



Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
(800) 451-6027
www.IN.gov/idem

TO: Interested Parties / Applicant
DATE: June 15, 2007
RE: Metal Source, LLC / 169-24720-00067
FROM: Nisha Sizemore
Chief, Permits Branch
Office of Air Quality

Notice of Decision – Approval

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to 326 IAC 2, this approval was effective immediately upon submittal of the application.

If you wish to challenge this decision, IC 4-21.5-3-7 requires that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within eighteen (18) calendar days from the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- (3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- (1) the name and address of the person making the request;
- (2) the interest of the person making the request;
- (3) identification of any persons represented by the person making the request;
- (4) the reasons, with particularity, for the request;
- (5) the issues, with particularity, proposed for considerations at any hearing; and
- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures
FNPER-AM.dot 03/23/06



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We make Indiana a cleaner, healthier place to live.

Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

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June 15, 2007

Benjamin Gebhart
Metal Source, LLC
1734 Wabash Ave.
Wabash, IN 46992

Re: Notice-Only Change 169-24720-00067
Registered Construction and Operation Status

Dear Mr. Gebhart:

Metal Source, LLC, was issued a Registration No. 169-23861-00067 on February 15, 2007, for an aluminum ingots and sows manufacturing source. On May 2, 2007, the Office of Air Quality (OAQ) received an application from the source requesting that the maximum capacity of the dry hearth furnace be revised from 3,000 to 2,500 pounds of scrap aluminum per hour, the baghouse be removed from the description, and the alternate emission factors for PM and PM₁₀ be revised from 2.04 and 2.36 pounds per ton to 2.03 and 4.00 pounds per ton, respectively. Based on the data submitted and the provisions in 326 IAC 2-5.5, it has been determined that the following operation, to be located at 1734 Wabash Ave., Wabash, Indiana 46992, is classified as registered:

One (1) dry hearth furnace, approved for construction in 2007, equipped with two (2) primary natural gas low-NO_x burners rated at 1 million British thermal units per hour, each, one (1) holding chamber natural gas low-NO_x burner rated at 1.5 million British thermal units per hour, and one (1) natural gas-fired low-NO_x afterburner rated at 1.5 million British thermal units per hour, exhausting to stack SV-1, with metal poured directly into cast iron molds, capacity: 2,500 pounds of scrap aluminum per hour. Under 40 CFR 63, Subpart RRR, this is a new sweat furnace.

There is no fluxing or dross handling and cooling at this source. This furnace is a dry hearth furnace. The aluminum melts on a slanted refractory and drips through a hole and into a holding well. Once the charge is melted, the door is opened and iron is removed. The iron is a marketable material and is not considered dross. Metal Source does not intend to flux, and is not permitted to do so by this approval.

There are no unpaved roads, storage piles, or other fugitive emission sources.

The following conditions shall be applicable:

1. Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:
 - (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

2. Pursuant to 326 IAC 6-3-2, the allowable particulate emission rate from the one (1) dry hearth furnace, shall not exceed 4.76 pounds per hour when operating at a process weight rate of 2,500 pounds per hour (1.25 tons per hour). This limit is based upon the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

3. Within 180 days of startup, in order to demonstrate compliance with the pre-control emission factors of 2.03 pounds of PM per ton of metal processed and 4.00 pounds of PM₁₀ per ton of metal processed, the Permittee shall perform PM and PM₁₀ testing for this facility, utilizing methods as approved by the Commissioner. PM₁₀ includes filterable and condensable PM₁₀.

All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

no later than thirty-five (35) days prior to the intended test date.

The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date.

Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ, no later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ, if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

4. Pursuant to 40 CFR 63.1518, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1 for the one (1) dry hearth furnace as specified in Appendix A of 40 CFR Part 63, Subpart RRR in accordance with schedule in 40 CFR 63 Subpart RRR.
5. Pursuant to 40 CFR Part 63, Subpart RRR, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart RRR, which are incorporated by reference as 326 IAC 20-70 for the one (1) dry hearth furnace as specified in Attachment A of this letter.
6. Pursuant to 40 CFR Part 63.1515(b), the Permittee shall submit a notification of compliance status report within ninety (90) days of startup.

This source remains a registered source. The source may operate according to 326 IAC 2-5.5.

An authorized individual shall provide an annual notice to the Office of Air Quality that the source is in operation and in compliance with this registration pursuant to 326 IAC 2-5.5-4(a)(3). The annual notice and all reports required by this registration shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

no later than March 1 of each year, with the annual notice being submitted in the format attached.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Original Signed By:

Nisha Sizemore, Chief
Permits Branch
Office of Air Quality

Attachments: Attachment A and Technical Support Document (TSD)

CAP/MES

cc: File - Wabash County
Wabash County Health Department
Air Compliance - Ryan Hillman
Permit Tracking
Compliance Data Section
Administrative & Development Section
Dana Armstrong, DECA Environmental & Associated, Inc.

Registration Annual Notification

This form should be used to comply with the notification requirements under 326 IAC 2-5.5-4(a)(3).

Company Name:	Metal Source, LLC
Source Address:	1734 Wabash Ave., Wabash, Indiana 46992
General Source Phone Number:	(260) 563-8833
Registration Number:	169-24720-00067

Certification by the Authorized Individual
I hereby certify that Metal Source, LLC, is still in operation and is in compliance with the requirements of Registration No. 169-24720-00067 .
Name (typed):
Title:
Signature:
Phone Number:
Date:

Attachment A to Registration No. 169-24720-00067

**Metal Source, LLC
1734 Wabash Ave.
Wabash, IN 46992**

Title 40: Protection of Environment

Subpart RRR—National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production

General

§ 63.1500 Applicability.

(a) The requirements of this subpart apply to the owner or operator of each secondary aluminum production facility as defined in §63.1503.

(c) The requirements of this subpart pertaining to dioxin and furan (D/F) 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 §63.2:

(3) Each new and existing sweat furnace;

(e) If you are an owner or operator of an area source subject to this subpart, you are exempt from the obligation to obtain a permit under 40 CFR part 70 or 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart applicable to area sources.

(f) 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 such sources are regulated under this subpart or any other subpart. 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 subpart 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 subpart if it melts only clean charge, internal scrap, or customer returns.

§ 63.1501 Dates.

(b) Except as provided in paragraph (c) of this section, the owner or operator of a new affected source that commences construction or reconstruction after February 11, 1999 must comply with the requirements of this subpart by March 24, 2000 or upon startup, whichever is later.

§ 63.1502 Incorporation by reference.

(a) The following material is incorporated by reference in the corresponding sections noted. The incorporation by reference (IBR) of certain publications listed in the rule will be approved by the Director of the Office of the Federal Register as of the date of publication of the final rule in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. This material is incorporated as it exists on the date of approval:

(1) Chapters 3 and 5 of "Industrial Ventilation: A Manual of Recommended Practice," American Conference of Governmental Industrial Hygienists, (23rd edition, 1998), IBR approved for §63.1506(c), and

(2) "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).

(b) The material incorporated by reference is available for inspection at the National Archives and Records Administration (NARA); and at the Air and Radiation Docket and Information Center, U.S. EPA, 1200 Pennsylvania Ave., NW., Washington, DC. For information on the availability of this material at NARA, call 202-741-6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html. The material is also available for purchase from the following addresses:

(1) Customer Service Department, American Conference of Governmental Industrial Hygienists (ACGIH), 1330 Kemper Meadow Drive, Cincinnati, OH 45240-1634, telephone number (513) 742-2020; and

(2) The National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, VA, NTIS no. PB 90-145756.

§ 63.1503 Definitions.

Terms used in this subpart are defined in the Clean Air Act as amended (CAA), in §63.2, or in this section as follows:

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.

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.

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

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*.

Bag leak detection system means an instrument that is capable of monitoring particulate matter loadings in the exhaust of a fabric filter (*i.e.*, baghouse) in order to detect bag failures. A *bag leak detection system* includes, but is not limited to, an instrument that operates on triboelectric, light scattering, light transmittance, or other effect to monitor relative particulate matter loadings.

Chips means small, uniformly-sized, unpainted pieces of aluminum scrap, typically below 1 1/4 inches in any dimension, primarily generated by turning, milling, boring, and machining of aluminum parts.

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/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/decoated at 482 °C (900 °F) or higher, and runaround scrap.

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.

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 (*i.e.*, lacquers).

D/F means dioxins and furans.

Dioxins and furans means tetra-, penta-, hexa-, and octachlorinated dibenzo dioxins and furans.

Dross means the slags and skimmings from aluminum melting and refining operations consisting of fluxing agent(s), impurities, and/or oxidized and non-oxidized aluminum, from scrap aluminum charged into the furnace.

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.

Emission unit means a *group 1 furnace* or *in-line fluxer* at a *secondary aluminum production facility*.

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.

Feed/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, etc.) and alloying agents that enter the furnace during an operating cycle. For a furnace or other process unit that operates continuously, *feed/charge* means the weight of material (including molten aluminum, T-bar, sow, ingot, etc.) and alloying agents that enter the process unit within a specified time period (e.g., a time period equal to the performance test period). The *feed/charge* for a dross only furnace includes the total weight of dross and solid flux.

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 (solvent flux); 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*.

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

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*.

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.

HCl means, for the purposes of this subpart, emissions of hydrogen chloride that serve as a surrogate measure of the total emissions of the HAPs hydrogen chloride, hydrogen fluoride and chlorine.

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

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.

Lime means calcium oxide or other alkaline reagent.

Lime-injection means the continuous addition of lime upstream of a *fabric filter*.

Melting/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 purposes of alloy changes, off-specification product drains, or maintenance activities.

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 or 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 (the period from tap-to-tap).

PM means, for the purposes of this subpart, 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 but not limited to, antimony, arsenic, beryllium, cadmium, chromium, cobalt, lead, manganese, mercury, nickel, and selenium.

Pollution prevention means source reduction as defined under the Pollution Prevention Act of 1990 (e.g., 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.

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 HAP.

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 percent 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 standard(s) established in this subpart. Replacement of the refractory in a furnace is routine maintenance and is not a *reconstruction*. The repair and replacement of *in-line fluxer* components (e.g., rotors/shafts, burner tubes, refractory, warped steel) is considered to be routine maintenance and is not considered a *reconstruction*. *In-line fluxers* are typically removed to a maintenance/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*.

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.

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

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/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*.

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

Secondary aluminum processing unit (SAPU). 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*. A new SAPU means any combination of individual *group 1 furnaces* and *in-line fluxers* within a *secondary aluminum production facility* which either were constructed or reconstructed after February 11, 1999, or have been permanently redesignated as new emission units pursuant to §63.1505(k)(6). Each of the *group 1 furnaces* or *in-line fluxers* within a new SAPU is considered an *emission unit* within that *secondary aluminum production facility*.

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/decoating, thermal chip drying, furnace operations (i.e., melting, holding, sweating, refining, fluxing, or alloying), recovery of aluminum from dross, in-line fluxing, or dross cooling. A *secondary aluminum production facility* may be independent or part of a primary aluminum production facility. For purposes of this subpart, 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, or scrap dryers/delacquering kilns/decoating kilns. The determination of whether a facility is a *secondary aluminum production facility* is only for purposes of this subpart and any regulatory requirements which are derived from the applicability of this subpart, 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 U.S.C. §7479(1) and 40 CFR 52.21(b)(1)(i)(A) ("prevention of significant deterioration of air quality").

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.

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.

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), available from the National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, Virginia 22161, NTIS no. PB 90-145756.

THC means, for the purposes of this subpart, total hydrocarbon emissions that also serve as a surrogate for the emissions of organic HAP compounds.

Thermal chip dryer means a device that uses heat to evaporate oil or oil/water mixtures from unpainted/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 for purposes of this subpart.

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

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/charge, as determined by the procedure in §63.1512(o).

Emission Standards and Operating Requirements

§ 63.1505 Emission standards for affected sources and emission units.

(a) *Summary.* The owner or operator of a new or existing affected source must comply with each applicable limit in this section. Table 1 to this subpart summarizes the emission standards for each type of source.

(f) *Sweat furnace.* The owner or operator of a sweat furnace shall comply with the emission standard of paragraph (f)(2) of this section.

(1) The owner or operator is not required to conduct a performance test to demonstrate compliance with the emission standard of paragraph (f)(2) of this section, provided that, on and after the compliance date of this rule, 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.

(2) On and after the compliance date established by §63.1501, the owner or operator of a sweat furnace at a secondary aluminum production facility that is a major or area source must 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 percent oxygen (O_2).

§ 63.1506 Operating requirements.

(a) *Summary.* (1) On and after the compliance date established by §63.1501, the owner or operator must operate all new and existing affected sources and control equipment according to the requirements in this section.

(2) The owner or operator of an existing sweat furnace that meets the specifications of §63.1505(f)(1) must operate the sweat furnace and control equipment according to the requirements of this section on and after the compliance date of this standard.

(3) The owner or operator of a new sweat furnace that meets the specifications of §63.1505(f)(1) must operate the sweat furnace and control equipment according to the requirements of this section by March 23, 2000 or upon startup, whichever is later.

(4) Operating requirements are summarized in Table 2 to this subpart.

(c) *Capture/collection systems.* For each affected source or emission unit equipped with an add-on air pollution control device, the owner or operator must:

(1) 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 §63.1502 of this subpart);

(2) 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; and

(3) Operate each capture/collection system according to the procedures and requirements in the OM&M plan.

(h) *Sweat furnace.* The owner or operator of a sweat furnace with emissions controlled by an afterburner must:

(1) Maintain the 3-hour block average operating temperature of each afterburner at or above:

(ii) 1600 °F if a performance test was not conducted, and the afterburner meets the specifications of §63.1505(f)(1).

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

(p) *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 must initiate corrective action. Corrective action must 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 must include follow-up actions necessary to return the process or control device parameter level(s) 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.

Monitoring and Compliance Requirements

§ 63.1510 Monitoring requirements.

(a) *Summary.* On and after the compliance date established by §63.1501, the owner or operator of a new or existing affected source or emission unit must 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 Table 3 to this subpart.

(b) *Operation, maintenance, and monitoring (OM&M) plan.* The owner or operator must 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 must submit the OM&M plan to the responsible permitting authority no later than the compliance date established by §63.1501(a). The owner or operator of any new affected source must submit the OM&M plan to the responsible permitting authority within 90 days after a successful initial performance test under §63.1511(b), or within 90 days after the compliance date established by §63.1501(b) if no initial performance test is required. The plan must 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 subpart. The owner or operator must comply with all of the provisions of the OM&M plan as submitted to the permitting authority, unless and until the plan is revised in accordance with the following procedures. If the permitting authority 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 section or this subpart, the owner or operator must 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, such revisions will not become effective until the owner or operator submits a description of the changes and a revised plan incorporating them to the permitting authority. Each plan must contain the following information:

(1) 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.

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

(3) 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 §63.1505.

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

(i) Calibration and certification of accuracy of each monitoring device, at least once every 6 months, according to the manufacturer's instructions; and

(ii) Procedures for the quality control and quality assurance of continuous emission or opacity monitoring systems as required by the general provisions in subpart A of this part.

(5) 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/feed (or throughput) weight if a measurement device is not used.

(6) Corrective actions to be taken when process or operating parameters or add-on control device parameters deviate from the value or range established in paragraph (b)(1) of this section, including:

(i) Procedures to determine and record the cause of any deviation or excursion, and the time the deviation or excursion began and ended; and

(ii) Procedures for recording the corrective action taken, the time corrective action was initiated, and the time/date corrective action was completed.

(7) 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.

(8) 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 paragraph (o) of this section for each group 1 furnace not equipped with an add-on air pollution control device.

(d) *Capture/collection system.* The owner or operator must:

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

(2) Inspect each capture/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 §63.1506(c) and record the results of each inspection.

(g) *Afterburner.* These requirements apply to the owner or operator of an affected source using an afterburner to comply with the requirements of this subpart.

(1) The owner or operator must 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 subpart A of this part.

(2) The temperature monitoring device must meet each of these performance and equipment specifications:

(i) The temperature monitoring device must be installed at the exit of the combustion zone of each afterburner.

(ii) The monitoring system must record the temperature in 15-minute block averages and determine and record the average temperature for each 3-hour block period.

(iii) The recorder response range must include zero and 1.5 times the average temperature established according to the requirements in §63.1512(m).

(iv) The reference method must be a National Institute of Standards and Technology calibrated reference thermocouple-potentiometer system or alternate reference, subject to approval by the Administrator.

(3) The owner or operator must conduct an inspection of each afterburner at least once a year and record the results. At a minimum, an inspection must include:

(i) Inspection of all burners, pilot assemblies, and pilot sensing devices for proper operation and clean pilot sensor;

(ii) Inspection for proper adjustment of combustion air;

(iii) Inspection of internal structures (e.g., baffles) to ensure structural integrity;

(iv) Inspection of dampers, fans, and blowers for proper operation;

(v) Inspection for proper sealing;

(vi) Inspection of motors for proper operation;

(vii) Inspection of combustion chamber refractory lining and clean and replace lining as necessary;

(viii) Inspection of afterburner shell for corrosion and/or hot spots;

(ix) Documentation, for the burn cycle that follows the inspection, that the afterburner is operating properly and any necessary adjustments have been made; and

(x) Verification that the equipment is maintained in good operating condition.

(xi) Following an equipment inspection, all necessary repairs must be completed in accordance with the requirements of the OM&M plan.

§ 63.1513 Equations for determining compliance.

(d) *Conversion of D/F measurements to TEQ units.* To convert D/F measurements to TEQ units, the owner or operator must 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 §63.1502 of this subpart, available from the National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, Virginia, NTIS no. PB 90-145756.

Notifications, Reports, And Records

§ 63.1515 Notifications.

(a) *Initial notifications.* The owner or operator must submit initial notifications to the applicable permitting authority as described in paragraphs (a)(1) through (7) of this section.

(2) As required by §63.9(b)(3), 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 the effective date of this subpart and for which an application for approval of construction or reconstruction is not required under §63.5(d), must provide notification that the source is subject to the standard.

(4) As required by §63.9(b)(5), after the effective date of this subpart, an owner or operator who intends to construct a new affected source or reconstruct an affected source subject to this subpart, or reconstruct a source such that it becomes an affected source subject to this subpart, must provide notification of the intended construction or reconstruction. The notification must include all the information required for an application for approval of construction or reconstruction as required by §63.5(d). For major sources, the application for approval of construction or reconstruction may be used to fulfill these requirements.

(i) The application must be submitted as soon as practicable before the construction or reconstruction is planned to commence (but no sooner than the effective date) if the construction or reconstruction commences after the effective date of this subpart; or

(b) *Notification of compliance status report.* Each owner or operator of an existing affected source must submit a notification of compliance status report within 60 days after the compliance date established by §63.1501(a). Each owner or operator of a new affected source must submit a notification of compliance status report within 90 days after conducting the initial performance test required by §63.1511(b), or within 90 days after the compliance date established by §63.1501(b) if no initial performance test is required. The notification must be signed by the responsible official who must certify its accuracy. A complete notification of compliance status report must include the information specified in paragraphs (a)(1) through (10) of this section. The required information may be submitted in an operating permit application, in an amendment to an operating permit application, in a separate submittal, or in any combination. In a State with an approved operating permit program where delegation of authority under section 112(l) of the CAA has not been requested or approved, the owner or operator must provide duplicate notification to the applicable Regional Administrator. 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 complete notification of compliance status report must include:

(5) Design information and analysis, with supporting documentation, demonstrating conformance with the requirements for capture/collection systems in §63.1506(c).

(8) 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.

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

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

§ 63.1516 Reports.

(a) *Startup, shutdown, and malfunction plan/reports.* The owner or operator must develop a written plan as described in §63.6(e)(3) 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 §63.10(b) 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 §63.6(e)(3). In addition to the information required in §63.6(e)(3), the plan must include:

(1) Procedures to determine and record the cause of the malfunction and the time the malfunction began and ended; and

(2) 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.

(b) *Excess emissions/summary report.* The owner or operator must submit semiannual reports according to the requirements in §63.10(e)(3). Except, the owner or operator must submit the semiannual reports within 60 days after the end of each 6-month period instead of within 30 days after the calendar half as specified in §63.10(e)(3)(v). When no deviations of parameters have occurred, the owner or operator must submit a report stating that no excess emissions occurred during the reporting period.

(1) A report must be submitted if any of these conditions occur during a 6-month reporting period:

(iv) An excursion of a compliant process or operating parameter value or range (e.g., 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).

(v) An action taken during a startup, shutdown, or malfunction was not consistent with the procedures in the plan as described in §63.6(e)(3).

(vi) An affected source (including an emission unit in a secondary aluminum processing unit) was not operated according to the requirements of this subpart.

§ 63.1517 Records

(a) As required by §63.10(b), the owner or operator shall maintain files of all information (including all reports and notifications) required by the general provisions and this subpart.

(1) The owner or operator must 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 must be retained at the facility. The remaining 3 years of records may be retained off site.

(2) The owner or operator may retain records on microfilm, computer disks, magnetic tape, or microfiche; and

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

(b) In addition to the general records required by §63.10(b), the owner or operator of a new or existing affected source (including an emission unit in a secondary aluminum processing unit) must maintain records of:

(2) For each affected source with emissions controlled by an afterburner:

(i) 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; and

(ii) Records of annual afterburner inspections.

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

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

(i) Startup, shutdown, and malfunction plan;

(ii) OM&M plan; and

Other

§ 63.1518 Applicability of general provisions.

The requirements of the general provisions in subpart A of this part that are applicable to the owner or operator subject to the requirements of this subpart are shown in appendix A to this subpart.

§ 63.1519 Implementation and enforcement.

(a) This subpart can be implemented and enforced by the U.S. EPA, or a delegated authority such as the applicable State, local, or Tribal agency. If the U.S. EPA Administrator has delegated authority to a State, local, or Tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this regulation. Contact the applicable U.S. EPA Regional Office to find out if this subpart is delegated to a State, local, or Tribal agency.

(b) In delegating implementation and enforcement authority of this regulation to a State, local, or Tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the Administrator of U.S. EPA and cannot be transferred to the State, local, or Tribal agency.

(c) The authorities that cannot be delegated to State, local, or Tribal agencies are as specified in paragraphs (c)(1) through (4) of this section.

(1) Approval of alternatives to the requirements in §§63.1500 through 63.1501 and 63.1505 through 63.1506.

(2) Approval of major alternatives to test methods for under §63.7(e)(2)(ii) and (f), as defined in §63.90, and as required in this subpart.

(3) Approval of major alternatives to monitoring under §63.8(f), as defined in §63.90, and as required in this subpart.

(4) Approval of major alternatives to recordkeeping and reporting under §63.10(f), as defined in §63.90, and as required in this subpart.

Table 1 to Subpart RRR of Part 63—Emission Standards for New and Existing Affected Sources

Table 1 to Subpart RRR--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/decoating kiln	PM HCl THC D/F ^a	0.08 0.80 0.06 0.25	lb/ton of feed lb/ton of feed lb/ton of feed µg TEQ/Mg of feed
Or Alternative limits if afterburner has a design residence time of at least 1 second and operates at a temperature of at least 1400 °F	PM HCl THC D/F ^a	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
New and existing sweat furnace	D/F ^a	0.80	ng TEQ/dscm @ 11% O ₂ ^b
New and existing cross-only furnace	PM	0.30	lb/ton of feed

New and existing in-line fluxer ^a	HCl	0.04	lb/ton of feed
	PM	0.01	lb/ton of feed
New and existing in-line 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/holding furnace (processing only clean charge) ^a	PM	0.80	lb/ton of feed
	HCl	0.40	lb/ton of feed
		or 10	percent of the HCl upstream of an add-on control device
New and existing group 1 furnace ^a	PM	0.40	lb/ton of feed
	HCl	0.40	lb/ton of feed
		or 10	percent of the HCl upstream of an add-on control device
	D/F ^a	15.0	µg TEQ/Mg of feed
New and existing group 1 furnace ^a with clean charge only	PM	0.40	lb/ton of feed
	HCl	0.40	lb/ton of feed
		Or 10	percent of the HCl upstream of an add-on control device
	D/F ^a	No Limit	Clean charge only

New and existing secondary aluminum processing unit^{a, b} (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 in-line fluxers)

PM^c

$$L_{t_{PM}} = \frac{\sum_{i=1}^n (L_{i_{PM}} \times T_i)}{\sum_{i=1}^n (T_i)}$$

HCl^d

$$L_{t_{HCl}} = \frac{\sum_{i=1}^n (L_{i_{HCl}} \times T_i)}{\sum_{i=1}^n (T_i)}$$

D/F^e

$$L_{t_{D/F}} = \frac{\sum_{i=1}^n (L_{i_{D/F}} \times T_i)}{\sum_{i=1}^n (T_i)}$$

^a D/F limit applies to a unit at a major or area source.

^b Sweat furnaces equipped with afterburners meeting the specifications of §63.1505(f)(1) 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: $L_{i_{PM}}$ = the PM emission limit for individual emission unit i in the secondary aluminum processing unit [kg/Mg (lb/ton) of feed]; T_i = the feed rate for individual emission unit i in the secondary aluminum processing unit; $L_{t_{PM}}$ = the overall PM emission limit for the secondary aluminum processing unit [kg/Mg (lb/ton) of feed]; $L_{i_{HCl}}$ = the HCl emission limit for individual emission unit i in the secondary aluminum processing unit [kg/Mg (lb/ton) of feed]; $L_{t_{HCl}}$ = the overall HCl emission limit for the secondary aluminum processing unit [kg/Mg (lb/ton) of feed]; $L_{i_{D/F}}$ = the D/F emission limit for individual emission unit i [μ g TEQ/Mg (gr TEQ/ton) of feed]; $L_{t_{D/F}}$ = the overall D/F emission limit for the secondary aluminum processing unit [μ g TEQ/Mg (gr TEQ/ton) of feed]; n = 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.

Table 2 to Subpart RRR of Part 63—Summary of Operating Requirements for New and Existing Affected Sources and Emission Units

Affected source/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 Handbook of Recommended Practice; operate in accordance with OM&M plan. \b\
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 § 63.1505(f)(1), maintain average temperature for each 3-hr period at or above 1600 °F.
	Afterburner operation.....	Operate in accordance with OM&M plan. \b\

Table 3 to Subpart RRR of Part 63—Summary of Monitoring Requirements for New and Existing Affected Sources and Emission Units

Affected source/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 ACGIH standards.
Sweat furnace with afterburner.....	Afterburner operating temperature.	Continuous measurement device to meet specifications in § 63.1510(g)(1); record temperatures in 15-minute block averages; determine and record 3-hr block averages.
	Afterburner operation.....	Annual inspection of afterburner internal parts; complete repairs in accordance with the OM&M plan.

\a\ Thermal chip dryers, scrap dryers/delacquering kilns/decoating kilns, dross-only furnaces, in-line fluxers
 and group 1 furnaces or melting/holding furnaces.
 \b\ Permitting agency 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/charge weighing devices of specified accuracy are not practicable due to equipment layout or charging practices.
 \c\ Non-triboelectric bag leak detectors must be installed and operated in accordance with manufacturers' specifications.
 \d\ Permitting agency may approve other alternatives including load cells for lime hopper weight, sensors for carrier gas pressure, or HCl monitoring devices at fabric filter outlet.

Appendix A to Subpart RRR of Part 63—General Provisions Applicability to Subpart RRR

Citation	Requirement	Applies to RRR	Comment
§ 63.1(a)(1)-(4)	General Applicability.	Yes	
§ 63.1(a)(5)		No	[Reserved].
§ 63.1(a)(6)-(8)		Yes	
§ 63.1(a)(9)		No	[Reserved].
§ 63.1(a)(10)-(14)		Yes	
§ 63.1(b)	Initial Applicability Determination.	Yes	EPA retains approval authority.
§ 63.1(c)(1)	Applicability After Standard Established.	Yes	
§ 63.1(c)(2)		Yes	§ 63.1500(e) exempts area sources subject to this subpart from the obligation to obtain Title V operating permits.
§ 63.1(c)(3)		No	[Reserved].
§ 63.1(c)(4)-(5)		Yes	
§ 63.1(d)		No	[Reserved].
§ 63.1(e)	Applicability of Permit Program.	Yes	
§ 63.2	Definitions	Yes	Additional definitions in § 63.1503.
§ 63.3	Units and Abbreviations.	Yes	
§ 63.4(a)(1)-(3)	Prohibited Activities.	Yes	
§ 63.4(a)(4)		No	[Reserved]
§ 63.4(a)(5)		Yes	
§ 63.4(b)-(c)	Circumvention/ Severability.	Yes	
§ 63.5(a)	Construction and Reconstruction Applicability.	Yes	
§ 63.5(b)(1)	Existing, New, Reconstructed Sources Requirements.	Yes	
§ 63.5(b)(2)		No	[Reserved].
§ 63.5(b)(3)-(6)		Yes	
§ 63.5(c)		No	[Reserved].
§ 63.5(d)	Application for Approval of Construction/ Reconstruction.	Yes	
§ 63.5(e)	Approval of Construction/ Reconstruction.	Yes	
§ 63.5(f)	Approval of Construction/ Reconstruction Based on State Review.	Yes	
§ 63.6(a)	Compliance with Standards and Maintenance Applicability.	Yes	
§ 63.6(b)(1)-(5)	New and Reconstructed Sources Dates.	Yes	
§ 63.6(b)(6)		No	[Reserved].
§ 63.6(b)(7)		Yes	
§ 63.6(c)(1)	Existing Sources Dates	Yes	§ 63.1501 specifies dates.
§ 63.6(c)(2)		Yes	
§ 63.6(c)(3)-(4)		No	[Reserved].
§ 63.6(c)(5)		Yes	
§ 63.6(d)		No	[Reserved].

Citation	Requirement	Applies to RRR	Comment
§ 63.6(e)(1)-(2)	Operation & Maintenance Requirements.	Yes....	§ 63.1510 requires plan.
§ 63.6(e)(3)	Startup, Shutdown, and Malfunction Plan.	Yes.	
§ 63.6(f)	Compliance with Emission Standards.	Yes.	
§ 63.6(g)	Alternative Standard..	No.....	
§ 63.6(h)	Compliance with Opacity/VE Standards.	Yes.	
§ 63.6(i)(1)-(14)	Extension of Compliance.	Yes.	
§ 63.6(i)(15)		No.....	[Reserved].
§ 63.6(i)(16)		Yes.	
§ 63.6(j)	Exemption from Compliance.	Yes.	
§ 63.7(a)-(h)	Performance Test Requirements- Applicability and Dates.	Yes.....	Except § 63.1511 establishes dates for initial performance tests.
§ 63.7(b)	Notification.....	Yes.	
§ 63.7(c)	Quality Assurance/Test Plan.	Yes.	
§ 63.7(d)	Testing Facilities....	Yes.	
§ 63.7(e)	Conduct of Tests.....	Yes.	
§ 63.7(f)	Alternative Test Method.	Yes.	
§ 63.7(g)	Data Analysis.....	Yes.	
§ 63.7(h)	Waiver of Tests.....	Yes.	
§ 63.8(a)(1)	Monitoring Requirements Applicability.	Yes.	
§ 63.8(a)(2)		Yes.	
§ 63.8(a)(3)		No.....	[Reserved]
§ 63.8(a)(4)		Yes.....	
§ 63.8(b)	Conduct of Monitoring.	Yes.	
§ 63.8(c)(1)-(3)	CMS Operation and Maintenance.	Yes.	
§ 63.8(c)(4)-(8)		Yes.	
§ 63.8(d)	Quality Control.....	Yes.	
§ 63.8(e)	CMS Performance Evaluation.	Yes.	
§ 63.8(f)(1)-(5)	Alternative Monitoring Method.	No.....	§ 63.1510(w) includes provisions for monitoring alternatives.
§ 63.8(f)(6)	Alternative to RATA Test.	Yes.	
§ 63.8(g)(1)	Data Reduction.....	Yes.	
§ 63.8(g)(2)		No.....	§ 63.1512 requires five 6-minute averages for an aluminum scrap shredder.
§ 63.8(g)(3)-(5)		Yes.	
§ 63.9(a)	Notification Requirements Applicability.	Yes.	
§ 63.9(b)	Initial Notifications.	Yes.	
§ 63.9(c)	Request for Compliance Extension.	Yes.	
§ 63.9(d)	New Source Notification for Special Compliance Requirements.	Yes.	
63.9(e)	Notification of Performance Test.	Yes.	
§ 63.9(f)	Notification of VE/Opacity Test.	Yes.	

Citation	Requirement	Applies to RRR	Comment
§ 63.9(g)	Additional CMS Notifications.	Yes.	
§ 63.9(h)(1)-(3)	Notification of Compliance Status.	Yes.....	Except § 63.1515 establishes dates for notification of compliance status reports.
§ 63.9(h)(4)		No.....	[Reserved].
§ 63.9(h)(5)-(6)		Yes.	
§ 63.9(i)	Adjustment of Deadlines.	Yes.	
§ 63.9(j)	Change in Previous Information.	Yes.	
§ 63.10(a)	Recordkeeping/Reporting Applicability.	Yes.	
§ 63.10(b)	General Requirements..	Yes.....	§ 63.1517 includes additional requirements.
§ 63.10(c)(1)	Additional CMS Recordkeeping.	Yes.	
§ 63.10(c)(2)-(4)		No...	[Reserved].
§ 63.10(c)(5)		Yes.	
§ 63.10(c)(6)		Yes.	
§ 63.10(c)(7)-(8)		Yes.	
§ 63.10(c)(9)		No.....	[Reserved].
§ 63.10(c)(10)-(13)		Yes.	
§ 63.10(c)(14)		Yes.	
§ 63.10(d)(1)	General Reporting Requirements.	Yes.	
§ 63.10(d)(2)	Performance Test Results.	Yes.	
§ 63.10(d)(3)	Opacity or VE Observations.	Yes.	
§ 63.10(d)(4)-(5)	Progress Reports/Startup, Shutdown, and Malfunction Reports.	Yes.	
§ 63.10(e)(1)-(2)	Additional CMS Reports	Yes.	
§ 63.10(e)(3)	Excess Emissions/CMS Performance Reports.	Yes.....	Reporting deadline given in § 63.1516.
§ 63.10(e)(4)	COMS Data Reports....	Yes.	
§ 63.10(f)	Recordkeeping/Reporting Waiver.	Yes.	
§ 63.11(a)-(b)	Control Device Requirements.	No.....	Flares not applicable.
§ 63.12(a)-(c)	State Authority and Delegations.	Yes.	EPA retains authority for applicability determinations.
§ 63.13	Addresses.....	Yes.	
§ 63.14	Incorporation by Reference.	Yes.....	Chapters 3 and 5 of ACGIH Industrial Ventilation Manual for capture/collection systems; and Interim Procedures for Estimating Risk Associated with Exposure to Mixtures of Chlorinated Dibenzofurans (CDDs and CDFs) and 1989 Update (incorporated by reference in § 63.1502).
§ 63.15	Availability of Information/Confidentiality.	Yes.	

Indiana Department of Environmental Management Office of Air Quality

Technical Support Document (TSD) for a Notice-only Change to a Registration

Source Background and Description

Source Name:	Metal Source, LLC
Source Location:	1734 Wabash Ave., Wabash, Indiana 46992
County:	Wabash
SIC Code:	3341
Registration Notice-only change:	169-24720-00067
Permit Reviewer:	CarrieAnn Paukowits

The Office of Air Quality (OAQ) has reviewed a revision application from Metal Source, LLC relating to the revision of the capacity and alternate emission factors for the dry hearth furnace as follows (deleted language appears as ~~strikeouts~~, new language appears in **bold**):

One (1) dry hearth furnace, approved for construction in 2007, equipped with two (2) primary natural gas low-NO_x burners rated at 1 million British thermal units per hour, each, one (1) holding chamber natural gas low-NO_x burner rated at 1.5 million British thermal units per hour, and one (1) natural gas-fired low-NO_x afterburner rated at 1.5 million British thermal units per hour, ~~equipped with a baghouse for particulate control~~, exhausting to stack SV-1, with metal poured directly into cast iron molds, capacity: ~~3,000~~ **2,500** pounds of scrap aluminum per hour. Under 40 CFR 63, Subpart RRR, this is a new sweat furnace.

Also, the applicant requested that the baghouse be removed from the description because it is not necessary for compliance with any rules. No IDEM-validated tests have been performed at this time. Preliminary testing of the alternate emission factor was done without a baghouse. Testing to validate the alternate emission factors is required by the registration.

History

Metal Source, LLC was issued a Registration No. 169-23861-00067 on February 15, 2007. On May 2, 2007, Metal Source, LLC submitted an application to the OAQ requesting to revise the capacity of the furnace to reflect the maximum capacity of the constructed unit, and change the alternate emission factors for the unit.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (ft)	Diameter (ft)	Flow Rate (acfm)	Temperature (°F)
SV-1	Dry hearth furnace	40	3	35,000	150

Recommendation

The staff recommends to the Commissioner that the Registration Notice-only Change be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on May 2, 2007. Additional information was received on May 23, 2007.

Emission Calculations

See pages 1 through 3 of 3 of Appendix A of this document for detailed emissions calculations.

Potential To Emit of Source before Controls

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U.S. EPA.”

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

There are no proposed changes nor is there any proposed construction at this time. However, the change in capacity and the alternate emission factor will change the calculated potential to emit of the source. The new PTE of the entire source is as follows, with the previous PTE in strikethrough and the new PTE in bold:

Pollutant	Potential to Emit (tons/yr)
PM	13.2 10.9
PM ₁₀	15.3 21.6
SO ₂	0.276 0.232
VOC	2.35 1.98
CO	1.84
NO _x	6.15 5.31

HAPs	Potential to Emit (tons/yr)
Formaldehyde	0.002
Hexane	0.039
Benzene, Dichlorobenzene, Toluene, Lead, Cadmium, Chromium, Manganese and Nickel	< 0.001, each
Total	0.041

- (a) The potential to emit of each criteria pollutant is still less than twenty-five (25) tons per year, but the potential to emit PM and PM₁₀ is greater than five (5) tons per year. Therefore, the source is still subject to the provisions of 326 IAC 2-5.5.
- (b) The potential to emit of any single HAP is still less than ten (10) tons per year and the potential to emit of a combination of HAPs is still less than twenty-five (25) tons per year. Therefore, the requirements of 326 IAC 2-7, Part 70, are still not applicable.

Justification for Revision

The Registration is being revised through a Notice-only Change pursuant to 326 IAC 2-5.5-6(d)(2) because it is a change in the descriptive information concerning the emission unit. These changes are considered descriptive, administrative changes for the following reasons:

- (a) Change in alternate emission factors: The factors are not limitations in the approval. In addition, the changes do not affect the permit level. The only change to the registration is in Condition 3, which requires testing to validate the factors.
- (b) Removal of the baghouse: The baghouse was not required by the approval and is not required for compliance with any rule or limitation. The only changes are in the emission unit descriptions.
- (c) Reduction in capacity: This is a newly constructed emission unit. The capacity change is not due to a change in operation. The only change is to the description of the emission unit.

County Attainment Status

The source is located in Wabash County.

Pollutant	Status
PM _{2.5}	attainment
PM ₁₀	attainment
SO ₂	attainment
NO ₂	attainment
8-Hour Ozone	attainment
CO	attainment
Lead	attainment

- (a) Wabash County has been classified as attainment for PM_{2.5}. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM_{2.5} emissions. Therefore, until the U.S. EPA adopts specific provisions for PSD review for PM_{2.5} emissions, it has directed states to regulate PM₁₀ emissions as a surrogate for PM_{2.5} emissions. See the State Rule Applicability – Entire Source section.
- (b) Volatile organic compounds (VOC) and nitrogen oxides (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC emissions and NO_x emissions are considered when evaluating the rule applicability relating to ozone. Wabash County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions and NO_x emissions were reviewed pursuant to the requirements for

Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.

- (c) Wabash County has been classified as attainment in Indiana for all remaining criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for PSD, 326 IAC 2-2. See the State Rule Applicability – Entire Source section.
- (d) On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in Indiana.
- (e) Fugitive Emissions
Since this type of operation is in one of the twenty-eight (28) listed source categories under 326 IAC 2-2, fugitive emissions are counted toward the determination of PSD applicability.

Federal Rule Applicability

This Notice-only Change will not change the applicability of any federal rules.

State Rule Applicability – Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration (PSD))

The unrestricted potential emissions of each attainment criteria pollutant from this source, which is one (1) of the twenty-eight (28) listed source categories, are still less than one hundred (100) tons per year. Therefore, 326 IAC 2-2, PSD, does not apply.

326 IAC 2-4.1-1 (New source toxics control)

The operation of this aluminum ingots and sows manufacturing source will still emit less than ten (10) tons per year of a single HAP, and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

326 IAC 2-6 (Emission Reporting)

This source is not located in Lake or Porter County, does not emit five (5) tons per year or more of lead and does not require a Part 70 Operating Permit. Therefore, the requirements of 326 IAC 2-6 still do not apply.

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity limitations), except as provided in 326 IAC 5-1-3 (Temporary alternative opacity limitations), opacity shall meet the following, unless otherwise stated in the permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability – Individual Facilities

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

Pursuant to 326 IAC 6-3-2, the allowable particulate emission rate from the one (1) dry hearth furnace, shall not exceed 4.76 pounds per hour when operating at a process weight rate of 2,500 pounds per hour (1.25 tons per hour). This limit is based upon the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

The unrestricted potential to emit PM from page 1 of 3 of Appendix A is 2.54 pounds per hour, which is less than 4.76 pounds per hour. Therefore, the one (1) dry hearth furnace can comply with this rule.

326 IAC 8-1-6 (New facilities; General reduction requirements)

The unrestricted potential VOC emissions are still less than twenty-five (25) tons per year from the one (1) furnace. Therefore, the requirements of 326 IAC 8-1-6 are not applicable.

Proposed Changes

The registration is revised as follows (deleted language appears as ~~strikeouts~~, new language appears in **bold**):

Change 1:

The IDEM, OAQ, mail code has been added to the letter, as follows:

100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Change 2:

The emission unit description has been revised as follows:

One (1) dry hearth furnace, approved for construction in 2007, equipped with two (2) primary natural gas low-NO_x burners rated at 1 million British thermal units per hour, each, one (1) holding chamber natural gas low-NO_x burner rated at 1.5 million British thermal units per hour, and one (1) natural gas-fired low-NO_x afterburner rated at 1.5 million British thermal units per hour, ~~equipped with a baghouse for particulate control~~, exhausting to stack SV-1, with metal poured directly into cast iron molds, capacity: ~~3,000~~ **2,500** pounds of scrap aluminum per hour. Under 40 CFR 63, Subpart RRR, this is a new sweat furnace.

Change 3:

Condition 2 has been changed to reflect the revised capacity and revised 326 IAC 6-3-2 allowable emission rate of the furnace, as follows:

Pursuant to 326 IAC 6-3-2, the allowable particulate emission rate from the one (1) dry hearth furnace, shall not exceed ~~5.38~~ **4.76** pounds per hour when operating at a process weight rate of ~~3,000~~ **2,500** pounds per hour (~~1.5~~ **1.25** tons per hour). This limit is based upon the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

Change 4:

Condition 3 has been changed to include the revised alternate emission factors for the furnace. The applicant requested the revision because their own internal preliminary tests of the unit installed at the plant indicate that the emission factors are higher than those listed in the initial registration. IDEM approved testing is still required in order for the source to demonstrate compliance. Changes to Condition 3 are as follows:

Within 180 days of startup, in order to demonstrate compliance with the pre-control emission factors of ~~2.04~~ **2.03** pounds of PM per ton of metal processed and ~~2.36~~ **4.00** pounds of PM₁₀ per ton of metal processed, the Permittee shall perform PM and PM₁₀ testing for this facility ~~before control by the baghouse~~, utilizing methods as approved by the Commissioner. PM₁₀ includes filterable and condensable PM₁₀.

All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

no later than thirty-five (35) days prior to the intended test date.

The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date.

Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ, no later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ, if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Change 5:

All reports required by this registration, including those required by 40 CFR 63, Subpart RRR, must be submitted to the IDEM, OAQ, compliance data section. This has been clarified in the registration letter as follows:

The annual notice **and all reports required by this registration** shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Change 6:

To minimize future changes to this registration, the OAQ has deleted the name and/or title of the Authorized Individual from this Registration. This change is considered a notice-only change pursuant to 325 IAC 2-5.5-6(d).

The following change has been made to the signature box on the Annual Notification Form:

I hereby certify that Metal Source, LLC is still in operation and is in compliance with the requirements of Registration ~~169-23861-00067~~ **No. 169-24720-00067**.

Conclusion

The operation of this source shall be subject to the conditions of the attached Registration Notice-only Change No. 169-24720-00067.

**Appendix A: Secondary Metal Production
Aluminum**

Company Name: Metal Source, LLC
Address City IN Zip: 1734 Wabash Ave., Wabash, IN 46992
Permit Number: 165-24720-00067
Reviewer: CarrieAnn Paukowits
Date: June 6, 2007

SCC #3-04-001-01

Furnace

TYPE OF MATERIAL	Throughput					
Aluminum	LBS/HR	1 TON/2000 lbs	TON/HR			
	2500	2000	1.25			
	PM lbs/ton Produced	PM10 lbs/ton Produced	SOx lbs/ton Produced	NOx lbs/ton Produced	VOC lbs/ton Produced	CO lbs/tons Produced
	see below	see below	0.02	0.76	0.2	--
Potential Emissions lbs/hr	see below	see below	0.025	0.95	0.250	--
Potential Emissions lbs/day	see below	see below	0.600	22.8	6.00	--
Potential Emissions tons/year	see below	see below	0.110	4.16	1.10	--

Unrestricted PM and PM10 Emissions

	Proposed Emission Factor (lbs/ton)	Unrestricted PTE (lbs/hr)	Unrestricted PTE (tons/yr)
Particulate Filterables (PM)	2.03	2.54	10.9
Total Particulate (PM10)	4.00	5.00	21.4

Methodology

Furnace melting emission factors from FIRE 6.25 for SO2 and AIRS EPA 450/4-90-003 for NOx and VOC.

PM and PM10 Emissions are based on a manufacturer's test on an identical unit

PM and PM10 Emission Factor based on Test (lbs/ton) = Hourly Emissions During Test (lbs/hr) / Throughput During Test (tons/hr)

PTE (lbs/hr) = Proposed Emission Factor (lbs/ton) x Throughput (tons/hr)

PTE (tons/yr) = PTE (lbs/hr) x 8,760 hrs/yr x 1 ton/2,000 lbs

PM includes filterables and PM10 includes filterables and condensibles

The applicant will be required to test to verify the proposed emission factors

SCC# 3-04-001-14

TYPE OF MATERIAL	Throughput					
Aluminum	LBS/HR	1 TON/2000 lbs	TON/HR			
	2500	2000	1.25			
	PM lbs/ton metal charged	PM10 lbs/ton metal charged	SOx lbs/ton metal charged	NOx lbs/ton metal charged	VOC lbs/ton metal charged	CO lbs/tons metal charged
	--	--	0.02	0.01	0.14	--
Potential Emissions lbs/hr	0	0	0.025	0.013	0.175	--
Potential Emissions lbs/day	0	0	0.600	0.300	4.20	--
Potential Emissions tons/year	0	0	0.110	0.055	0.767	--

Methodology

Pouring/casting emission factors from FIRE 6.25 for pouring into cast iron molds.

**Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100**

Company Name: Metal Source, LLC
Address City IN Zip: 1734 Wabash Ave., Wabash, IN 46992
Permit Number: 165-24720-00067
Reviewer: CarrieAnn Paukowits
Date: June 6, 2007

Pollutant

Emission Factor in lb/MMCF	PM*	PM10*	SO2	NOx	VOC	CO
	1.90	7.60	0.600	50 **see below	5.50	84.0

*PM emission factor is filterable PM only. PM-10 emission factor is filterable and condensable PM-10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Equipment	Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr	Potential Emission in tons/yr					
			PM*	PM10*	SO2	NOx	VOC	CO
Primary burners	2.00	17.52	0.017	0.067	0.005	0.438	0.048	0.736
Holding chamber burner	1.50	13.14	0.012	0.050	0.004	0.329	0.036	0.552
Afterburner	1.50	13.14	0.012	0.050	0.004	0.329	0.036	0.552
Total	5.00	43.8	0.042	0.166	0.013	1.10	0.120	1.84

HAPs - Organics

Emission Factor in lb/MMcf	Benzene 0.0021	Dichlorobenzene 0.0012	Formaldehyde 0.0750	Hexane 1.8000	Toluene 0.0034
Potential Emission in tons/yr	0.0000	0.0000	0.002	0.039	0.0001

HAPs - Metals

Emission Factor in lb/MMcf	Lead 0.0005	Cadmium 0.0011	Chromium 0.0014	Manganese 0.0004	Nickel 0.0021	Total HAPs
Potential Emission in tons/yr	0.0000	0.0000	0.0000	0.0000	0.0000	0.041

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03

(SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.

**Appendix A: Emissions Calculations
Summary**

Company Name: Metal Source, LLC
Address City IN Zip: 1734 Wabash Ave., Wabash, IN 46992
Permit Number: 165-24720-00067
Reviewer: CarrieAnn Paukowits
Date: June 6, 2007

Equipment	Unrestricted Potential Emissions in tons/yr					
	PM	PM10	SO2	NOx	VOC	CO
Furnace	10.9	21.4	0.110	4.16	1.10	--
Pouring/Casting	0.000	0.000	0.110	0.055	0.767	--
Primary burners	0.017	0.067	0.005	0.438	0.048	0.736
Holding chamber burner	0.012	0.050	0.004	0.329	0.036	0.552
Afterburner	0.012	0.050	0.004	0.329	0.036	0.552
Total	10.9	21.6	0.232	5.31	1.98	1.84

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Potential Emission in tons/yr	0.00005	0.00003	0.0016	0.0394	0.0001

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel	Total
Potential Emission in tons/yr	0.00001	0.00002	0.00003	0.00001	0.00005	0.041