: A Manual of Recommended Practice, incorporated by reference in s. NR 484.11(2)(d).
All affected sources and emission units subject to production-based, lb/ton of feed or charge, emission limits. [a]	Feed charge weight	Record weight of each feed or charge, weight measurements device of other procedure accuracy of ±1%[b]; calibrate according to manufacturers specifications, or at least once every 6 months
Group 1 furnace, group 2 furnace in-line fluxer, scrap dryer, delacquering kiln or decoating kiln	Labeling	Check monthly to confirm that labels are intact and legible
Aluminum scrap shredder with fabric filter	Bag leak detector or Continuous opacity	Install and operate in accordance with “Fabric Filter Bag Leak Detection Guidance.”[c]; Record voltage output from bag leak detector. Design and install in accordance with PS-1; collect

	monitor or	data in accordance with subpart A of 40 CFR part 63; determine and record 6-minute block averages.
	Visual emissions	Conduct and record results of 30-minute daily test in accordance with Method 9 in Appendix A to 40 CFR part 60, incorporated by reference in s. NR 484.04(13).
Thermal Chip dryer with afterburner	Afterburner operating temperature	Continuous measurement device to meet specifications in s. NR 463.15(7)(a); record average temperature for each 15-minute block; determine and record 3-hr block averages.
	Afterburner operation	Annual inspection of afterburner internal parts; complete repairs in accordance with the OM&M[d] plan.
	Feed or charge material	Record identity of each feed or charge; certify feed or charge materials ever 6 months
Scrap dryer, delacquering kiln or decoating kiln with afterburner and lime injected fabric filter	Afterburner operating temperature	Continuous measurement device to meet specifications in s. NR 463.15(7)(a); record temperature for each 15-minute block; determine and record 3-hr block averages.
	Afterburner operation	Annual inspection of afterburner internal parts; complete repairs in accordance with the OM&M[d] plan.
	Bag leak detector or	Install and operate in accordance with "Fabric Filter Bag Leak Detection Guidance"[c]; record voltage output from bag leak detector.
	Continuous opacity monitor	Design and install in accordance with PS-1; collect data in accordance with subpart A of 40 CFR part 63; determine and record 6-minute block averages.
	Lime injection rate	For continuous injection systems; inspect each feed hopper or silo every 8 hr to verify that lime is free-flowing; record results of each inspection. If blockage occurs, inspect every 4 hr for 3 days; return to 8-hr inspections if corrective action results in no further blockage during the 3-day period; record feeder setting daily.
	Fabric filter inlet temperature	Continuous measurement device to meet specifications in s. NR 463.15(8)(b); record temperatures in 15-minute block averages; determine and record 3-hr blockage averages.
Sweat furnace with after burner	Afterburner operating temperature	Continuous measurement device to meet specifications in s. NR 463.15(8)(a); record temperature in 15-minute block averages;

		determine and record 3-hr block average.
	Afterburner operation	Annual inspection of afterburner internal parts; complete repairs in accordance with the OM&M[d] plan.
Dross-only furnace with fabric filter	Bag leak detector or	Install and operate in accordance with "Fabric Filter Bag Leak Detection Guidance"[c]; record output voltage from bag leak detector.
	Continuous opacity monitor	Design and install in accordance with PS-1; collect data in accordance with subpart A of 40 CFR part 63; determine and record 6-minute block averages.
	Feed or charge material	Record identify of each feed or charge; certify charge materials every 6 months.
Rotary dross cooler with fabric filter	Bag leak detector or	Install and operate in accordance with "Fabric Filter Bag Leak Detection Guidance"[c]; record output voltage from bag leak detector.
	Continuous opacity monitor	Design and install in accordance with PS-1; collect data in accordance with subpart A of 40 CFR part 63; determine and record 6-minute block averages.
In-Line fluxer with lime-injected fabric filter	Flux materials	Record flux material; certify every 6 months for no reactive flux.
	Bag leak detector or	Install and operate in accordance with "Fabric Filter Bag Leak Detection Guidance"[c]; record output voltage from bag leak detector.
	Continuous opacity monitor	Design and install in accordance with PS-1; collect data in accordance with subpart A of 40 CFR part 63; determine and record 6-minute block averages.
	Reactive flux injection rate	Weight measurement device accuracy of ±1%; calibrate according to manufacturers specifications or at least once every 6 months; record time, weight and type of reactive flux added or injected for each 15-minute block period while reactive fluxing occurs; calculate and record total reactive flux injection rate for each operating cycle or time period used in performance test; or Alternative flux injection rate determination procedure per s. NR 463.15 (10) (e).
	Lime injection rate	For continuous injection systems; inspect each feed hopper or silo every 8 hr to verify that lime is free-flowing; record results of each inspection. If blockage occurs, inspect every 4 hr for 3 days;

		return to 8-hr inspections if corrective action results in no further blockage during the 3-day period.[e]
In-line fluxer using no reactive flux	Flux materials	Record flux materials; certify every 6 months for no reactive flux.
Group 1 furnace with lime injected fabric filter	Bag leak detector or	Install and operate in accordance with "Fabric Filter Bag Leak Detection Guidance"[c]; record output voltage from bag leak detector.
	Continuous opacity monitor	Design and install in accordance with PS-1; collect data in accordance with subpart A of 40 CFR part 63; determine and record 6-minute block averages.
	Lime injection rate	For continuous injection systems; inspect each feed hopper or silo every 8 hr to verify that lime is free-flowing; record results of each inspection. If blockage occurs, inspect every 4 hr for 3 days; return to 8-hr inspections if corrective action results in no further blockage during the 3-day period; record feeder setting daily.
	Reactive flux injection rate	Weight measurement device accuracy of ± 1%[b], calibrate every 3 months; record weight and type of reactive flux added or injected for each 15-minute block period while reactive fluxing occurs; calculate and record total reactive flux injection rate for each operating cycle or time period used in performance test; or Alternative flux rate injection rate determination procedure per s. NR 463.15(10)(e).
	Fabric filter inlet temperature	Continuous measurement device to meet specifications in s. NR 463.15(8)(b); record temperatures in 15-minute block averages; determine and record 3-hour block averages
	Maintain molten aluminum level in sidewell furnace	Maintain aluminum level operating log; certify every 6 months.
Group 1 furnace without add-on controls	Fluxing molten aluminum level in sidewell furnace	Maintain flux addition operating log; certify every 6 months.
	Reactive flux injection rate	Weight measurement device accuracy of ±1%; calibrate according to manufacturers specifications or at least once every 6 months; record time, weight and type of reactive flux added or injected for each 15-minute block period while reactive fluxing

		occurs; calculate and record total reactive flux injection rate for each operating cycle or time period used in performance test.
	OM&M[d] plan approved by the department	Demonstration of site-specific monitoring procedures to provide data and show correlation of emissions across the range of charge and flux materials and furnace operating parameters.
	Feed material - melting and holding furnace	Record type of permissible feed or charge material; certify charge materials every 6 months.
Clean group 2 furnace	Charge and flux materials	Record charge and flux materials; certify every 6 months for clean charge and no reactive flux.

[a] Thermal chip dryers, scrap dryers, delacquering kilns, dross-only furnaces, in-line fluxers and group 1 furnaces or melting and holding furnaces
[b] The department may approve measurement devices of alternative accuracy, for example in cases where flux rates are very low and costs of meters of specified accuracy are prohibitive; or where feed or charge weighing devices of specified accuracy are not practicable due to equipment layout or charging practices.
[c] Non-turboelectric bag leak detectors shall be installed and operated in accordance with manufacturers' specifications.
[d] OM&M plan- Operation, maintenance, and monitoring plan.
[e] The department may approve of other alternatives including load cells for lime hopper weight, sensors for carrier gas pressure, or HCl monitoring devices of fabric filter outlet.

(**2**) OPERATION, MAINTENANCE, AND MONITORING PLAN. The owner or operator shall prepare and implement for each new or existing affected source and emission unit, a written operation, maintenance and monitoring (OM&M) plan. The owner or operator of an existing affected source shall submit the OM&M plan to the department no later than the compliance date established by s. NR 463.115(1). The owner or operator of any new MACT source subject to this subchapter shall submit the OM&M plan to the department within 90 days after a successful initial performance test under s. NR 463.16(2) or within 90 days after the compliance date established by s. NR 463.115(2) if no initial performance test is required. The plan shall be accompanied by a written certification by the owner or operator that the OM&M plan satisfies all requirements of this section and is otherwise consistent with the requirements of this subchapter. The owner or operator shall comply with all of the provisions of the OM&M plan as submitted to the department, unless and until the plan is revised in accordance with the following procedures. If the department determines at any time after receipt of the OM&M

plan that any revisions of the plan are necessary to satisfy the requirements of this subchapter, the owner or operator shall promptly make all necessary revisions and resubmit the revised plan. If the owner or operator determines that any other revisions of the OM&M plan are necessary, the revisions may not become effective until the owner or operator submits a description of the changes and a revised plan incorporating them to the department. Each plan shall contain all of the following information:

(a) Process and control device parameters to be monitored to determine compliance, along with established operating levels or ranges, as applicable, for each process and control device.

(b) A monitoring schedule for each affected source and emission unit.

(c) Procedures for the proper operation and maintenance of each process unit and add-on control device used to meet the applicable emission limits or standards in s. NR 463.13.

(d) Procedures for the proper operation and maintenance of monitoring devices or systems used to determine compliance, including the following:

1. Calibration and certification of accuracy of each monitoring device, at least once every 6 months, according to the manufacturer's instructions.

2. Procedures for the quality control and quality assurance of continuous emission or opacity monitoring systems as required by the general provisions in ch. NR 460.

(e) Procedures for monitoring process and control device parameters, including procedures for annual inspections of afterburners, and if applicable, the procedure to be used for determining charge or feed or throughput weight if a measurement device is not used.

(f) Corrective actions to be taken when process or operating parameters or add-on control device parameters deviate from the value or range established in par. (a), including the following:

1. Procedures to determine and record the cause of a deviation or excursion, and the time the deviation or excursion began and ended.

2. Procedures for recording the corrective action taken, the time corrective action was initiated, and the time and date corrective action was completed.

(g) A maintenance schedule for each process and control device that is consistent with the

manufacturer's instructions and recommendations for routine and long-term maintenance.

(h) Documentation of the work practice and pollution prevention measures used to achieve compliance with the applicable emission limits and a site-specific monitoring plan as required in sub. (15) for each group 1 furnace not equipped with an add-on air pollution control device.

(**3**) LABELING. The owner or operator shall inspect the labels for each group 1 furnace, group 2 furnace, in-line fluxer, scrap dryer, delacquering kiln and decoating kiln at least once per calendar month to confirm that posted labels as required by the operational standard in s. NR 463.14(2) are intact and legible.

(**4**) CAPTURE AND COLLECTION SYSTEM. The owner or operator shall do both of the following:

(a) Install, operate and maintain a capture and collection system for each affected source and emission unit equipped with an add-on air pollution control device.

(b) Inspect each capture and collection and closed vent system at least once each calendar year to ensure that each system is operating in accordance with the operating requirements in s. NR 463.14(3) and record the results of each inspection.

(**5**) FEED OR CHARGE WEIGHT. The owner or operator of an affected source or emission unit subject to an emission limit in kg/Mg (lb/ton) or µg/Mg (gr/ton) of feed or charge shall install, calibrate, operate and maintain a device to measure and record the total weight of feed or charge to, or the aluminum production from, the affected source or emission unit over the same operating cycle or time period used in the performance test. Feed or charge or aluminum production within SAPUs shall be measured and recorded on an emission unit-by-emission unit basis. As an alternative to a measurement device, the owner or operator may use a procedure acceptable to the department to determine the total weight of feed or charge or aluminum production to the affected source or emission unit.

(a) The weight measurement device or procedure shall have an accuracy of ± 1% of the weight being measured. The owner or operator may apply to the department for approval to use a device of alternative accuracy if the required accuracy cannot be achieved as a result of equipment layout or charging practices. A device of alternative accuracy may not be approved unless the owner or operator provides assurance through data and information that the affected source will meet the relevant emission standard.

(b) The owner or operator shall verify the calibration of the weight measurement device in accordance with the schedule specified by the manufacturer, or if no calibration schedule is specified, at least once every 6 months.

(**6**) FABRIC FILTERS AND LIME-INJECTED FABRIC FILTERS. The owner or operator of an affected source or emission unit using a fabric filter or lime-injected fabric filter to comply with the requirements of this subchapter shall install, calibrate, maintain and continuously operate a bag leak detection system as required in par. (a) or a continuous opacity monitoring system as required in par. (b). The owner or operator of an aluminum scrap shredder shall install and operate a bag leak detection system as required in par. (a), install and operate a continuous opacity monitoring system as required in par. (b), or conduct visible emission observations as required in par. (c).

(a) The requirements of this paragraph apply to the owner or operator of a new or existing affected source or existing emission unit using a bag leak detection system.

1. The owner or operator shall install and operate a bag leak detection system for each exhaust stack of a fabric filter.

2. Each triboelectric bag leak detection system shall be installed, calibrated, operated and maintained according to the Fabric Filter Bag Leak Detection Guidance, EPA, OAQPS, September 1997, incorporated by reference in s. NR 484.05(10). Other bag leak detection systems shall be installed, operated, calibrated, and maintained in a manner consistent with the manufacturer's written specifications and recommendations.

3. The bag leak detection system shall be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less.

4. The bag leak detection system sensor shall provide output of relative or absolute PM loadings.

5. The bag leak detection system shall be equipped with a device to continuously record the output signal from the sensor.

6. The bag leak detection system shall be equipped with an alarm system that shall sound automatically when an increase in relative PM emissions over a preset level is detected. The alarm shall be

located where it is easily heard by plant operating personnel.

7. For positive pressure fabric filter systems, a bag leak detection system shall be installed in each baghouse compartment or cell. For negative pressure or induced air fabric filters, the bag leak detector shall be installed downstream of the fabric filter.

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

9. The baseline output shall be established by adjusting the range and the averaging period of the device and establishing the alarm set points and the alarm delay time.

10. Following initial adjustment of the system, the owner or operator may not adjust the sensitivity or range, averaging period, alarm set points, or alarm delay time except as detailed in the OM&M plan. In no case may the sensitivity be increased by more than 100% or decreased more than 50% over a 365-day period unless the adjustment follows a complete fabric filter inspection which demonstrates that the fabric filter is in good operating condition.

(b) The requirements of this paragraph apply to the owner or operator of a new or existing affected source or an existing emission unit using a continuous opacity monitoring system.

1. The owner or operator shall install, calibrate, maintain and operate a continuous opacity monitoring system to measure and record the opacity of emissions exiting each exhaust stack.

2. Each continuous opacity monitoring system shall meet the design and installation requirements of Performance Specification 1 in Appendix B to 40 CFR part 60, incorporated by reference in s. NR 484.04(21).

(c) The requirements of this paragraph apply to the owner or operator of a new or existing aluminum scrap shredder who conducts visible emission observations. The owner or operator shall do both of the following:

1. Perform a visible emissions test for each aluminum scrap shredder using a certified observer at least once a day according to the requirements of Method 9 in Appendix A to 40 CFR part 60, incorporated by reference in s. NR 484.04(13). Each Method 9 test shall consist of 5 6-minute observations in a 30-minute period.

2. Record the results of each test required under subd. 1.

(**7**) AFTERBURNER. The requirements of this subsection apply to the owner or operator of an affected source using an afterburner to comply with the requirements of this subchapter.

(a) The owner or operator shall install, calibrate, maintain, and operate a device to continuously monitor and record the operating temperature of the afterburner consistent with the requirements for continuous monitoring systems in s. NR 460.07(3).

(b) The temperature monitoring device shall meet each of the following performance and equipment specifications:

1.The temperature monitoring device shall be installed at the exit of the combustion zone of each afterburner.

2. The monitoring system shall record the temperature in 15-minute block averages and determine and record the average temperature for each 3-hour block period.

3. The recorder response range shall include zero and 1.5 times the average temperature established according to the requirements in s. NR 463.163(13).

4. The reference method shall be a National Institute of Standards and Technology calibrated reference thermocouple-potentiometer system or alternate reference, subject to approval by the department.

(c) The owner or operator shall conduct an inspection of each afterburner at least once a year and record the results. At a minimum, an inspection and resulting steps shall include all of the following:

1. Inspection of all burners, pilot assemblies, and pilot sensing devices for proper operation and clean pilot sensor.

2. Inspection for proper adjustment of combustion air.

3. Inspection of internal structures, such as baffles, to ensure structural integrity.

4. Inspection of dampers, fans, and blowers for proper operation.

5. Inspection for proper sealing.

6. Inspection of motors for proper operation.

7. Inspection of combustion chamber refractory lining and cleaning and replacement of lining as

necessary.

8. Inspection of afterburner shell for corrosion and hot spots.

9. Documentation, for the burn cycle that follows the inspection, that the afterburner is operating properly and any necessary adjustments have been made.

10. Verification that the equipment is maintained in good operating condition.

11. Following an equipment inspection, completion of all necessary repairs in accordance with the requirements of the OM&M plan.

(**8**) FABRIC FILTER INLET TEMPERATURE. The requirements of this subsection apply to the owner or operator of a scrap dryer, delacquering kiln or decoating kiln or a group 1 furnace using a lime-injected fabric filter to comply with the requirements of this subchapter.

(a) The owner or operator shall install, calibrate, maintain and operate a device to continuously monitor and record the temperature of the fabric filter inlet gases consistent with the requirements for continuous monitoring systems in s. NR 460.07(3).

(b) The temperature monitoring device shall meet each of the following performance and equipment specifications:

1. The monitoring system shall record the temperature in 15-minute block averages and calculate and record the average temperature for each 3-hour block period.

2. The recorder response range shall include zero and 1.5 times the average temperature established according to the requirements in s. NR 463.163(14).

3. The reference method shall be a National Institute of Standards and Technology calibrated reference thermocouple-potentiometer system or alternate reference, subject to approval by the department.

(**9**) LIME INJECTION. The requirements of this subsection apply to the owner or operator of an affected source or emission unit using a lime-injected fabric filter to comply with the requirements of this subchapter.

(a) The owner or operator of a continuous lime injection system shall verify that lime is always free-flowing by one of the following methods:

1. Inspecting each feed hopper or silo at least once each 8-hour period and recording the results of each inspection. If lime is found not to be free-flowing during any of the 8-hour periods, the owner or operator shall increase the frequency of inspections to at least once every 4-hour period for the next 3 days. The owner or operator may return to inspections at least once every 8-hour period if corrective action results in no further blockages of lime during the 3-day period.

2. Subject to the approval of the department, installing, operating and maintaining a load cell, carrier gas or lime flow indicator, carrier gas pressure drop measurement system or other system to confirm that lime is free-flowing. If lime is found not to be free-flowing, the owner or operator shall promptly initiate and complete corrective action.

3. Subject to the approval of the department, installing, operating and maintaining a device to monitor the concentration of HCl at the outlet of the fabric filter. If an increase in the concentration of HCl indicates that the lime is not free-flowing, the owner or operator shall promptly initiate and complete corrective action.

(b) The owner or operator of a continuous lime injection system shall record the lime feeder setting once each day of operation.

(c) An owner or operator who intermittently adds lime to a lime coated fabric filter shall obtain approval from the department for a lime addition monitoring procedure. The department may not approve a monitoring procedure unless data and information are submitted establishing that the procedure is adequate to ensure that relevant emission standards will be met on a continuous basis.

(**10**) TOTAL REACTIVE FLUX INJECTION RATE. The requirements of this subsection apply to the owner or operator of a group 1 furnace or in-line fluxer. The owner or operator shall meet pars. (a) to (d) or apply for approval of an alternate method under par. (e):

(a) Install, calibrate, operate and maintain a device to continuously measure and record the weight of gaseous or liquid reactive flux injected to each affected source or emission unit.

1. The monitoring system shall record the weight for each 15-minute block period, during which reactive fluxing occurs, over the same operating cycle or time period used in the performance test.

2. The weight measurement device shall be accurate to ± 1% of the weight of the reactive component

of the flux being measured. The owner or operator may apply to the department for permission to use a weight measurement device of alternative accuracy in cases where the reactive flux flow rates are so low as to make the use of a weight measurement device of ±1% impracticable. A device of alternative accuracy may not be approved unless the owner or operator provides assurance through data and information that the affected source will meet the relevant emission standards.

3. The owner or operator shall verify the calibration of the weight measurement device in accordance with the schedule specified by the manufacturer, or if no calibration schedule is specified, at least once every 6 months.

(b) Calculate and record the gaseous or liquid reactive flux injection rate (kg/Mg or lb/ton) for each operating cycle or time period used in the performance test using the procedure in s. NR 463.163(15).

(c) Record, for each 15-minute block period during each operating cycle or time period used in the performance test during which reactive fluxing occurs, the time, weight and type of flux for each addition of the following:

1. Gaseous or liquid reactive flux other than chlorine.

2. Solid reactive flux.

(d) Calculate and record the total reactive flux injection rate for each operating cycle or time period used in the performance test using the procedure in s. NR 463.163(15).

(e) At their discretion, apply to the department for approval of an alternative method for monitoring and recording the total reactive flux addition rate based on monitoring the weight or quantity of reactive flux per ton of feed or charge for each operating cycle or time period used in the performance test. An alternative monitoring method may not be approved unless the owner or operator provides assurance through data and information that the affected source will meet the relevant emission standards on a continuous basis.

(**11**) THERMAL CHIP DRYER. The requirements of this subsection apply to the owner or operator of a thermal chip dryer with emissions controlled by an afterburner. The owner or operator shall do both of the following:

(a) Record the type of materials charged to the unit for each operating cycle or time period used in the

performance test.

(b) Submit a certification of compliance with the applicable operational standard for charge materials in s. NR 463.14(6)(c) for each 6-month reporting period. Each certification shall contain the information in s. NR 463.18(2)(c)1.

(**12**) DROSS-ONLY FURNACE. The requirements of this subsection apply to the owner or operator of a dross-only furnace. The owner or operator shall do both of the following:

(a) Record the materials charged to each unit for each operating cycle or time period used in the performance test.

(b) Submit a certification of compliance with the applicable operational standard for charge materials in s. NR 463.14(9)(c) for each 6-month reporting period. Each certification shall contain the information in s. NR 463.18(2)(b)2.

(**13**) IN-LINE FLUXERS USING NO REACTIVE FLUX. The owner or operator of an in-line fluxer that uses no reactive flux materials shall submit a certification of compliance with the operational standard for no reactive flux materials in s. NR 463.14(12) for each 6-month reporting period. Each certification shall contain the information in s. NR 463.18(2)(b)6.

(**14**) SIDEWELL GROUP 1 FURNACE WITH ADD-ON AIR POLLUTION CONTROL DEVICES. The requirements of this subsection apply to the owner or operator of a sidewell group 1 furnace using add-on air pollution control devices. The owner or operator shall do both of the following:

(a) Record in an operating log for each charge of a sidewell furnace that the level of molten metal was above the top of the passage between the sidewell and hearth during reactive flux injection, unless the furnace hearth was also equipped with an add-on control device.

(b) Submit a certification of compliance with the operational standards in s. NR 463.14(13)(g) for each 6-month reporting period. Each certification shall contain the information in s. NR 463.18(2)(b)3.

(**15**) GROUP 1 FURNACE WITHOUT ADD-ON AIR POLLUTION CONTROL DEVICES. (a) The requirements of this paragraph apply to the owner or operator of a group 1 furnace that is not equipped with an add-on air pollution control device.

1.The owner or operator shall develop, in consultation with the department, a written site-specific monitoring plan. The site-specific monitoring plan shall be submitted to the department as part of the OM&M plan. The site-specific monitoring plan shall contain sufficient procedures to ensure continuing compliance with all applicable emission limits and shall demonstrate, based on documented test results, the relationship between emissions of PM, HCl and D&F and the proposed monitoring parameters for each pollutant. Test data shall establish the highest level of PM, HCl and D&F that will be emitted from the furnace. This emission level may be determined by conducting performance tests and monitoring operating parameters while charging the furnace with feed or charge materials containing the highest anticipated levels of oils and coatings and fluxing at the highest anticipated rate. If the department determines that any revisions of the site-specific monitoring plan are necessary to meet the requirements of this subchapter, the owner or operator shall promptly make all necessary revisions and resubmit the revised plan to the department.

2. The site-specific monitoring plan shall contain all of the following as applicable:

a. Each site-specific monitoring plan shall document each work practice, equipment and design practice, pollution prevention practice or other measure used to meet the applicable emission standards.

b. Each site-specific monitoring plan shall include provisions for unit labeling as required in sub. (3), feed or charge weight measurement, or production weight measurement, as required in sub. (5) and flux weight measurement as required in sub. (10).

c. Each site-specific monitoring plan for a melting and holding furnace subject to the clean charge emission standard in s. NR 463.13(9)(c) shall include requirements that the owner or operator record the type of feed or charge, such as ingot, thermally dried chips, dried scrap, or other, for each operating cycle or time period used in the performance test, and that the owner or operator submit a certification of compliance with the applicable operational standard for clean charge materials in s. NR 463.14(14)(c) for each 6-month reporting period. Each certification shall contain the information in s. NR 463.18(2)(b)4.

d. If a continuous emission monitoring system is included in a site-specific monitoring plan, the plan shall include provisions for the installation, operation and maintenance of the system to provide quality-assured measurements in accordance with all applicable requirements of the general provisions of ch. NR

460.

e. If a continuous opacity monitoring system is included in a site-specific monitoring plan, the plan shall include provisions for the installation, operation and maintenance of the system to provide quality-assured measurements in accordance with all applicable requirements of this subchapter.

f. If a site-specific monitoring plan includes a scrap inspection program for monitoring the scrap contaminant level of furnace feed or charge materials, the plan shall include provisions for the demonstration and implementation of the program in accordance with all applicable requirements in sub. (16).

g. If a site-specific monitoring plan includes a calculation method for monitoring the scrap contaminant level of furnace feed or charge materials, the plan shall include provisions for the demonstration and implementation of the program in accordance with all applicable requirements in sub. (17).

3. The owner or operator of an existing affected source shall submit the site-specific monitoring plan to the department for review at least 6 months prior to the compliance date.

(b) The department shall review and approve or disapprove a proposed site-specific monitoring plan, or request changes to a plan, based on whether the plan contains sufficient provisions to ensure continuing compliance with applicable emission limits and demonstrates, based on documented test results, the relationship between emissions of PM, HCl and D&F and the proposed monitoring parameters for each pollutant. Test data shall establish the highest level of PM, HCl and D&F that will be emitted from the furnace. Subject to department approval of the OM&M plan, this may be determined by conducting performance tests and monitoring operating parameters while charging the furnace with feed or charge materials containing the highest anticipated levels of oils and coatings and fluxing at the highest anticipated rate.

(**16**) SCRAP INSPECTION PROGRAM FOR GROUP 1 FURNACE WITHOUT ADD-ON AIR POLLUTION CONTROL DEVICES. A scrap inspection program shall include all of the following:

(a) A proven method for collecting representative samples and measuring the oil and coatings content of scrap samples.

(b) A scrap inspector training program.

(c) An established correlation between visual inspection and physical measurement of oil and

coatings content of scrap samples.

(d) Periodic physical measurements of oil and coatings content of randomly-selected scrap samples and comparison with visual inspection results.

(e) A system for assuring that only acceptable scrap is charged to an affected group 1 furnace.

(f) Recordkeeping requirements to document conformance with plan requirements.

(**17**) MONITORING OF SCRAP CONTAMINATION LEVEL BY CALCULATION METHOD FOR GROUP 1 FURNACE WITHOUT ADD-ON AIR POLLUTION CONTROL DEVICES. The owner or operator of a group 1 furnace dedicated to processing a distinct type of furnace feed or charge composed of scrap with a uniform composition, such as rejected product from a manufacturing process for which the coating-to-scrap ratio can be documented, may include a program in the site-specific monitoring plan for determining, monitoring and certifying the scrap contaminant level using a calculation method rather than a scrap inspection program. A scrap contaminant monitoring program using a calculation method shall include all of the following:

(a) Procedures for the characterization and documentation of the contaminant level of the scrap prior to the performance test.

(b) Limitations on the scrap in the furnace feed or charge to scrap of the same composition as that used in the performance test. If the performance test was conducted with a mixture of scrap and clean charge, limitations on the proportion of scrap in the furnace feed or charge to no greater than the proportion used during the performance test.

(c) Operating, monitoring, recordkeeping and reporting requirements to ensure that no scrap with a contaminant level higher than that used in the performance test is charged to the furnace.

(**18**) GROUP 2 FURNACE. The requirements of this subsection apply to the owner or operator of a new or existing group 2 furnace. The owner or operator shall do both of the following:

(a) Record a description of the materials charged to each furnace, including any nonreactive, non-HAP-containing, non-HAP-generating fluxing materials or agents.

(b) Submit a certification of compliance with the applicable operational standard for charge materials in s. NR 463.14(15) for each 6-month reporting period. Each certification shall contain the information in s. NR

463.18(4)(b)5.

(**19**) SITE-SPECIFIC REQUIREMENTS FOR SECONDARY ALUMINUM PROCESSING UNITS. (a) An owner or operator of a secondary aluminum processing unit at a facility shall include, within the OM&M plan prepared in accordance with sub. (2), all of the following information:

1. The identification of each emission unit in the secondary aluminum processing unit.

2. The specific control technology or pollution prevention measure to be used for each emission unit in the secondary aluminum processing unit and the date of its installation or application.

3. The emission limit calculated for each secondary aluminum processing unit and performance test results with supporting calculations demonstrating initial compliance with each applicable emission limit.

4. Information and data demonstrating compliance for each emission unit with all applicable design, equipment, work practice or operational standards of this subchapter.

5. The monitoring requirements applicable to each emission unit in a secondary aluminum processing unit and the monitoring procedures for daily calculation of the 3-day, 24-hour rolling average using the procedure in sub. (20).

(b) The SAPU compliance procedures within the OM&M plan may not contain any of the following provisions:

1. Any averaging among emissions of differing pollutants.

2. The inclusion of any affected sources other than emission units in a secondary aluminum processing unit.

3. The inclusion of any emission unit while it is shut down.

4. The inclusion of any periods of startup, shutdown or malfunction in emission calculations.

(c) To revise the SAPU compliance provisions within the OM&M plan prior to the end of the permit term, the owner or operator shall submit a request to the department containing the information required by par. (a) and obtain approval of the department prior to implementing any revisions.

(**20**) SECONDARY ALUMINUM PROCESSING UNIT. Except as provided in sub. (21), the owner or operator shall calculate and record the 3-day, 24-hour rolling average emissions of PM, HCl and D&F for each

secondary aluminum processing unit on a daily basis. To calculate the 3-day, 24-hour rolling average, the owner or operator shall do all of the following:

(a) Calculate and record the total weight of material charged to each emission unit in the secondary aluminum processing unit for each 24-hour day of operation using the feed or charge weight information required in sub. (5). If the owner or operator chooses to comply on the basis of weight of aluminum produced by the emission unit, rather than weight of material charged to the emission unit, all performance test emissions results and all calculations shall be conducted on the aluminum production weight basis.

(b) Multiply the total feed or charge weight to the emission unit, or the weight of aluminum produced by the emission unit, for each emission unit for the 24-hour period by the emission rate, in lb/ton of feed or charge, for that emission unit, as determined during the performance test, to provide emissions for each emission unit for the 24-hour period, in pounds.

(c) Divide the total emissions for each SAPU for the 24-hour period by the total material charged to the SAPU, or the weight of aluminum produced by the SAPU over the 24-hour period, to provide the daily emission rate for the SAPU.

(d) Compute the 24-hour daily emission rate using Equation 4:

$$E_{day} = \frac{\sum_{i=1}^{n} (T_i \times ER_i)}{\sum_{i=1}^{n} T_i} \qquad \text{(Equation 4)}$$

where:

E_{day} is the daily PM, HCl, or D&F emission rate for the secondary aluminum processing unit for the 24-hour period

T_i is the total amount of feed, or aluminum produced, for emission unit i for the 24-hour period (tons or Mg)

ER_i is the measured emission rate for emission unit i as determined in the performance test (lb/ton or µg/Mg of feed or charge)

n is the number of emission units in the secondary aluminum processing unit

(e) Calculate and record the 3-day, 24-hour rolling average for each pollutant each day by summing the daily emission rates for each pollutant over the 3 most recent consecutive days and dividing by 3.

(**21**) SECONDARY ALUMINUM PROCESSING UNIT COMPLIANCE BY INDIVIDUAL EMISSION UNIT DEMONSTRATION. As an alternative to the procedures of sub. (20), an owner or operator may demonstrate, through performance tests, that each individual emission unit within the secondary aluminum production unit is in compliance with the applicable emission limits for the emission unit.

(**22**) ALTERNATIVE MONITORING METHOD FOR LIME ADDITION. The owner or operator of a lime-coated fabric filter that employs intermittent or noncontinuous lime addition may apply to the department for approval of an alternative method for monitoring the lime addition schedule and rate based on monitoring the weight of lime added per ton of feed or charge for each operating cycle or time period used in the performance test. An alternative monitoring method may not be approved unless the owner or operator provides assurance through data and information that the affected source will meet the relevant emission standards on a continuous basis.

(**23**) ALTERNATIVE MONITORING METHODS. If an owner or operator wishes to use an alternative monitoring method to demonstrate compliance with any emission standard in this subchapter, other than those alternative monitoring methods which may be authorized pursuant to subs. (10) (e) and (22), the owner or operator may submit an application to the department. Any application shall be processed according to the criteria and procedures in pars. (a) to (f).

(a) The department may not approve averaging periods other than those specified in this section.

(b) The owner or operator shall continue to use the original monitoring requirement until necessary data are submitted and approval is received to use another monitoring procedure.

(c) The owner or operator shall submit the application for approval of alternate monitoring methods no later than the notification of the performance test. The application shall contain all the information specified in subds. 1. to 3.:

1. Data or information justifying the request, such as the technical or economic infeasibility, or the

impracticality of using the required approach.

2. A description of the proposed alternative monitoring requirements, including the operating parameters to be monitored, the monitoring approach and technique, and how the limit is to be calculated.

3. Data and information documenting that the alternative monitoring requirements would provide equivalent or better assurance of compliance with the relevant emission standards.

(d) The department may not approve an alternate monitoring application unless it would provide equivalent or better assurance of compliance with the relevant emission standards. Before disapproving any alternate monitoring application, the department shall provide both of the following:

1. Notice of the information and findings upon which the intended disapproval is based.

2. Notice of opportunity for the owner or operator to present additional supporting information before final action is taken on the application. This notice shall specify how much additional time is allowed for the owner or operator to provide additional supporting information.

(e) The owner or operator is responsible for submitting any supporting information in a timely manner to enable the department to consider the application prior to the performance test. Neither submittal of an application nor the department's failure to approve or disapprove the application relieves the owner or operator of the responsibility to comply with any provisions of this subchapter.

(f) The department may decide at any time, on a case-by-case basis, that additional or alternative operating limits, or alternative approaches to establishing operating limits, are necessary to demonstrate compliance with the emission standards of this subchapter.

NR 463.16 Performance test and compliance demonstration general requirements. (**1**) SITE-SPECIFIC TEST PLAN. Prior to conducting any performance test required by this subchapter, the owner or operator shall prepare a site-specific test plan which satisfies all of the requirements of this section, and shall obtain review and evaluation of the plan by the department pursuant to the procedures in s. NR 460.06.

(**2**) INITIAL PERFORMANCE TEST. (a) Following the review and evaluation of the site-specific test plan, the owner or operator shall demonstrate initial compliance with each applicable emission, equipment,

work practice or operational standard for each affected source and emission unit, and report the results in the notification of compliance status report as described in s. NR 463.17(2). The owner or operator of any existing affected source for which an initial performance test is required to demonstrate compliance shall conduct this initial performance test no later than the date for compliance established by s. NR 463.115(1). The owner or operator of any new affected source for which an initial performance test is required shall conduct this initial performance test within 90 days after the date for compliance established by s. NR 463.115(2). Except for the date by which the performance test shall be conducted, the owner or operator shall conduct each performance test in accordance with the requirements and procedures in s. NR 460.06(2). Owners or operators of affected sources located at facilities which are area sources are subject only to those performance testing requirements pertaining to D&F. Owners or operators of sweat furnaces meeting the specifications of s. NR 463.13(6)(a) are not required to conduct a performance test.

(b) The owner or operator shall conduct each test while the affected source or emission unit is operating at the highest production level with charge materials representative of the range of materials processed by the unit and, if applicable, at the highest reactive fluxing rate.

(c) Each performance test for a continuous process shall consist of 3 separate runs; pollutant sampling for each run shall be conducted for the time period specified in the applicable method or, in the absence of a specific time period in the test method, for a minimum of 3 hours.

(d) Each performance test for a batch process shall consist of 3 separate runs; pollutant sampling for each run shall be conducted over the entire process operating cycle.

(e) Where multiple affected sources or emission units are exhausted through a common stack, pollutant sampling for each run shall be conducted over a period of time during which all affected sources or emission units complete at least one entire process operating cycle or for 24 hours, whichever is shorter.

(f) Initial compliance with an applicable emission limit or standard is demonstrated if the average of 3 runs conducted during the performance test is less than or equal to the applicable emission limit or standard.

(**3**) TEST METHODS. The owner or operator shall use the following methods in Appendix A to 40 CFR part 60, incorporated by reference in s. NR 484.04(13), to determine compliance with the applicable emission

limits or standards:

(a) Method 1 for sample and velocity traverses.

(b) Method 2 for velocity and volumetric flow rate.

(c) Method 3 for gas analysis.

(d) Method 4 for moisture content of the stack gas.

(e) Method 5 for the concentration of PM.

(f) Method 9 for visible emission observations.

(g) Method 23 for the concentration of D&F.

(h) Method 25A for the concentration of THC, as propane.

(i) Method 26A for the concentration of HCl. Where a lime-injected fabric filter is used as the control device to comply with the 90% reduction standard, the owner or operator shall measure the fabric filter inlet concentration of HCl at a point before lime is introduced to the system.

(**4**) ALTERNATIVE METHODS. The owner or operator may use an alternative test method, subject to approval by the department.

(**5**) REPEAT TESTS. The owner or operator of new or existing affected sources and emission units located at secondary aluminum production facilities that are major sources shall conduct a performance test every 5 years following the initial performance test.

(**6**) TESTING OF REPRESENTATIVE EMISSION UNITS. With the prior approval of the department, an owner or operator may utilize emission rates obtained by testing a particular type of group 1 furnace which is not controlled by any add-on control device, or by testing an in-line flux box which is not controlled by any add-on control device, to determine the emission rate for other units of the same type at the same facility. Emission test results may only be considered to be representative of other units if all of the following criteria are satisfied:

(a) The tested emission unit uses feed materials and charge rates which are comparable to the emission units that it represents.

(b) The tested emission unit uses the same type of flux materials in the same proportions as the

emission units it represents.

(c) The tested emission unit is operated utilizing the same work practices as the emission units that it represents.

(d) The tested emission unit is of the same design as the emission units that it represents.

(e) The tested emission unit is tested under the highest load or capacity reasonably expected to occur for any of the emission units that it represents.

(**7**) ESTABLISHMENT OF MONITORING AND OPERATING PARAMETER VALUES. The owner or operator of new or existing affected sources and emission units shall establish a minimum or maximum operating parameter value, or an operating parameter range, for each parameter to be monitored as required by s. NR 463.15 that ensures compliance with the applicable emission limit or standard. To establish the minimum or maximum value or range, the owner or operator shall use the appropriate procedures in this section and submit the information required by s. NR 463.17(2)(d) in the notification of compliance status report. The owner or operator may use existing data in addition to the results of performance tests to establish operating parameter values for compliance monitoring provided each of the following conditions are met to the satisfaction of the department:

(a) The complete emission test report used as the basis of the parameter or parameters is submitted.

(b) The same test methods and procedures as required by this subchapter were used in the test.

(c) The owner or operator certifies that no design or work practice changes have been made to the source, process or emission control equipment since the time of the report.

(d) All process and control equipment operating parameters required to be monitored were monitored as required in this subchapter and documented in the test report.

(**8**) TESTING OF COMMONLY-DUCTED UNITS WITHIN A SECONDARY ALUMINUM PROCESSING UNIT. When group 1 furnaces and in-line fluxers are included in a single existing SAPU or new SAPU, and the emissions from more than one emission unit within that existing SAPU or new SAPU are manifolded to a single control device, compliance for all units within the SAPU is demonstrated if the total measured emissions from all controlled and uncontrolled units in the SAPU do not exceed the emission limits calculated

for that SAPU based on the applicable equation in s. NR 463.13(11).

(**9**) TESTING OF COMMONLY-DUCTED UNITS NOT WITHIN A SECONDARY ALUMINUM PROCESSING UNIT. With the prior approval of the department, an owner or operator may do combined performance testing of 2 or more individual affected sources or emission units which are not included in a single existing SAPU or new SAPU, but whose emissions are manifolded to a single control device. Any performance testing of commonly-ducted units shall satisfy all the following basic requirements:

(a) All testing shall be designed to verify that each affected source or emission unit individually satisfies all emission requirements applicable to that affected source or emission unit.

(b) All emissions of pollutants subject to a standard shall be tested at the outlet from each individual affected source or emission unit while operating under the highest load or capacity reasonably expected to occur, and prior to the point that the emissions are manifolded together with emissions from other affected sources or emission units.

(c) The combined emissions from all affected sources and emission units which are manifolded to a single emission control device shall be tested at the outlet of the emission control device.

(d) All tests at the outlet of the emission control device shall be conducted with all affected sources and emission units whose emissions are manifolded to the control device operating simultaneously under the highest load or capacity reasonably expected to occur.

(e) For purposes of demonstrating compliance of a commonly-ducted unit with any emission limit for a particular type of pollutant, the emissions of that pollutant by the individual unit shall be presumed to be controlled by the same percentage as total emissions of that pollutant from all commonly-ducted units are controlled at the outlet of the emission control device.

NR 463.163 Performance test and compliance demonstration requirements and procedures. (**1**) ALUMINUM SCRAP SHREDDER. The owner or operator shall conduct performance tests to measure PM emissions at the outlet of the control system. If visible emission observations is the selected monitoring option, the owner or operator shall record visible emission observations from each exhaust stack for all

consecutive 6-minute periods during the PM emission test according to the requirements of Method 9 in Appendix A to 40 CFR part 60, incorporated by reference in s. NR 484.04(13).

(**2**) THERMAL CHIP DRYER. The owner or operator shall conduct a performance test to measure THC and D&F emissions at the outlet of the control device while the unit processes only unpainted aluminum chips.

(**3**) SCRAP DRYER, DELACQUERING KILN AND DECOATING KILN. (a) The owner or operator shall conduct performance tests to measure emissions of THC, D&F, HCl and PM at the outlet of the control device.

(b) If the scrap dryer, delacquering kiln or decoating kiln is subject to the alternative emission limits in s. NR 463.13(5), the average afterburner operating temperature in each 3-hour block period shall be maintained at or above 760˚C (1400˚F) for the test.

(c) The owner or operator of a scrap dryer, delacquering kiln or decoating kiln subject to the alternative limits in s. NR 463.13(5) shall submit a written certification in the notification of compliance status report containing the information required by s. NR 463.17(2)(g).

(**4**) GROUP 1 FURNACE WITH ADD-ON AIR POLLUTION CONTROL DEVICES. (a) The owner or operator of a group 1 furnace that processes scrap other than clean charge materials with emissions controlled by a lime-injected fabric filter shall conduct performance tests to measure emissions of PM and D&F at the outlet of the control device and emissions of HCl at the outlet, for the emission limit, or the inlet and the outlet, for the percent reduction standard.

(b) The owner or operator of a group 1 furnace that processes only clean charge materials with emissions controlled by a lime-injected fabric filter shall conduct performance tests to measure emissions of PM at the outlet of the control device and emissions of HCl at the outlet, for the emission limit, or the inlet and the outlet, for the percent reduction standard.

(c) The owner or operator may choose to determine the rate of reactive flux addition to the group 1 furnace and assume, for the purposes of demonstrating compliance with the SAPU emission limit, that all reactive flux added to the group 1 furnace is emitted. Under these circumstances, the owner or operator is not required to conduct an emission test for HCl.

(d) The owner or operator of a sidewell group 1 furnace that conducts reactive fluxing, except for cover

flux, in the hearth, or that conducts reactive fluxing in the sidewell at times when the level of molten metal falls below the top of the passage between the sidewell and the hearth, shall conduct the performance tests required by par. (a) or (b), to measure emissions from both the sidewell and the hearth.

(**5**) GROUP 1 FURNACE, INCLUDING MELTING AND HOLDING FURNACES, WITHOUT ADD-ON AIR POLLUTION CONTROL DEVICES. (a) In the site-specific monitoring plan required by s. NR 463.15(15), the owner or operator of a group 1 furnace, including a melting and holding furnace, without add-on air pollution control devices shall include data and information demonstrating compliance with the applicable emission limits.

(b) If the group 1 furnace processes material other than clean charge, the owner or operator shall conduct emission tests to measure emissions of PM, HCl and D&F at the furnace exhaust outlet.

(c) If the group 1 furnace processes only clean charge, the owner or operator shall conduct emission tests to simultaneously measure emissions of PM and HCl at the furnace exhaust outlet. A D&F test is not required. Each test shall be conducted while the group 1 furnace, including a melting and holding furnace, processes only clean charge.

(d) The owner or operator may choose to determine the rate of reactive flux addition to the group 1 furnace and assume, for the purposes of demonstrating compliance with the SAPU emission limit, that all reactive flux added to the group 1 furnace is emitted. Under these circumstances, the owner or operator is not required to conduct an emission test for HCl.

(**6**) SWEAT FURNACE. The owner or operator shall measure emissions of D&F from each sweat furnace at the outlet of the control device except that the owner or operator is not required to conduct a performance test to demonstrate compliance with the emission standard of s. NR 463.13(6), provided that, on and after the compliance date established by s. NR 463.115, the owner or operator operates and maintains an afterburner with a design residence time of 0.8 seconds or greater and an operating temperature of 1600˚F or greater.

(**7**) DROSS-ONLY FURNACE. The owner or operator shall conduct a performance test to measure emissions of PM from each dross-only furnace at the outlet of each control device while the unit processes

only dross and salt flux as the sole feedstock.

(**8**) IN-LINE FLUXER. (a) The owner or operator of an in-line fluxer that uses reactive flux materials shall conduct a performance test to measure emissions of HCl and PM or otherwise demonstrate compliance in accordance with par. (b). If the in-line fluxer is equipped with an add-on control device, the emissions shall be measured at the outlet of the control device.

(b) The owner or operator may choose to limit the rate at which reactive chlorine flux is added to an in-line fluxer and assume, for the purposes of demonstrating compliance with the SAPU emission limit, that all chlorine in the reactive flux added to the in-line fluxer is emitted as HCl. Under these circumstances, the owner or operator is not required to conduct an emission test for HCl. If the owner or operator of any in-line flux box which has no ventilation ductwork manifolded to any outlet or emission control device chooses to demonstrate compliance with the emission limit for HCl by limiting use of reactive chlorine flux and assuming that all chlorine in the flux is emitted as HCl, compliance with the HCl limit shall also constitute compliance with the emission limit for PM, and no separate emission test for PM is required. In this case, the owner or operator of the unvented in-line flux box shall utilize the maximum permissible PM emission rate for the in-line flux boxes when determining the total emissions for any SAPU which includes the flux box.

(**9**) ROTARY DROSS COOLER. The owner or operator shall conduct a performance test to measure PM emissions from a rotary dross cooler at the outlet of the control device.

(**10**) SECONDARY ALUMINUM PROCESSING UNIT. The owner or operator shall conduct performance tests as described in pars. (a) to (c). The results of the performance tests shall be used to establish emission rates in lb/ton of feed or charge for PM and HCl and µg TEQ/Mg of feed or charge for D&F emissions from each emission unit. These emission rates shall be used for compliance monitoring in the calculation of the 3-day, 24-hour rolling average emission rates using the equation in s. NR 463.15(20). A performance test is required for:

(a) Each group 1 furnace processing only clean charge to measure emissions of PM and either of the following:

1. Emissions of HCl, for the emission limit.

2. The mass flow rate of HCl at the inlet to and outlet from the control device, for the percent reduction standard.

(b) Each group 1 furnace that processes scrap other than clean charge to measure emissions of PM and D&F and either of the following:

1. Emissions of HCl, for the emission limit.

2.The mass flow rate of HCl at the inlet to and outlet from the control device, for the percent reduction standard.

(c) Each in-line fluxer to measure emissions of PM and HCl.

(**11**) FEED OR CHARGE WEIGHT MEASUREMENT. During the emission tests conducted to determine compliance with emission limits in a kg/Mg (lb/ton) format, the owner or operator of an affected source or emission unit, subject to an emission limit in a kg/Mg (lb/ton) of feed or charge format, shall measure, or otherwise determine, and record the total weight of feed or charge to the affected source or emission unit for each of the 3 test runs and calculate and record the total weight. An owner or operator that chooses to demonstrate compliance on the basis of the aluminum production weight shall measure the weight of aluminum produced by the emission unit or affected source instead of the feed or charge weight.

(**12**) CONTINUOUS OPACITY MONITORING SYSTEM. The owner or operator of an affected source or emission unit using a continuous opacity monitoring system shall conduct a performance evaluation to demonstrate compliance with Performance Specification 1 in Appendix B to 40 CFR part 60, incorporated by reference in s. NR 484.04(21). Following the performance evaluation, the owner or operator shall measure and record the opacity of emissions from each exhaust stack for all consecutive 6-minute periods during the PM emission test.

(**13**) AFTERBURNER. The owner or operator of an affected source using an afterburner to comply with the requirements of this subchapter shall do both of the following:

(a) Prior to the initial performance test, the owner or operator shall conduct a performance evaluation for the temperature monitoring device according to the requirements of s. NR 460.07.

(b) The owner or operator shall use the following procedures to establish an operating parameter

value or range for the afterburner operating temperature:

1. Continuously measure and record the operating temperature of each afterburner every 15 minutes during the THC and D&F performance tests.

2. Determine and record the 15-minute block average temperatures for the 3 test runs.

3. Determine and record the 3-hour block average temperature measurements for the 3 test runs.

(**14**) INLET GAS TEMPERATURE. The owner or operator of a scrap dryer, delacquering kiln or decoating kiln or a group 1 furnace using a lime-injected fabric filter shall use the following procedures to establish an operating parameter value or range for the inlet gas temperature:

(a) Continuously measure and record the temperature at the inlet to the lime-injected fabric filter every 15 minutes during the HCl and D&F performance tests.

(b) Determine and record the 15-minute block average temperatures for the 3 test runs.

(c) Determine and record the 3-hour block average of the recorded temperature measurements for the 3 test runs.

(**15**) FLUX INJECTION RATE. The owner or operator shall use the following procedures to establish an operating parameter value or range for the total reactive chlorine flux injection rate:

(a) Continuously measure and record the weight of gaseous or liquid reactive flux injected for each 15-minute period during the HCl and D&F tests, determine and record the 15-minute block average weights, and calculate and record the total weight of the gaseous or liquid reactive flux for the 3 test runs.

(b) Record the identity, composition and total weight of each addition of solid reactive flux for the 3 test runs.

(c) Determine the total reactive chlorine flux injection rate by adding the recorded measurement of the total weight of chlorine in the gaseous or liquid reactive flux injected and the total weight of chlorine in the solid reactive flux using Equation 5:

$$W_t = F_1 W_1 + F_2 W_2 \qquad \text{(Equation 5)}$$

where:

W_t is the total chlorine usage, by weight

F_1 is the faction of gaseous or liquid flux that is chlorine

W_1 is the weight of reactive flux gas injected

F_2 is the fraction of solid reactive chloride flux that is chlorine

Note: For example, F_2 is equal to 0.75 for magnesium chloride

W_2 is the weight of solid reactive flux

(d) Divide the weight of total chlorine usage (W_t) for the 3 test runs by the recorded measurement of the total weight of feed for the 3 test runs.

(e) If a solid reactive flux other than magnesium chloride is used, the owner or operator shall derive the appropriate proportion factor subject to approval by the department.

(**16**) LIME INJECTION. The owner or operator of an affected source or emission unit using a lime-injected fabric filter system shall use the following procedures during the HCl and D&F tests to establish an operating parameter value for the feeder setting for each operating cycle or time period used in the performance test:

(a) For continuous lime injection systems, ensure that lime in the feed hopper or silo is free-flowing at all times.

(b) Record the feeder setting for the 3 test runs. If the feed rate setting varies during the runs, determine and record the average feed rate from the 3 runs.

(**17**) BAG LEAK DETECTION SYSTEM. The owner or operator of an affected source or emission unit using a bag leak detection system shall submit the information described in s. NR 463.17(2)(f) as part of the notification of compliance status report to document conformance with the specifications and requirements in s. NR 463.15(6).

(**18**) LABELING. The owner or operator of each scrap dryer, delacquering kiln or decoating kiln, group 1 furnace, group 2 furnace and in-line fluxer shall submit the information described in s. NR 463.17(2)(c) as part of the notification of compliance status report to document conformance with the operational standard in s. NR 463.14(2).

(**19**) CAPTURE AND COLLECTION SYSTEM. The owner or operator of a new or existing affected source or emission unit with an add-on control device shall submit the information described in s. NR 463.17(2)(b) as part of the notification of compliance status report to document conformance with the operational standard in s. NR 463.14(3).

NR 463.166 Equations for determining compliance. (**1**) THC EMISSION LIMIT. The owner or operator of an emission unit subject to a THC emission limit shall use Equation 6 to determine compliance with the THC emission limit in s. NR 463.13:

$$E = \frac{C \times MW \times Q \times K_1 \times K_2}{M_V \times P \times 10^6} \qquad \text{(Equation 6)}$$

where:

E is the emission rate of measured pollutant, kg/Mg (lb/ton) of feed

C is the measured volume fraction of pollutant, ppmv

MW is the molecular weight of measured pollutant, g/g-mole (lb/lb-mole): THC, as propane, has a molecular weight of 44.11

Q is the volumetric flow rate of exhaust gases, dscm/hr (dscf/hr)

K_1 is the conversion factor, 1 kg/1,000 g (1 lb/lb)

K_2 is the conversion factor, 1,000 L/m^3 (1 ft^3/ft^3)

M_v is the molar volume, 24.45 L/g-mole (385.3 ft^3/lb-mole)

P is the production rate, Mg/hr (ton/hr)

(**2**) PM, HCl AND D&F EMISSION LIMITS. (a) The owner or operator of an emission unit subject to a PM or HCl emission limit shall use Equation 7 to determine compliance with the PM or HCl emission limit in s. NR 463.13:

$$E = \frac{C \times Q \times K_1}{P} \qquad \text{(Equation 7)}$$

where:

E is the emission rate of PM or HCl, kg/Mg (lb/ton) of feed

C is the concentration of PM or HCl, g/dscm (gr/dscf)

Q is the volumetric flow rate of exhaust gases, dscm/hr (dscf/hr)

K_1 is the conversion factor, 1 kg/1,000 g (1 lb/7,000 gr)

P is the production rate, Mg/hr (ton/hr)

(b) The owner or operator of an emission unit subject to a D&F emission limit shall use Equation 7A to determine compliance with the emission limit in s. NR 463.13:

$$E = \frac{C \times Q}{P} \qquad \text{(Equation 7A)}$$

where:

E is the emission rate of D&F, µg/Mg (gr/ton) of feed;

C is the concentration of D&F, µg/dscm (gr/dscf);

Q is the volumetric flow rate of exhaust gases, dscm/hr (dscf/hr); and

P is the production rate, Mg/hr (ton/hr).

(**3**) HCl PERCENT REDUCTION STANDARD. The owner or operator of an emission unit subject to the HCl percent reduction standard shall use Equation 8 to determine compliance with the HCl percent reduction standard in s. NR 463.13:

$$\%R = \frac{L_i - L_o}{L_i} \times 100 \qquad \text{(Equation 8)}$$

where:

%R is the percent reduction of the control device

L_i is the inlet loading of pollutant, kg/Mg (lb/ton)

L_o is the outlet loading of pollutant, kg/Mg (lb/ton)

(**4**) CONVERSION OF D&F MEASUREMENTS TO TEQ UNITS. To convert D&F measurements to TEQ

units, the owner or operator shall use the procedures and equations in Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxins and -Dibenzofurans (CDDs and CDFs) and 1989 Update (EPA-625/3-89-016), incorporated by reference in s. NR 484.05(12).

(**5**) SECONDARY ALUMINUM PROCESSING UNIT. The owner or operator of a secondary aluminum processing unit shall use the procedures in pars. (a) to (c) or the procedure in par. (d) to determine compliance with emission limits in s. NR 463.13 for a secondary aluminum processing unit.

(a) Use Equation 9 to compute the mass-weighted PM emissions for a secondary aluminum processing unit. Compliance is achieved if the mass-weighted emissions for the secondary aluminum processing unit (E_{cPM}) is less than or equal to the emission limit for the secondary aluminum processing unit (L_{cPM} calculated using Equation 1 in s. NR 463.13(11)).

$$E_{c_{PM}} = \frac{\sum_{i=1}^{n}\left(E_{ti_{PM}} \times T_{ti}\right)}{\sum_{i=1}^{n}\left(T_{ti}\right)} \qquad \text{(Equation 9)}$$

where:

$E_{c_{PM}}$ is the mass-weighted PM emissions for the secondary aluminum processing unit

$E_{ti_{PM}}$ is the measured PM emissions for individual emission unit i

T_{ti} is the average feed rate for individual emission unit i during the operating cycle or performance test period

n is the number of emission units in the secondary aluminum processing unit

(b) Use Equation 10 to compute the aluminum mass-weighted HCl emissions for the secondary aluminum processing unit. Compliance is achieved if the mass-weighted emissions for the secondary aluminum processing unit (E_{cHCl}) is less than or equal to the emission limit for the secondary aluminum processing unit (L_{cHCl}) calculated using Equation 2 in s. NR 463.13(11).

$$E_{c_{HCl}} = \frac{\sum_{i=1}^{n}\left(E_{ti_{HCl}} \times T_{ti}\right)}{\sum_{i=1}^{n}\left(T_{ti}\right)} \qquad \text{(Equation 10)}$$

where:

$E_{c_{HCl}}$ is the mass-weighted HCl emissions for the secondary aluminum processing unit

$E_{ti_{HCl}}$ is the measured HCl emissions for individual emission unit i

(c) Use Equation 11 to compute the aluminum mass-weighted D&F emissions for the secondary aluminum processing unit. Compliance is achieved if the mass-weighted emissions for the secondary aluminum processing unit is less than or equal to the emission limit for the secondary aluminum processing unit. The emission limit for the secondary aluminum processing unit ($L_{cD\&F}$) is calculated using Equation 3 in s. NR 463.13(11).

$$E_{c_{D\&F}} = \frac{\sum_{i=1}^{n}\left(E_{ti_{D\&F}} \times T_{ti}\right)}{\sum_{i=1}^{n}\left(T_{ti}\right)} \qquad \text{(Equation 11)}$$

where:

$E_{c_{D\&F}}$ is the mass-weighted D&F emissions for the secondary aluminum processing unit

$E_{ti_{D\&F}}$ is the measured D&F emissions for individual emission unit i

(d) As an alternative to using the equations in pars. (a) to (c), the owner or operator may demonstrate compliance for a secondary aluminum processing unit by demonstrating that each existing group 1 furnace is in compliance with the emission limits for a new group 1 furnace in s. NR 463.13(9) and that each existing in-line fluxer is in compliance with the emission limits for a new in-line fluxer in s. NR 463.13(10).

NR 463.17 Notifications. (**1**) INITIAL NOTIFICATIONS. The owner or operator shall submit initial

notifications to the department as described in pars. (a) to (g).

(a) As required by s. NR 460.08(2)(a), the owner or operator shall provide notification for an area source that subsequently increases its emissions such that the source is a major source subject to the standard.

(b) As required by s. NR 460.08(2)(c), the owner or operator of a new or reconstructed affected source, or a source that has been reconstructed such that it is an affected source, that has an initial startup after September 24, 2002 and for which an application for approval of construction or reconstruction is not required under ch. NR 406, shall provide notification that the source is subject to the standard.

(c) As required by s. NR 460.08(2)(d), the owner or operator of a new or reconstructed major affected source that has an initial startup after September 24, 2002 and for which an application for approval of construction or reconstruction is required by ch. NR 406 shall provide all the following notifications:

1. Intention to construct a new major affected source, reconstruct a major source or reconstruct a major source such that the source becomes a major affected source.

2. Date when construction or reconstruction was commenced, submitted simultaneously with the application for approval of construction or reconstruction if construction or reconstruction was commenced before September 24, 2002, or no later than 30 days after the date construction or reconstruction commenced if construction or reconstruction commenced after September 24, 2002.

3. Anticipated date of startup.

4. Actual date of startup.

(d) As required by s. NR 460.08(2)(d), after September 24, 2002, an owner or operator who intends to construct a new affected source or reconstruct an affected source subject to this subchapter, or reconstruct a source such that it becomes an affected source subject to this subchapter, shall provide notification of the intended construction or reconstruction. The notification shall include all the information required for an application for approval of construction or reconstruction as required by ch. NR 406. For major sources, the application for approval of construction or reconstruction may be used to fulfill these requirements. The application shall be submitted according to one of the following, as applicable:

1. The application shall be submitted as soon as practicable before the construction or reconstruction is planned to commence, but no sooner than September 24, 2002, if the construction or reconstruction commences after September 24, 2002.

2. The application shall be submitted as soon as practicable before startup but no later than 90 days after September 24, 2002 if the construction or reconstruction had commenced and initial startup had not occurred before September 24, 2002.

(e) As required by s. NR 460.08(4), the owner or operator shall provide notification of any special compliance obligations for a new source.

(f) As required by s. NR 460.08(5) and (6), the owner or operator shall provide notification of the anticipated date for conducting performance tests and visible emission observations. The owner or operator shall notify the department of the intent to conduct a performance test at least 60 days before the performance test is scheduled; notification of opacity or visible emission observations for a performance test shall be provided at least 30 days before the observations are scheduled to take place.

(g) As required by s. NR 460.08(7), the owner or operator shall provide additional notifications for sources with continuous emission monitoring systems or continuous opacity monitoring systems.

(**2**) NOTIFICATION OF COMPLIANCE STATUS REPORT. Each owner or operator of an existing affected source shall submit a notification of compliance status report within 60 days after the compliance date established by s. NR 463.115(1). Each owner or operator of a new affected source shall submit a notification of compliance status report within 90 days after conducting the initial performance test required by s. NR 463.16(2), or within 90 days after the compliance date established by s. NR 463.115(2) if no initial performance test is required. The notification shall be signed by the responsible official who shall certify its accuracy. A notification of compliance status report shall include the information specified in pars. (a) to (j). The required information may be submitted in an operation permit application, in an amendment to an operation permit application, in a separate submittal, or in any combination. If an owner or operator submits the information specified in this section at different times or in different submittals, later submittals may refer to earlier submittals instead of duplicating and resubmitting the information previously submitted. A notification of

compliance status report shall include:

(a) All information required in s. NR 460.08(8). The owner or operator shall provide a complete performance test report for each affected source and emission unit for which a performance test is required. A complete performance test report includes all data, associated measurements, and calculations, including visible emission and opacity tests.

(b) The approved site-specific test plan and performance evaluation test results for each continuous monitoring system, including a continuous emission or opacity monitoring system.

(c) Unit labeling as described in s. NR 463.14(2), including process type or furnace classification and operating requirements.

(d) The compliant operating parameter value or range established for each affected source or emission unit with supporting documentation and a description of the procedure used to establish the value, such as lime injection rate, total reactive chlorine flux injection rate, afterburner operating temperature, fabric filter inlet temperature, including the operating cycle or time period used in the performance test.

(e) Design information and analysis, with supporting documentation, demonstrating conformance with the requirements for capture and collection systems in s. NR 463.14(3).

(f) If applicable, analysis and supporting documentation demonstrating conformance with EPA guidance and specifications for bag leak detection systems in s. NR 463.15(6).

(g) Manufacturer's specification or analysis documenting the design residence time of no less than one second for each afterburner used to control emissions from a scrap dryer, delacquering kiln or decoating kiln subject to alternative emission standards in s. NR 463.13(5).

(h) Manufacturer's specification or analysis documenting the design residence time of no less than 0.8 seconds and design operating temperature of no less than 1,600˚F for each afterburner used to control emissions from a sweat furnace that is not subject to a performance test.

(i) The operation, maintenance and monitoring (OM&M) plan, including site-specific monitoring plan for each group 1 furnace with no add-on air pollution control device.

(j) Startup, shutdown and malfunction plan, with revisions.

NR 463.18 Reports. (**1**) STARTUP, SHUTDOWN AND MALFUNCTION PLAN AND REPORTS. The owner or operator shall develop a written plan as described in s. NR 460.05(4)(c) that contains specific procedures to be followed for operating and maintaining the source during periods of startup, shutdown and malfunction, and a program of corrective action for malfunctioning process and air pollution control equipment used to comply with the standard. The owner or operator shall also keep records of each event as required by s. NR 460.09(2) and record and report if an action taken during a startup, shutdown or malfunction is not consistent with the procedures in the plan as described in s. NR 460.05(4)(c). In addition to the information required in s. NR 460.05(4)(c), the plan shall include both of the following:

(a) Procedures to determine and record the cause of the malfunction and the time the malfunction began and ended.

(b) Corrective actions to be taken in the event of a malfunction of a process or control device, including procedures for recording the actions taken to correct the malfunction or minimize emissions.

(**2**) EXCESS EMISSIONS AND SUMMARY REPORT. The owner or operator shall submit semiannual reports according to the requirements in s. NR 460.09(5)(c), except that the semiannual reports shall be submitted within 60 days after the end of each 6-month period instead of within 30 days after the calendar half as specified in s. NR 460.09(5)(c)5. When no deviations of parameters have occurred, the owner or operator shall submit a report stating that no excess emissions occurred during the reporting period. Reports shall be submitted in accordance with all of the following:

(a) A report shall be submitted if any of the following conditions occur during a 6-month reporting period:

1. The corrective action specified in the operation, maintenance and monitoring (OM&M) plan for a bag leak detection system alarm was not initiated within one hour.

2. The corrective action specified in the OM&M plan for a continuous opacity monitoring deviation was not initiated within one hour.

3. The corrective action specified in the OM&M plan for visible emissions from an aluminum scrap

shredder was not initiated within one hour.

4. An excursion of a compliant process or operating parameter value or range, including lime injection rate or screw feeder setting, total reactive chlorine flux injection rate, afterburner operating temperature, fabric filter inlet temperature, definition of acceptable scrap or other approved operating parameter.

5. An action taken during a startup, shutdown or malfunction was not consistent with the procedures in the plan as described in s. NR 460.05(4)(c).

6. An affected source, including an emission unit in a secondary aluminum processing unit, was not operated according to the requirements of this subchapter.

7. A deviation from the 3-day, 24-hour rolling average emission limit for a secondary aluminum processing unit.

(b) Each report shall include each of these certifications, as applicable:

1. For each thermal chip dryer: “Only unpainted aluminum chips were used as feedstock in any thermal chip dryer during this reporting period.”

2. For each dross-only furnace: “Only dross and salt flux were used as the charge material in any dross-only furnace during this reporting period.”

3. For each sidewell group 1 furnace with add-on air pollution control devices: “Each furnace was operated such that the level of molten metal remained above the top of the passage between the sidewell and hearth during reactive fluxing, and reactive flux, except for cover flux, was added only to the sidewell or to a furnace hearth equipped with an add-on air pollution control device for PM, HCl, and D&F emissions during this reporting period.”

4. For each group 1 melting and holding furnace without add-on air pollution control devices and using pollution prevention measures that processes only clean charge material: “Each group 1 furnace without add-on air pollution control devices subject to emission limits in s. NR 463.13(9)(b) processed only clean charge during this reporting period.”

5. For each group 2 furnace: “Only clean charge materials were processed in any group 2 furnace during this reporting period, and no fluxing was performed or all fluxing performed was conducted using only

nonreactive, non-HAP-containing and non-HAP-generating fluxing gases or agents, except for cover fluxes, during this reporting period."

6. For each in-line fluxer using no reactive flux: "Only nonreactive, non-HAP-containing, non-HAP-generating flux gases, agents, or materials were used at any time during this reporting period."

(c) The owner or operator shall submit the results of any performance test conducted during the reporting period, including one complete report documenting test methods and procedures, process operation and monitoring parameter ranges or values for each test method used for a particular type of emission point tested.

(**3**) ANNUAL COMPLIANCE CERTIFICATIONS. For the purpose of annual certifications of compliance required by s. NR 439.03(1)(c), the owner or operator shall certify continuing compliance based upon, but not limited to, both of the following conditions:

(a) Any and all periods of excess emissions, as defined in sub. (2)(a), that occurred during the year were reported.

(b) All monitoring, recordkeeping and reporting requirements were met during the year.

NR 463.19 Records. (**1**)(a) The owner or operator shall maintain files of all information, including all reports and notifications, required by s. NR 460.09(2) and this subchapter.

(b) The owner or operator shall retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report or record. The most recent 2 years of records shall be retained at the facility. The remaining 3 years of records may be retained off site.

(c) The owner or operator may retain records on microfilm, computer disks, magnetic tape or microfiche.

(d) The owner or operator may report required information on paper or on a labeled computer disk using commonly available and department compatible computer software.

(**2**) In addition to the general records required by s. NR 460.09(2), the owner or operator of a new or existing affected source, including an emission unit in a secondary aluminum processing unit, shall maintain

records of all of the following:

(a) For each affected source and emission unit with emissions controlled by a fabric filter or a lime-injected fabric filter each of the following as applicable:

1. If a bag leak detection system is used, the number of total operating hours for the affected source or emission unit during each 6-month reporting period, records of each alarm, the time of the alarm, the time corrective action was initiated and completed and a brief description of the cause of the alarm and the corrective actions taken.

2. If a continuous opacity monitoring system is used, records of opacity measurement data, including records where the average opacity of any 6-minute period exceeds 5%, with a brief explanation of the cause of the emissions, the time the emissions occurred, the time corrective action was initiated and completed and the corrective action taken.

3. If an aluminum scrap shredder is subject to visible emission observation requirements, records of all observations made using Method 9 in Appendix A to 40 CFR part 60, incorporated by reference in s. NR 484.04(13), including records of any visible emissions during a 30-minute daily test, with a brief explanation of the cause of the emissions, the time the emissions occurred, the time corrective action was initiated and completed and the corrective action taken.

(b) For each affected source with emissions controlled by an afterburner, both of the following:

1. Records of 15-minute block average afterburner operating temperature, including any period when the average temperature in any 3-hour block period falls below the compliant operating parameter value with a brief explanation of the cause of the excursion and the corrective action taken.

2. Records of annual afterburner inspections.

(c) For each scrap dryer, delacquering kiln or decoating kiln and group 1 furnace, subject to D&F and HCl emission standards with emissions controlled by a lime-injected fabric filter, records of 15-minute block average inlet temperatures for each lime-injected fabric filter, including any period when the 3-hour block average temperature exceeds the compliant operating parameter value +14˚C (+25˚F), with a brief explanation of the cause of the excursion and the corrective action taken.

(d) For each affected source and emission unit with emissions controlled by a lime-injected fabric filter, the requirements in subd. 1. and either subd. 2. or 3.:

1. Records of inspections at least once every 8-hour period verifying that lime is present in the feeder hopper or silo and flowing, including any inspection where blockage is found, with a brief explanation of the cause of the blockage and the corrective action taken, and records of inspections at least once every 4-hour period for the subsequent 3 days. If flow monitors, pressure drop sensors or load cells are used to verify that lime is present in the hopper and flowing, records of all monitor or sensor output including any event where blockage was found, with a brief explanation of the cause of the blockage and the corrective action taken.

2. If the lime feeder setting is monitored, records of daily inspections of feeder setting, including records of any deviation of the feeder setting from the setting used in the performance test, with a brief explanation of the cause of the deviation and the corrective action taken.

3. If the lime addition rate for a noncontinuous lime injection system is monitored pursuant to the approved alternative monitoring requirements in s. NR 463.15(22), records of the time and mass of each lime addition during each operating cycle or time period used in the performance test and calculations of the average lime addition rate in lb/ton of feed or charge.

(e) For each group 1 furnace, with or without add-on air pollution control devices, or in-line fluxer, records of 15-minute block average weights of gaseous or liquid reactive flux injection, total reactive flux injection rate and calculations, including records of the identity, composition and weight of each addition of gaseous, liquid or solid reactive flux, including records of any period the rate exceeds the compliant operating parameter value and corrective action taken.

(f) For each continuous monitoring system, records required by s. NR 460.09(3).

(g) For each affected source and emission unit subject to an emission standard in kg/Mg (lb/ton) of feed or charge, records of feed or charge, or throughput, weights for each operating cycle or time period used in the performance test.

(h) Approved site-specific monitoring plan for a group 1 furnace without add-on air pollution control devices with records documenting conformance with the plan.

(i) Records of all charge materials for each thermal chip dryer, dross-only furnace, and group 1 melting and holding furnaces without air pollution control devices processing only clean charge.

(j) Operating logs for each group 1 sidewell furnace with add-on air pollution control devices documenting conformance with operating standards for maintaining the level of molten metal above the top of the passage between the sidewell and hearth during reactive flux injection and for adding reactive flux only to the sidewell or a furnace hearth equipped with a control device for PM, HCl and D&F emissions.

(k) For each in-line fluxer for which the owner or operator has certified that no reactive flux was used, one of the following:

1. Operating logs which establish that no source of reactive flux was present at the in-line fluxer.

2. Labels required pursuant to s. NR 463.14(2) which establish that no reactive flux may be used at the in-line fluxer.

3. Operating logs which document each flux gas, agent or material used during each operating cycle.

(l) Records of all charge materials and fluxing materials or agents for a group 2 furnace.

(m) Records of monthly inspections for proper unit labeling for each affected source and emission unit subject to labeling requirements.

(n) Records of annual inspections of emission capture and collection and closed vent systems.

(o) Records for any approved alternative monitoring or test procedure.

(p) Current copy of all required plans, including any revisions, with records documenting conformance with the applicable plan, including all of the following:

1. Startup, shutdown and malfunction plan.

2. Operation, maintenance and monitoring (OM&M) plan.

3. Site-specific secondary aluminum processing unit emission plan, if applicable.

(q) For each secondary aluminum processing unit, records of total charge weight, or if the owner or operator chooses to comply on the basis of aluminum production, total aluminum produced for each 24-hour period and calculations of 3-day, 24-hour rolling average emissions.

NR 463.20 Applicability of general provisions. (**1**) The requirements of the general provisions in ch. NR 460 that are applicable to the owner or operator subject to the requirements of this subchapter are shown in Appendix RRR in ch. NR 460.

SECTION 8. NR 484.05(10) and (12) are created to read:

Document Reference		Document Title	Incorporated by Reference For
NR 484.05			
(10)	EPA-454/R-98-015, September 1997	Fabric Filter Bag Leak Detection Guidance	NR 463.15(6)(a)2.
(12)	EPA-625/3-89-016	Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxins and -Dibenzofurans (CDDs and CDFs) and 1989 Update	NR 463.12(39) NR 463.166(4)

SECTION 9. NR 484.11(2)(d) is amended to read:

Document Number	Title	Incorporated by Reference For
NR 484.11(2)(d)	Industrial Ventilation: A Manual of Recommended Practice, ~~20th~~ 23rd ed., ~~1988~~ 1998	NR 421.04(3)(c)1. NR 460 Appendix RRR NR 463.14, Table 2 NR 463.14(3)(a)

SECTION 10. TERMINOLOGY CHANGES. Wherever “chapter” appears in the following sections of the code, the word “subchapter” is substituted:

NR 463.01(1)(intro.) and (a) to (e), (2) and Note

NR 463.03(intro.) and (5)

NR 463.04(1), (2)(a) and (b)1. to 3.

NR 463.05(2) (e) and (f)

NR 463.06(2)(a) and (3)(a), (b)(intro.) and (c)

NR 463.07(intro.), (5)(b)2., (6)(b)2., (7)(a) and (8)(b)(intro.) and 1.

NR 463.08, 463.09(2)(a)(intro.), (3)(intro.) and (a) and (5)(a), (b) and (c)(intro.), 1. and 4. and (d)(intro.) and 2.

NR 463.10(1)(a), (b)4. and 9. and (d)

NR 63.103(1) and (2)(intro.) and (a)

NR 463.106(intro.), (2), (5)(a) and (b)(intro.), 2., 5. and 9., (7)(b)1.b. and (d) and (8)(c)1.b.

SECTION 11. EFFECTIVE DATE. This rule shall take effect on the first day of the month following publication in the Wisconsin administrative register as provided in s. 227.22 (2) (intro.), Stats.

SECTION 12. BOARD ADOPTION. This rule was approved and adopted by the State of Wisconsin Natural Resources Board on August 13, 2008.

Dated at Madison, Wisconsin _____.

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

By_____
Matthew J. Frank, Secretary

(SEAL)