



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: May 14, 2007  
RE: United Core, LLC. / 089-24443-00522  
FROM: Nisha Sizemore  
Chief, Permits Branch  
Office of Air Quality

### Notice of Decision: Approval - Registration

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 IC 4-21.5-3-4(d) this order is effective when it is served. When served by U.S. mail, the order is effective three (3) calendar days from the mailing of this notice pursuant to IC 4-21.5-3-2(e).

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 of 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  
FN-REGIS.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

100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251  
(317) 232-8603  
(800) 451-6027  
www.IN.gov/idem

Ruben Sanchez  
United Core, LLC  
1200 146th Street  
East Chicago, Indiana 46312

May 14, 2007

Re: Registered Construction and Operation Status,  
089-24443-00522

Dear Mr. Sanchez:

The application from United Core, LLC, received on March 15, 2007, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.1, it has been determined that the following secondary aluminum recovering plant, to be located at 1200 146th Street, East Chicago, Indiana, is classified as registered:

- (a) One (1) natural gas-fired secondary aluminum sweat furnace, identified as SF01, approved for construction in 2007 with a maximum capacity of 1.5 tons of scrap aluminum per hour, using a thermal oxidizer as control, and exhausting to stack S1. Under the Secondary Aluminum Production NESHAP (40 CFR 63, Subpart RRR), the furnace is considered a new sweat furnace as defined in 40 CFR 63.1503. The sweat furnace includes:
  - (1) One (1) melt chamber (maximum heat input rate of 5.0 MMBtu/hr), and
  - (2) One (1) holding chamber connected to an afterburner (maximum heat input rate of 1.5 MMBtu/hr), with a minimum operating temperature of 1,600°F and 1.21 second residence time.

The furnace does not use fluxing agents.

- (b) Four (4) waste oil-fired space heaters each with a maximum heat input rate of 0.5 MMBtu/hr vented to the atmosphere.
- (c) Paved and unpaved roads and parking lots with public access.

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:
  - (a) Opacity shall not exceed an average of twenty percent (20%) 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 6-4 (Fugitive Dust Emissions), the Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).
  3. Pursuant to 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the sweat furnace (SF01) shall not exceed 5.38 lbs/hr when operating at a process weight rate of 1.5 tons of scrap aluminum per hour.

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:

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

4. 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 the Attachment A of this letter.
5. Pursuant to 40 CFR Part 63.1515(b), the Permittee shall submit a notification of compliance status report within ninety (90) days of startup.
6. 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.

This registration is the first air approval issued to this 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 2-5.1-2(f)(3). The annual notice shall be submitted to:

**Compliance Data Section  
Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, IN 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.

Pursuant to Contract No. A305-5-65, IDEM, OAQ has assigned the processing of this application to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Bryan Lange, ERG, 1600 Perimeter Park Drive, Morrisville, North Carolina 27560, or call (919) 468-7854 to speak directly to Mr. Lange. Questions may also be directed to Duane Van Laningham at IDEM, OAQ, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana, 46204-2251 or call (800) 451-6027, ask for Duane Van Laningham, or extension 3-6878, or dial (317) 233-6878.

Original Signed By:

Nisha Sizemore, Chief  
Permits Branch  
Office of Air Quality

ERG/BL

Attachments: Attachment A and Technical Support Document (TSD)

cc: File - Lake County  
Lake County Health Department  
Air Compliance - Rick Massoels  
IDEM Northwest Regional Office  
Permit Tracking  
Compliance Data Section  
Billing, Licensing, and Training - Dan Stamatkin

<b>Registration Annual Notification</b>
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This form should be used to comply with the notification requirements under 326 IAC 2-5.1-2(f)(3)

<b>Company Name: United Core, LLC</b>
<b>Address: 1200 146th Street</b>
<b>City: East Chicago, IN 46312</b>
<b>Phone #: (219) 378-8800</b>
<b>Registration #: 089-24443-00522</b>

I hereby certify that United Core, LLC is still in operation and is in compliance with the requirements of Registration 089-24443-00522.

<b>Name (typed):</b>
<b>Title:</b>
<b>Signature:</b>
<b>Date:</b>

## Attachment A

### **Title 40: Protection of Environment**

#### **PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES**

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

Source: 65 FR 15710, Mar. 23, 2000 unless otherwise noted.

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.

[65 FR 15710, Mar. 23, 2000, as amended at 67 FR 79814, Dec. 30, 2002; 70 FR 75346, Dec. 19, 2005]

#### **§ 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.

[67 FR 59791, Sept. 24, 2002]

#### **§ 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., N.W., 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](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 11/4inches 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 processing 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 processing unit*.

*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).

[65 FR 15710, Mar. 23, 2000, as amended at 67 FR 79814, Dec. 30, 2002; 69 FR 18803, Apr. 9, 2004; 69 FR 53984, Sept. 3, 2004; 70 FR 57517, Oct. 3, 2005]

### **§ 63.1504 [Reverved]**

## **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 ( $3.5 \times 10^{-10}$  gr per dscf) at 11 percent oxygen ( $O_2$ ).

[65 FR 15710, Mar. 23, 2000, as amended at 67 FR 59792, Sept. 24, 2002; 67 FR 79816, Dec. 30, 2002; 70 FR 57517, Oct. 3, 2005]

### **§ 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.

[65 FR 15710, Mar. 23, 2000, as amended at 67 FR 59792, Sept. 24, 2002; 67 FR 79816, Dec. 30, 2002; 69 FR 53984, Sept. 3, 2004

### **§ 63.1507-63.1509 [Reserved]**

## **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.

[65 FR 15710, Mar. 23, 2000, as amended at 67 FR 59792, Sept. 24, 2002; 67 FR 79816, Dec. 30, 2002; 69 FR 53984, Sept. 3, 2004]

#### **§ 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.

[65 FR 15710, Mar. 23, 2000, as amended at 69 FR 53984, Sept. 3, 2004]

#### **§ 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.

[65 FR 15710, Mar. 23, 2000, as amended at 67 FR 59793, Sept. 24, 2002; 67 FR 79818, Dec. 30, 2002]

### **§ 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:

(i) The corrective action specified in the OM&M plan for a bag leak detection system alarm was not initiated within 1 hour.

(ii) The corrective action specified in the OM&M plan for a continuous opacity monitoring deviation was not initiated within 1 hour.

(iii) The corrective action specified in the OM&M plan for visible emissions from an aluminum scrap shredder was not initiated within 1 hour.

(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.

[65 FR 15710, Mar. 23, 2000, as amended at 69 FR 53984, Sept. 3, 2004; 71 FR 20461, Apr. 20, 2006]

### **§ 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

(iii) Site-specific secondary aluminum processing unit emission plan (if applicable).

(17) 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.

[65 FR 15710, Mar. 23, 2000, as amended at 67 FR 79818, Dec. 30, 2002]

### **§ 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.

[68 FR 37359, June 23, 2003]

**§ 63.1520 [Reserved]**

**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 <sup>a</sup>	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 <sup>a</sup>	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 <sup>a</sup>	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 <sup>a</sup>	0.80	ng TEQ/dscm @ 11% O <sub>2</sub> <sup>b</sup>
New and existing dross-only furnace	PM	0.30	lb/ton of feed

New and existing in-line fluxer <sup>d</sup>	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) <sup>e</sup>	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 <sup>e</sup>	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 <sup>a</sup>	15.0	µg TEQ/Mg of feed
New and existing group 1 furnace <sup>e</sup> 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 <sup>a</sup>	No Limit	Clean charge only

New and existing secondary aluminum processing unit<sup>a, b</sup> (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<sup>c</sup>

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

HCl<sup>f</sup>

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

D/F<sup>g</sup>

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

<sup>a</sup> D/F limit applies to a unit at a major or area source.

<sup>b</sup> Sweat furnaces equipped with afterburners meeting the specifications of §63.1505(f)(1) are not required to conduct a performance test.

<sup>c</sup> These limits are also used to calculate the limits applicable to secondary aluminum processing units.

<sup>d</sup> 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  $i$  [ $\mu$ g TEQ/Mg (gr TEQ/ton) of feed];  $L_{t_{D/F}}$  = the overall D/F emission limit for the secondary aluminum processing unit [ $\mu$ g TEQ/Mg (gr TEQ/ton) of feed];  $n$  = the number of units in the secondary aluminum processing unit.

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

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

<sup>g</sup> 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. <sup>b</sup>
All affected sources and	Charge/feed weight or	Operate a device that records the weight of each

Affected source/emission unit	Monitor type/operation/process	Operating requirements
emission units subject to production-based (lb/ton of feed) emission limits <sup>a</sup>	Production weight	charge; Operate in accordance with OM&M plan. <sup>b</sup>
Group 1 furnace, group 2 furnace, in-line fluxer and scrap dryer/delacquering kiln/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/decoating kiln.
Aluminum scrap shredder with fabric filter	Bag leak detector or	Initiate corrective action within 1-hr of alarm and complete in accordance with OM&M plan <sup>b</sup> ; operate such that alarm does not sound more than 5% of operating time in 6-month period.
	COM or	Initiate corrective action within 1-hr of a 6-minute average opacity reading of 5% or more and complete in accordance with OM&M plan. <sup>b</sup>
	VE	Initiate corrective action within 1-hr of any observed VE and complete in accordance with the OM&M plan. <sup>b</sup>
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. <sup>b</sup>
	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. <sup>b</sup>
	Bag leak detector or	Initiate corrective action within 1-hr of alarm and complete in accordance with the OM&M plan; <sup>b</sup> operate such that alarm does not sound more than 5% of operating time in 6-month period.
	COM	Initiate corrective action within 1-hr of a 6-minute average opacity reading of 5% or more and complete in accordance with the OM&M plan. <sup>b</sup>
	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 °C (+25 °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

Affected source/emission unit	Monitor type/operation/process	Operating requirements
		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. <sup>b</sup>
Dross-only furnace with fabric filter	Bag leak detector or	Initiate corrective action within 1-hr of alarm and complete in accordance with the OM&M plan; <sup>b</sup> operate such that alarm does not sound more than 5% of operating time in 6-month period.
	COM	Initiate corrective action within 1-hr of a 6-minute average opacity reading of 5% or more and complete in accordance with the OM&M plan. <sup>b</sup>
	Feed/charge material	Operate using only dross as the feed material.
Rotary dross cooler with fabric filter	Bag leak detector or	Initiate corrective action within 1-hr of alarm and complete in accordance with the OM&M plan; <sup>b</sup> operate such that alarm does not sound more than 5% of operating time in 6-month period.
	COM	Initiate corrective action within 1-hr of a 6-minute average opacity reading of 5% or more and complete in accordance with the OM&M plan. <sup>b</sup>
In-line fluxer with lime-injected fabric filter (including those that are part of a secondary aluminum processing unit)	Bag leak detector or	Initiate corrective action within 1-hr of alarm and complete in accordance with the OM&M plan; <sup>b</sup> operate such that alarm does not sound more than 5% of operating time in 6-month period.
	COM	Initiate corrective action within 1-hr of a 6-minute average opacity reading of 5% or more and complete in accordance with the OM&M plan. <sup>b</sup>
	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 material)	Flux materials	Use no reactive flux.
Group 1 furnace with lime-injected fabric filter (including those that are part of a secondary of aluminum processing unit).	Bag leak detector or	Initiate corrective action within 1-hr 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. <sup>b</sup>
	COM	Initiate corrective action within 1-hr of a 6-minute

Affected source/emission unit	Monitor type/operation/process	Operating requirements
		average opacity reading of 5% or more; complete corrective action in accordance with the OM&M plan. <sup>b</sup>
	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 (kg/Mg) (lb/ton) at or below 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 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 rate	Maintain reactive flux injection rate (kg/Mg) (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 <sup>c</sup>	Operate furnace within the range of charge materials, contaminant levels, and parameter values established in the site-specific monitoring plan.
	Feed material (melting/holding furnace)	Use only clean charge.
Clean (group 2) furnace	Charge and flux materials	Use only clean charge. Use no reactive flux.

<sup>a</sup>Thermal chip dryers, scrap dryers/delacquering kilns/decoating kilns, dross-only furnaces, in-line fluxers and group 1 furnaces including melting/holding furnaces.

<sup>b</sup>OM&M plan—Operation, maintenance, and monitoring plan.

<sup>c</sup>Site-specific monitoring plan. Owner/operators of group 1 furnaces without control devices must include a section in their OM&M plan that documents work practice 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 must be developed in coordination with and approved by the permitting authority.

[65 FR 15710, Mar. 23, 2000, as amended at 67 FR 79818, Dec. 30, 2002; 69 FR 53984, Sept. 3, 2004]

**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.
All affected sources and emission units subject to production-based (lb/ton of feed/charge) emission limits <sup>a</sup>	Feed/charge weight	Record weight of each feed/charge, weight measurement device or other procedure accuracy of $\pm 1\%$ <sup>b</sup> ; calibrate according to manufacturers specifications, or at least once every 6 months.
Group 1 furnace, group 2 furnace, in-line fluxer, and scrap dryer/delacquering kiln/decoating kiln	Labeling	Check monthly to confirm that labels are intact and legible.
Aluminum scrap shredder with fabric filter	Bag leak detector or	Install and operate in accordance with "Fabric Filter Bag Leak Detection Guidance" <sup>c</sup> ; record voltage output from bag leak detector.
	COM or	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.
	VE	Conduct and record results of 30-minute daily test in accordance with Method 9.
Thermal chip dryer with afterburner	Afterburner operating temperature	Continuous measurement device to meet specifications in §63.1510(g)(1); 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 plan.
	Feed/charge material	Record identity of each feed/charge; certify feed/charge materials every 6 months.
Scrap dryer/delacquering kiln/decoating kiln with afterburner and lime-injected fabric filter	Afterburner operating temperature.	Continuous measurement device to meet specifications in §63.1510(g)(1); 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 plan.
	Bag leak detector or	Install and operate in accordance with "Fabric Filter Bag Leak Detection Guidance" <sup>c</sup> ; record voltage output from bag leak detector.
	COM	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.

Affected source/Emission unit	Monitor type/Operation/Process	Monitoring requirements
	Lime injection rate	For continuous injection systems, inspect each feed hooper or silo every 8 hours to verify that lime is free flowing; record results of each inspection. If blockage occurs, inspect every 4 hours for 3 days; return to 8-hour inspections if corrective action results in no further blockage during 3-day period, record feeder setting daily.
	Fabric filter inlet temperature.	Continous measurement device to meet specifications in §63.1510(h)(2); record temperatures in 15-minute block averages; determine and record 3-hr block averages.
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.
Dross-only furnace with fabric filter	Bag leak detector or	Install and operate in accordance with "Fabric Filter Bag Leak Detection Guidance" <sup>c</sup> ; record output voltage from bag leak detector.
	COM	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/charge material	Record identity of each feed/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" <sup>c</sup> ; record output voltage from bag leak detector.
	COM	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	Bag leak detector or	Install and operate in accordance with "Fabric Filter Bag Leak Detection Guidance" <sup>c</sup> ; record output voltage from bag leak detector.
	COM	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 $\pm 1\%$ <sup>b</sup> ; calibrate according to manufacturer's 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

Affected source/Emission unit	Monitor type/Operation/Process	Monitoring requirements
		performance test; or Alternative flux injection rate determination procedure per §63.1510(j)(5).
	Lime injection rate	For continuous injection systems, record feeder setting daily and inspect each feed hopper or silo every 8 hrs to verify that lime is free-flowing; record results of each inspection. If blockage occurs, inspect every 4 hrs for 3 days; return to 8-hour inspections if corrective action results in no further blockage during 3-day period. <sup>d</sup>
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" <sup>c</sup> ; record output voltage from bag leak detector.
	COM	Design and install in accordance with PS-1; collect data in accordance with subpart A of 40 part CFR 63; determine and record 6-minute block averages.
	Lime injection rate	For continuous injection systems, record feeder setting daily and inspect each feed hopper or silo every 8 hours to verify that lime is free-flowing; record results of each inspection. If blockage occurs, inspect every 4 hours for 3 days; return to 8-hour inspections if corrective action results in no further blockage during 3-day period. <sup>d</sup>
	Reactive flux injection rate	Weight measurement device accuracy of $\pm 1\%$ <sup>b</sup> ; 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 injection rate determination procedure per §63.1510(j)(5).
	Fabric filter inlet temperature	Continuous measurement device to meet specifications in §63.1510(h)(2); 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 in sidewell furnace hearth	Maintain flux addition operating log; certify every 6 months.
	Reactive flux injection rate	Weight measurement device accuracy of $+1\%$ <sup>b</sup> ; calibrate according to manufacturers specifications or at least once every six 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.

Affected source/Emission unit	Monitor type/Operation/Process	Monitoring requirements
	OM&M plan (approved by permitting agency)	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/holding furnace)	Record type of permissible feed/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.

<sup>a</sup>Thermal chip dryers, scrap dryers/delacquering kilns/decoating kilns, dross-only furnaces, in-line fluxers and group 1 furnaces or melting/holding furnaces.

<sup>b</sup>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.

<sup>c</sup>Non-triboelectric bag leak detectors must be installed and operated in accordance with manufacturers' specifications.

<sup>d</sup>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.

[65 FR 15710, Mar. 23, 2000, as amended at 69 FR 53985, Sept. 3, 2004]

**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.	

<b>Citation</b>	<b>Requirement</b>	<b>Applies to RRR</b>	<b>Comment</b>
§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].
§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	Yes.	

Citation	Requirement	Applies to RRR	Comment
	Standards		
§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.	

Citation	Requirement	Applies to RRR	Comment
§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.	
§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.

Citation	Requirement	Applies to RRR	Comment
§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.	

[65 FR 15710, Mar. 23, 2000, as amended at 67 FR 59793, Sept. 24, 2002; 67 FR 79818, Dec. 30, 2002; 69 FR 53986, Sept. 3, 2004; 70 FR 75346, Dec. 19, 2005]

**Indiana Department of Environmental Management  
Office of Air Quality**

Technical Support Document (TSD) for a Registration

**Source Background and Description**

Source Name:	United Core, LLC
Source Location:	1200 146th Street, East Chicago, Indiana 46312
County:	Lake
SIC Code:	3341
Registration No.:	089-24443-00522
Permit Reviewer:	ERG/BL

The Office of Air Quality (OAQ) has reviewed an application from United Core, LLC relating to the construction and operation of a secondary aluminum recovering plant.

**Permitted Emission Units and Pollution Control Equipment**

There are no permitted emission units operating at this source during this review process.

**New Emission Units and Pollution Control Equipment**

- (a) One (1) natural gas fired secondary aluminum sweat furnace, identified as SF01, approved for construction in 2007 with a maximum capacity of 1.5 tons of scrap aluminum per hour, using a thermal oxidizer as control, and exhausting to stack S1. Under the Secondary Aluminum Production NESHAP (40 CFR 63, Subpart RRR), the furnace is considered a new sweat furnace as defined in 40 CFR 63.1503. The sweat furnace includes:
- (1) One (1) melt chamber (maximum heat input rate of 5.0 MMBtu/hr), and
  - (2) One (1) holding chamber connected to an afterburner (maximum heat input rate of 1.5 MMBtu/hr), with a minimum operating temperature of 1,600°F and 1.21 second residence time.

The furnace does not use fluxing agents.

- (b) Four (4) waste oil-fired space heaters each with a maximum heat input rate of 0.5 MMBtu/hr vented to the atmosphere.
- (c) Paved and unpaved roads and parking lots with public access.

**Existing Approvals**

There are no previous approvals for this source.

**Enforcement Issue**

There are no enforcement actions pending.

### Stack Summary

Stack ID	Operation	Height (ft)	Diameter (ft)	Flow Rate (acfm)	Temperature (°F)
S1	Secondary Aluminum Sweat Furnace	34.0	2.0	3,960	1,600

### Recommendation

The staff recommends to the Commissioner that the construction and operation 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.

A complete application for the purposes of this review was received on March 15, 2007.

### Emission Calculations

See Appendix A of this document for detailed emission calculations in Appendix A, pages 1 through 7. The source does not do any smelting, refining, or casting operations at this site; therefore these activities are not included in the calculations.

### Potential to Emit Before Controls

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emissions unit 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, the department, or the appropriate local air pollution control agency.”

Pollutant	Potential to Emit (tons/yr)
PM	10.3
PM10	9.33
PM2.5	9.33
SO <sub>2</sub>	16.4
VOC	1.49
CO	2.66
NO <sub>x</sub>	9.06

HAPs	Potential to Emit (tons/yr)
Hexane	0.05
Total	0.06

- (a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of PM and PM10 are less than twenty-five (25) tons per year but greater than five (5), and the potential to emit SO<sub>2</sub> is less than twenty-five (25) tons per year but greater than ten (10) tons per year. The PTE of VOC, CO, and NO<sub>x</sub> are less than twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-5.5. A registration will be issued.
- (b) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is less than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-1.1-1(16)) of a

combination of HAPs is less than twenty-five (25) tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.

### County Attainment Status

The source is located in Lake County.

Pollutant	Status
PM10	maintenance attainment
PM2.5	nonattainment
SO <sub>2</sub>	maintenance attainment
NO <sub>2</sub>	attainment
8-hour Ozone	moderate nonattainment
CO	maintenance attainment
Lead	attainment

**Note:** On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 redesignating Lake County to attainment for the sulfur dioxide standard, and revoking the one-hour ozone standard in Indiana.

- (a) U.S. EPA in Federal Register Notice 70 FR 943 dated January 5, 2005 has designated Lake County, as nonattainment for PM2.5. On March 7, 2005 the Indiana Attorney General's Office on behalf of IDEM filed a law suit with the Court of Appeals for the District of Columbia Circuit challenging U.S. EPA's designation of non-attainment areas without sufficient data. However, in order to ensure that sources are not potentially liable for violation of the Clean Air Act, the OAQ is following the U.S. EPA's guidance to regulate PM10 emissions as surrogate for PM2.5 emissions pursuant to the Nonattainment New Source Review requirements. See the State Rule Applicability - Entire Source section.
- (a) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) 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 and NOx emissions are considered when evaluating the rule applicability relating to the ozone standards. Lake County has been designated as nonattainment for the 8-hour ozone standard. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.
- (b) Lake County has been classified as attainment or maintenance attainment in Indiana for PM10, SO<sub>2</sub>, NO<sub>2</sub>, CO, and Lead. Therefore, these 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.
- (e) Fugitive Emissions  
Since this type of operation is one of the 28 listed source categories under 326 IAC 2-2, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are counted toward determination of PSD applicability.

### Source Status

New Source PSD and Emission Offset Definition (emissions after controls, based on 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/yr)
PM	10.3
PM10	9.33
PM2.5	9.33
SO <sub>2</sub>	16.4
VOC	1.49
CO	2.66
NO <sub>x</sub>	9.06
Hexane	0.05
Combination HAPs	0.06

- (a) This new source is not a major stationary source under PSD (326 IAC 2-2), because no regulated attainment pollutant is emitted at a rate of 100 tons per year or more, and it is one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).
- (b) This new source is not a major stationary source under Emission Offset (326 IAC 2-3), because no nonattainment regulated pollutant is emitted at a rate of 100 tons per year or more.
- (c) This new source is not a major source of HAPs, as defined by 40 CFR 63.41, because HAPs emissions are less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year for a combination of HAPs. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA).

### Part 70 Permit Determination

#### 326 IAC 2-7 (Part 70 Permit Program)

This new source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is less than 100 tons per year,
- (b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
- (c) any combination of HAPs is less than 25 tons per year.

This is the first air approval issued to this source.

### Federal Rule Applicability

- (a) This source is not subject to the requirements of the New Source Performance Standard (NSPS), 40 CFR Part 60, Subpart Z, Standards of Performance for Ferroalloy Production Facilities (326 IAC 12), since this source does not operate an electric submerged arc furnace.
- (b) This source is not subject to the requirements of the NSPS, 40 CFR Part 60, Subpart S, Standards of Performance for Primary Aluminum Reduction Plants (326 IAC 12), since this source is not a primary aluminum reduction plant.
- (c) There are no NSPSs (326 IAC 12 and 40 CFR Part 60) included in this Registration for this source.
- (d) This source is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) 40 CFR 63, Subpart LL, National Emission Standards for Hazardous Air Pollutants for Primary Aluminum Reduction Plants (326 IAC 20-24), since this source is not a primary aluminum reduction plant.

- (e) The sweat furnace is subject to the requirements of the NESHAP, 40 CFR 63 Subpart RRR, National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production (326 IAC 20-70).

The one (1) natural gas fired secondary aluminum sweat furnace is considered a new secondary aluminum processing unit. The sweat furnace is equipped with an afterburner with a design residence time of 0.8 seconds or greater and an operating temperature of 1600°F or greater. Therefore, pursuant to 40 CFR 63.1505(f)(1), testing is not required to demonstrate compliance with the limits of 40 CFR 63, Subpart RRR. This source is an area source of HAPs; therefore, only the requirements pertaining to dioxin and furan (D/F) emissions and associated operating, monitoring, reporting and recordkeeping requirements apply, and this source is not required to obtain a Part 70, Title V, Operating Permit. The following facility is subject to this rule:

Under 40 CFR 63, Subpart RRR, this is a new sweat furnace. Nonapplicable portions of the NESHAP will not be included in this Registration. The emission unit is subject to the following portions of Subpart RRR:

- (1) 40 CFR 63.1500 (a), (c)(3), (e), and (f)
- (2) 40 CFR 63.1501 (b)
- (3) 40 CFR 63.1502
- (4) 40 CFR 63.1503
- (5) 40 CFR 63.1505 (a) and (f)
- (6) 40 CFR 63.1506 (a), (c), (h)(1)(ii) and (2), and (p)
- (7) 40 CFR 63.1510 (a), (b), (d), and (g)
- (8) 40 CFR 63.1513 (d)
- (9) 40 CFR 63.1515 (a)(2) and (4)(i), (b)(5), (8), (9), and (10)
- (10) 40 CFR 63.1516 (a) and (b)(1)(iv) - (vi)
- (11) 40 CFR 63.1517 (a) and (b)(2), (14) and (16)
- (12) 40 CFR 63.1518
- (13) 40 CFR 63.1519
- (14) Tables 1 through 3

The provisions of 40 CFR 63 Subpart A – General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the facility described in this section except when otherwise specified in 40 CFR 63 Subpart RRR.

- (f) There are no other National Emission Standards for Hazardous Air Pollutants (NESHAP) (326 IAC 14 and 40 CFR Part 63) included in this registration for this source.

### **State Rule Applicability – Entire Source**

#### **326 IAC 1-6-3 (Preventive Maintenance Plan)**

The Permittee is required by 40 CFR Part 63 to have an Operation Maintenance, and Monitoring (OMM) Plan for the one (1) sweat furnace (SF01). The source submitted a OMM Plan on March 15, 2007. This OMM plan will fulfill the requirements of 326 IAC 1-6-3 (Preventive Maintenance Plan) for that unit.

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

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

#### **326 IAC 2-3 (Emission Offset) and 326 IAC 2-1.1-5 (Nonattainment Area New Source Review)**

Lake County was designated as non-attainment for PM<sub>2.5</sub> in 70 FR 943 dated January 5, 2005. According to the April 5, 2005, U.S. EPA memo titled "Implementation of New Source Review

Requirements in PM2.5 Nonattainment Areas” authored by Steve Page, Director of OAQPS, until EPA promulgates the PM2.5 major NSR regulations, states should assume that a major stationary source’s PM10 emissions represent PM2.5 emissions. IDEM will use the PM10 nonattainment major NSR program as a surrogate to address the requirements of nonattainment major NSR for the PM2.5 NAAQS. A major source in a nonattainment area is a source that emits or has the potential to emit 100 tons/yr of any regulated pollutant.

This existing source is located in Lake County (nonattainment area for 8-hour ozone and PM2.5) and has potential to emit PM10 (as surrogate for PM2.5) and VOC of less than one hundred (100) tons per twelve (12) consecutive month period, respectively. Therefore, pursuant to 326 IAC 2-3, this source is not subject to the requirements of Emission Offset and Nonattainment NSR.

**326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))**

This source has the potential to emit less than 10 tons per year of a single HAP and less than 25 tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

**326 IAC 2-6 (Emission Reporting)**

Pursuant to 326 IAC 2-6-1, this source is not subject to this rule because it is not required to have an operating permit under 326 IAC 2-7 (Part 70); it is located in Lake County and has potential to emit of VOC and NOx that is less than 25 tons per year; and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, 326 IAC 2-6 does 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 twenty percent (20%) 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.

**326 IAC 6-4 (Fugitive Dust Emission Limitations)**

Pursuant to 326 IAC 6-4 (Fugitive Dust Emission Limitations), the source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4.

**326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)**

The source is located in Lake County and was constructed after December 13, 1985. However, the fugitive particulate emissions from the paved and unpaved roads and parking lot area are negligible. Pursuant to 326 IAC 6-5-1(b), this source is exempt from the requirements of 326 IAC 6-5.

**State Rule Applicability – Individual Facilities**

**326 IAC 6.8 (Particulate Matter Limitations for Lake County)**

The requirements of 326 IAC 6.8 are not applicable to the any of the facilities at this source, because none of the facilities at this source are specifically listed in 326 IAC 6.8-2 through 326 IAC 6.8-11, the sources actual emissions of PM are less than ten (10) tons per year, and the potential emissions of PM are less than 100 tons per year.

**326 IAC 6.8-2 (Lake County: PM10 Emission Requirements)**

This source is located in Lake County and is not specifically listed in 326 IAC 6.8-2. Therefore, 326 IAC 6.8-2 (Lake County PM10 Emission Requirements) do not apply.

**326 IAC 6.8-10 (Lake County: Fugitive Particulate Matter)**

This source is located in Lake County, the potential to emit fugitive particulate matter into the atmosphere is less than five (5) tons per year. Therefore, 326 IAC 6.8-10 (Lake County: Fugitive Particulate Matter) does not apply.

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

The potential VOC emissions from this source are less than twenty-five (25) tons per year. Therefore, the requirements of 326 IAC 8-1-6 are not applicable to any facilities at this source.

**326 IAC 8-7 (Specific VOC Reduction Requirements for Lake, Porter, Clark, and Floyd Counties)**

This source is not subject to 326 IAC 8-7 (Specific VOC Reduction Requirements for Lake, Porter, Clark, and Floyd Counties) because the only source of VOC emissions, the sweat furnace (SF01) has the potential to emit VOC less than twenty-five (25) tons per year.

**State Rule Applicability – Sweat Furnace**

**326 IAC 4-2-2 (Incinerators)**

The sweat furnace (SF01) is not an incinerator, as defined by 326 IAC 1-2-34 because this furnace does not burn waste substances. Therefore, the sweat furnace is not subject to the requirements of 326 IAC 4-2-2.

**326 IAC 6-2 (Particulate Emissions from Indirect Heating Units)**

The sweat furnace (SF01) is not subject to the requirements of 326 IAC 6-2, since it is not a source of indirect heating.

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

Pursuant to 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the sweat furnace (SF01) shall not exceed 5.38 lbs/hr when operating at a process weight rate of 1.5 tons of scrap aluminum per hour.

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:

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

**326 IAC 7-1 (Sulfur Dioxide Emission Limitations)**

The sweat furnace (SF01) is not subject to the requirements of 326 IAC 7-1, because it has potential and actual emissions of sulfur dioxide less than twenty-five (25) tons per year and ten (10) pounds per hour, respectively.

**State Rule Applicability – Waste Oil-Fired Space Heaters**

**326 IAC 4-2-2 (Incinerators)**

Each of the waste oil-fired space heaters is not an incinerator, as defined by 326 IAC 1-2-34, since they each do not burn waste substances. Therefore, the waste oil-fired space heaters is not subject to the requirements of 326 IAC 4-2-2.

**326 IAC 6-2 (Particulate Emissions from Indirect Heating Units)**

The waste oil-fired space heaters are not subject to the requirements of 326 IAC 6-2, since they each are not a source of indirect heating.

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

Pursuant to 326 IAC 6-3-1(b)(14), the waste oil-fired space heaters are exempt from the requirements of 326 IAC 6-3, because the heaters have potential particulate emissions less than five hundred fifty-one thousandths (0.551) pound per hour.

**326 IAC 7-1 (Sulfur Dioxide Emission Limitations)**

The waste oil-fired space heaters are not subject to the requirements of 326 IAC 7-1, because they each has potential and actual emissions of sulfur dioxide less than twenty-five (25) tons per year and ten (10) pounds per hour, respectively.

**Testing Requirements**

Pursuant to 40 CFR Part 63, Subpart RRR, United Core, LLC is not required to conduct a performance test to demonstrate compliance with dioxin and furan emission standards, provided United Core, LLC uses an afterburner with a design residence time of 0.8 seconds or greater, and an operating temperature of 1,600°F or greater. United Core, LLC will monitor the temperature in the afterburner using a thermocouple and will record the temperature using a datalogger every 15-minutes.

**Conclusion**

The construction and operation of the secondary aluminum recovering plant shall be subject to the conditions of the Registration 089-24443-00522.

**Appendix A: Emission Calculations**  
**Natural Gas Fired Melt Chamber and After Burner**  
**MM BTU/HR <100**

**Company Name:** United Core, LLC  
**Address:** 1200 146th Street, East Chicago, Indiana 46312  
**Registration:** R089-24443-00522  
**Reviewer:** ERG/BL  
**Date:** April 4, 2007

Heat Input Capacity  
MMBtu/hr  
6.50

Potential Throughput  
MMSCF/yr  
55.8

Pollutant

	PM*	PM10*	SO <sub>2</sub>	NOx**	VOC	CO
Emission Factor (lb/MMSCF)	1.90	7.60	0.60	100	5.50	84.0
Potential to Emit (tons/yr)	0.05	0.21	0.02	2.79	0.15	2.34

\*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM combined.

\*\*Emission factor for NOx (Uncontrolled) = 100 lb/MMSCF

Total heat input capacity includes: melt chamber (5.0 MMBtu/hr) + holding chamber (1.5 MMBtu/hr)

Emission factors are from AP-42, Chapter 1.4, Tables 1.4-1, 1.4-2, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (July 1998).  
All emission factors are based on normal firing.

**Methodology**

Potential Throughput (MMSCF/yr) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMSCF/1,020 MMBtu  
Potential to Emit (tons/yr) = Potential Throughput (MMSCF/yr) x Emission Factor (lb/MMSCF) x 1 ton/2,000 lbs

**Appendix A: Emission Calculations**  
**HAPs Emissions from Natural Gas Combustion**  
**MM BTU/HR <100**

**Company Name:** United Core, LLC  
**Address:** 1200 146th Street, East Chicago, Indiana 46312  
**Registration:** R089-24443-00522  
**Reviewer:** ERG/BL  
**Date:** April 4, 2007

HAPs - Organics

Emission Factor (lb/MMSCF)	Benzene 2.10E-03	Dichlorobenzene 1.20E-03	Formaldehyde 7.50E-02	Hexane 1.80E+00	Toluene 3.40E-03
Potential to Emit (tons/yr)	5.86E-05	3.35E-05	2.09E-03	5.02E-02	9.49E-05

HAPs - Metals

Emission Factor (lb/MMSCF)	Lead 5.00E-04	Cadmium 1.10E-03	Chromium 1.40E-03	Manganese 3.80E-04	Nickel 2.10E-03
Potential to Emit (tons/yr)	1.40E-05	3.07E-05	3.91E-05	1.06E-05	5.86E-05

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors provided above are from AP-42, Chapter 1.4, Table 1.4-2, 1.4-3 and 1.4-4 (July, 1998). Additional HAPs emission factors are available in AP-42, Chapter 1.4.

**Appendix A: Emission Calculations  
Waste-Oil Fired Space Heaters  
MM BTU/HR <100**

**Company Name:** United Core, LLC  
**Address:** 1200 146th Street, East Chicago, Indiana 46312  
**Registration:** R089-24443-00522  
**Reviewer:** ERG/BL  
**Date:** April 4, 2007

Heat Input Capacity  
MMBtu/hr  
2.0

Potential Throughput  
kgals/year  
127

S = Weight % Sulfur  
1.80

Emission Factor (lb/kgal)	Pollutant						
	PM*	PM10*	SO2 256 (142.0 S)	NOx 20.0	VOC 0.34	CO 5.0	HAPs 0.04
Potential to Emit (tons/yr)	0.13	0.21	16.3	1.27	0.02	0.3	2.61E-03
Potential to Emit (lbs/hr)	0.03						

1 gallon of Waste Oil has a heating value of 137,500 Btu and a sulfur content of 1.8%  
Emission Factors are from AP42, Tables 1.3-1, 1.3-2, 1.3-3, and 1.3-9 ( SCC 1-03-005-01/02/03) [9/98]  
\*PM emission factor is for filterable PM only. PM10 emission factor is for filterable and condensable PM combined.

**Methodology**

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 kgal/1,000 gal x 1 gal/0.140 MMBtu  
Potential to Emit (tons/yr) = Potential Throughput (kgals/yr) x Emission Factor (lb/kgal)/2,000 lb/ton

**Appendix A: Emission Calculations**  
**Sweating Furnace**  
**MM BTU/HR <100**

**Company Name:** United Core, LLC  
**Address:** 1200 146th Street, East Chicago, Indiana 46312  
**Registration:** R089-24443-00522  
**Reviewer:** ERG/BL  
**Date:** April 4, 2007

Potential Throughput  
 Scrap Aluminum  
 (tons/hr)  
 1.50

	Pollutant					
	PM	PM10	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO
Emission Factor (lb/ton of metal processed)	14.5	13.3	0.02	0.76	0.20	-
Potential to Emit (tons/yr)	9.53	8.74	0.13	4.99	1.31	-
326 IAC 6-3-2 Allowable PM Emissions (lbs/hr)	5.38					
Potential to Emit (lbs/hr)	2.18					

Emission factors are from EPA's FIRE 6.25 (SCC 3-04-001-01) for SO<sub>2</sub>, PM and PM<sub>10</sub>; AIRS EPA 450/4-90-003 for NO<sub>x</sub> and VOC.

An 90% control efficiency for particulate was used for the thermal incinerator. Control efficiency for the thermal incinerator is from Air Pollution Control Technology Fact Sheet for Thermal Incinerator (EPA-452/F-03-022).

All emission factors are based on normal firing.

\* The source complies with the 326 IAC 6.8-1-2, allowable PM emissions (0.3 gr/dscf)

**Methodology**

SO<sub>2</sub>/NO<sub>x</sub>/VOC Potential to Emit (tons/yr) = Potential Throughput (tons/hr) x Emission Factor (lb/ton) x 1 ton/2,000 lbs x 8,760 hrs/yr

PM/PM<sub>10</sub> Potential to Emit (tons/yr) = Potential Throughput (tons/hr) x Emission Factor (lb/ton) x 1 ton/2,000 lbs x 8,760 hrs/yr x (1 - Control Efficiency%)

Allowable emissions under 326 IAC 6-3-2 are calculated using the following equation where the process weight rate is up to sixty thousand (60,000) pounds per hour:

$$E = 4.10 P^{0.67}$$

where

E = rate of emission in pounds per hour and

P = process weight rate in tons per hour

**Appendix A: Emission Calculations**  
**HAPs Emissions from Sweating Furnace**  
**MM BTU/HR <100**

**Company Name:** United Core, LLC  
**Address:** 1200 146th Street, East Chicago, Indiana 46312  
**Registration:** R089-24443-00522  
**Reviewer:** ERG/BL  
**Date:** April 4, 2007

Emission Factor (gr/dscf)	HAPs - Organics	
	Dioxins -TEQ 3.50E-10	Furans - TEQ 3.50E-10
Potential to Emit (tons/yr)	1.26E-08	1.26E-08

Emission rates from the furnace are set as equivalent to the requirements of 40 CFR Part 63, Subpart RRR  
Stack gas flowrate 957 dcfm. IDEM has assumed that actual conditions of the actual air flow is equal to air flow at dry standard conditions.

**Methodology**

Potential to Emit (tons/yr) = Stack Throughput (acfm) x Emission Factor (gr/dscf) x 1 lb/7,000 grains x 60 min/1hr x 8,760 hrs/yr x 1 ton/2,000 lbs

**Company Name:** United Core, LLC  
**Address:** 1200 146th Street, East Chicago, Indiana 46312  
**Registration:** R089-24443-00522  
**Reviewer:** ERG/BL  
**Date:** April 4, 2007

Permittee provided all input parameters (i.e., driving distance, gross weight, etc.). The maximum equipment capacity is one (1) load of scrap received per day. The distance traveled is 600 feet one-way (1/3 is paved and 2/3 unpaved).

**Paved Roads**

Maximum Vehicular Speed: 10 mph  
 Average Round Trip Distance of Haul: 0.08 miles  
 Weighted Average Gross Weight: 27 tons

Calculations:

$$E = k(sL/2)^{0.65} * (W/3)^{1.5}$$

E = Emission factor (lbs/vehicle miles traveled (VMT))  
 k = 0.016 particle size multiplier for PM-10  
       0.082 particle size multiplier for PM  
 sL = 9.7 road surface silt content (g/m<sup>2</sup>) (for Iron and steel production)  
 W = 27 weighted average vehicle weight (tons)

Emission equations from AP-42, Chapter 13.2.1 - Paved Roads (November 2006)

VMT= 27.7 (miles/yr)

E =  $\frac{PM}{VMT}$  6.18 lbs/VMT

Potential PM Emissions (tons/yr) = Emission factor (lbs/VMT) \* VMT (mi/yr) \* 1 ton/2,000 lbs  
 Potential PM Emissions (tons/yr) = **0.09 tons/yr**

E =  $\frac{PM-10}{VMT}$  1.21 lbs/VMT

Potential PM-10 Emissions (tons/yr) = Emission factor (lbs/VMT) \* VMT (mi/yr) \* 1 ton/2,000 lbs  
 Potential PM-10 Emissions (tons/yr) = **0.02 tons/yr**

**Unpaved Roads**

The following calculations determine the amount of emissions created by unpaved roads, based on 8760 hours of use and AP42, Ch. 13.2.2 (November 2006)

0.042 round trip/hr x  
 0.15 mile/round trip  
 8760 hrs/yr = 56.2 miles per year

PM

Method: Ef = k \* [(s/12)<sup>a</sup>] \* [(W/3)<sup>b</sup>]  
           = 16.8 (lbs/VMT)  
 where: k = 4.9 (particle size multiplier for PM-10) (k = 4.9 for PM-30 or TSP)  
       s = 17 mean % silt content of unpaved roads  
       a = 0.7 Constant for PM-10 (a = 0.7 for PM-30 or TSP)  
       b = 0.45 Constant for PM-10 (b = 0.45 for PM-30 or TSP)  
       W = 27 tons average vehicle weight

16.8 lb/mi \* 56.2 mi/yr = **0.47 tons/yr**

PM10

Method: Ef = k \* [(s/12)<sup>a</sup>] \* [(W/3)<sup>b</sup>]  
           = 5.52 (lbs/VMT)  
 where: k = 1.5 (particle size multiplier for PM-10) (k = 4.9 for PM-30 or TSP)  
       s = 17 mean % silt content of unpaved roads  
       a = 0.9 Constant for PM-10 (a = 0.7 for PM-30 or TSP)  
       b = 0.45 Constant for PM-10 (b = 0.45 for PM-30 or TSP)  
       W = 27 tons average vehicle weight

5.52 lb/mi \* 56.2 mi/yr = **0.16 tons/yr**

**Appendix A: Emission Calculations**

**Company Name:** United Core, LLC  
**Address:** 1200 146th Street, East Chicago, Indiana 46312  
**Registration:** R089-24443-00522  
**Reviewer:** ERG/BL  
**Date:** April 4, 2007

Process/emission unit	Potential to Emit After Issuance (tons/year)						
	PM	PM-10*	SO <sub>2</sub>	VOC	CO	NOx	HAPs
Natural Gas Combustion	0.05	0.21	0.02	0.15	2.34	2.79	0.05
Oil Combustion	0.13	0.21	16.3	0.02	0.32	1.27	0.00
Sweating Furnace	9.53	8.74	0.13	1.31	-	4.99	2.515E-08
Road Fugitives	0.56	0.17	-	-	-	-	-
<b>Total</b>	<b>10.3</b>	<b>9.33</b>	<b>16.4</b>	<b>1.49</b>	<b>2.66</b>	<b>9.06</b>	<b>0.06</b>

\* PM-10 emissions are a surrogate for PM2.5 emissions.