



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant

DATE: September 6, 2012

RE: General Aluminum Manufacturing Company / 069-31508-00048

FROM: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Notice of Decision: Approval - Effective Immediately

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 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require 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, Suite N 501E, 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
FNPER.dot12/03/07



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

Federally Enforceable State Operating Permit Renewal OFFICE OF AIR QUALITY

**General Aluminum Manufacturing Company
1345 Henry Street
Huntington, Indiana 46750**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-8 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a FESOP under 326 IAC 2-8.

Operation Permit No.: F069-31508-00048	
Issued by:  Iryn Callilung, Section Chief Permits Branch Office of Air Quality	Issuance Date: September 6, 2012 Expiration Date: September 6, 2022

TABLE OF CONTENTS

A. SOURCE SUMMARY	4
A.1 General Information [326 IAC 2-8-3(b)]	
A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]	
A.3 Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-8-3(c)(3)(I)]	
A.4 FESOP Applicability [326 IAC 2-8-2]	
B. GENERAL CONDITIONS	7
B.1 Definitions [326 IAC 2-8-1]	
B.2 Permit Term [326 IAC 2-8-4(2)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]	
B.3 Term of Conditions [326 IAC 2-1.1-9.5]	
B.4 Enforceability [326 IAC 2-8-6] [IC 13-17-12]	
B.5 Severability [326 IAC 2-8-4(4)]	
B.6 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]	
B.7 Duty to Provide Information [326 IAC 2-8-4(5)(E)]	
B.8 Certification [326 IAC 2-8-3(d)][326 IAC 2-8-4(3)(C)(i)][326 IAC 2-8-5(1)]	
B.9 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]	
B.10 Compliance Order Issuance [326 IAC 2-8-5(b)]	
B.11 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)]	
B.12 Emergency Provisions [326 IAC 2-8-12]	
B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5]	
B.14 Termination of Right to Operate [326 IAC 2-8-9][326 IAC 2-8-3(h)]	
B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-8-4(5)(C)][326 IAC 2-8-7(a)][326 IAC 2-8-8]	
B.16 Permit Renewal [326 IAC 2-8-3(h)]	
B.17 Permit Amendment or Revision [326 IAC 2-8-10][326 IAC 2-8-11.1]	
B.18 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]	
B.19 Source Modification Requirement [326 IAC 2-8-11.1]	
B.20 Inspection and Entry [326 IAC 2-8-5(a)(2)][IC 13-14-2-2][IC 13-17-3-2] [IC 13-30-3-1]	
B.21 Transfer of Ownership or Operational Control [326 IAC 2-8-10]	
B.22 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16] [326 IAC 2-1.1-7]	
B.23 Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][62 FR 8314] [326 IAC 1-1-6]	
C. SOURCE OPERATION CONDITIONS	17
Emission Limitations and Standards [326 IAC 2-8-4(1)]	
C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]	
C.2 Overall Source Limit [326 IAC 2-8]	
C.3 Opacity [326 IAC 5-1]	
C.4 Open Burning [326 IAC 4-1] [IC 13-17-9]	
C.5 Incineration [326 IAC 4-2] [326 IAC 9-1-2]	
C.6 Fugitive Dust Emissions [326 IAC 6-4]	
C.7 Stack Height [326 IAC 1-7]	
C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]	
Testing Requirements [326 IAC 2-8-4(3)]	
C.9 Performance Testing [326 IAC 3-6]	
Compliance Requirements [326 IAC 2-1.1-11]	

C.10 Compliance Requirements [326 IAC 2-1.1-11]

Compliance Monitoring Requirements [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

- C.11 Compliance Monitoring [326 IAC 2-8-4(3)][326 IAC 2-8-5(a)(1)]
- C.12 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)]
[326 IAC 2-8-5(1)]

Corrective Actions and Response Steps [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

- C.13 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]
- C.14 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]
- C.15 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4]
[326 IAC 2-8-5]

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

- C.16 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]
- C.17 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

Stratospheric Ozone Protection

- C.18 Compliance with 40 CFR 82 and 326 IAC 22-1

D.1. EMISSIONS UNIT OPERATION CONDITIONS..... 24

Emission Limitations and Standards [326 IAC 2-8-4(1)]

- D.1.1 Particulate (PM) [326 IAC 6-3-2]
- D.1.2 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]
- D.1.3 Hazardous Air Pollutants [326 IAC 2-8] [326 IAC 2-4.1]
- D.1.4 Volatile Organic Compounds BACT [326 IAC 8-1-6]
- D.1.5 Preventive Maintenance Plan [326 IAC 1-6-3]

Compliance Monitoring Requirements [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

- D.1.6 Visible Emissions Notations

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

- D.1.7 Record Keeping Requirements
- D.1.8 Reporting Requirements

D.2. EMISSIONS UNIT OPERATION CONDITIONS..... 24

- D.2.1 Particulate [326 IAC 6-2-4]

E.1. EMISSIONS UNIT OPERATION CONDITIONS..... 30

E.1.1 National Emission Standards for Hazardous Air Pollutant: Area Source Standards for Aluminum, Copper, and Other Nonferrous Foundries [40 CFR 63, Subpart ZZZZZZ]

Certification Form 32

Emergency Occurrence Form 33

FESOP Usage Report Form 35

Quarterly Deviation and Compliance Monitoring Report Form 37

SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-8-3(b)]

The Permittee owns and operates a stationary aluminum foundry melting only clean charge.

Source Address:	1345 Henry Street, Huntington, Indiana 46750
General Source Phone Number:	440-563-6059
SIC Code:	3365 (Aluminum Foundries)
County Location:	Huntington
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

This stationary source consists of the following emission units and pollution control devices:

- (a) Eight (8) natural gas-fired reverberatory furnaces, each melting clean scrap, defined as furnace charge materials, including molten aluminum; T-bar; sow; ingot; billet; pig; aluminum scrap known by the owner 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 365°C (650°F) or higher; aluminum scrap delacquered/decoated at 483°C (900°F) or higher, and runaround scrap.
- (1) Furnace #1, approved for construction in 2012, with a maximum heat input rate of 5.0 million (MM) British thermal units (Btu) per hour with a melting capacity of 1500 lb/hr, or 0.75 tons/hr, using wall flux at a rate of 0.21 lb/hr, and a drossing flux at a rate of 0.21 lb/hr, using no controls, and exhausting through stack #1.
 - (2) Furnace #2, constructed in 1992, and modified in 2012, with a maximum heat input rate of 5.4 million (MM) British thermal units (Btu) per hour with a melting capacity of 1500 lb/hr, or 0.75 tons/hr, using wall flux at a rate of 0.21 lb/hr, and a drossing flux at a rate of 0.21 lb/hr, using no controls, and exhausting through stack #2. Furnace #2 is capable of lost foam casting.
 - (3) Furnace #4, constructed in 1994, and modified in 2012, with a maximum heat input capacity of 3.20 MMBtu per hour and a melting capacity of 1000 lb/hr, or 0.5 tons/hr, using wall flux at a rate of 0.21 lb/hr, and a drossing flux at a rate of 0.21 lb/hr, using no controls, and exhausting through stack #4;
 - (4) Furnace #6, constructed in 1990, and modified in 2012, with a maximum heat input capacity of 4.60 MMBtu per hour and a melting capacity of 1000 lb/hr, or 0.5 tons/hr, using wall flux at a rate of 0.21 lb/hr, and a drossing flux at a rate of 0.21 lb/hr, using no controls, and exhausting through stack #6.

- (5) Furnace #7, constructed in 1990, and modified in 2012, with a maximum heat input capacity of 4.30 MMBtu per hour and a melting capacity of 1000 lb/hr, or 0.5 tons/hr, using wall flux at a rate of 0.21 lb/hr, and a dressing flux at a rate of 0.21 lb/hr, using no controls, and exhausting through stack #7.
- (6) Furnace #8, constructed in 1996, and modified in 2012, with a maximum heat input capacity of 3.90 MMBtu per hour and a melting capacity of 1000 lb/hr, or 0.5 tons/hr, using wall flux at a rate of 0.21 lb/hr, and a dressing flux at a rate of 0.21 lb/hr, using no controls, and exhausting through stack #8.
- (7) Furnace #9, constructed in 1992, and modified in 2012, with a maximum heat input capacity of 6.25 MMBtu per hour and a melting capacity of 1000 lb/hr, or 0.5 tons/hr, using wall flux at a rate of 0.21 lb/hr, and a dressing flux at a rate of 0.21 lb/hr, using no controls, and exhausting through stack #9. Furnace #9 is dedicated to lost foam casting.
- (8) Furnace #10, constructed in 2005, and modified in 2012, with a maximum heat input capacity of 7.95 MMBtu per hour and a melting capacity of 1000 lb/hr. or 0.5 tons/hr, using wall flux at a rate of 0.21 lb/hr, and a dressing flux at a rate of 0.21 lb/hr, using no controls, and exhausting through stack #10.

Note: Two separate types of flux are used, the first is a "wall flux" (FC-212-CC) for removing oxides from the walls of the furnaces, and the second is a "dressing flux" (WF-132) that is applied directly to the melt bath. Maximum usage is approximately 150 pounds per month of each flux type per furnace, or 0.21 lb/hr for each furnace.

Under 40 CFR 63, Subpart ZZZZZZ, these are affected facilities.

- (b) One (1) natural gas-fired dry hearth furnace (identified as DHF #14), constructed in 2005, and modified in 2012, melting clean scrap, defined as furnace charge materials, including molten aluminum; T-bar; sow; ingot; billet; pig; aluminum scrap known by the owner 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 365°C (650°F) or higher; aluminum scrap delacquered/decoated at 483°C (900°F) or higher, and runaround scrap, with a maximum throughput rate of 1500 lb/hr, or 0.75 tons/hr, and utilizing three (3) burners, with a combined maximum heat input capacity of 7.95 MMBtu/hr, using wall flux at a rate of 0.21 lb/hr, and a dressing flux at a rate of 0.21 lb/hr, using no controls.

Under 40 CFR 63, Subpart ZZZZZZ, this is an affected facility.

- (c) Six (6) natural gas-fired core machines, with a combined maximum capacity to produce 7106 lbs of cores per hour, or 3.55 tons per hour, consisting of the following:
 - (1) two (2) core machines, identified as Dependable 600 #1 and #2, each with a maximum heat input rate of 0.38 MMBtu/hr;
 - (2) two (2) core machines, identified as Dependable 400 #1 and #2, each with a maximum heat input rate of 0.27 MMBtu/hr;
 - (3) one (1) core machine, identified as U360, with a maximum heat input rate of 1.00 MMBtu/hr; and
 - (4) one (1) core machine, identified as Redford with a maximum heat input rate of 0.37 MMBtu/hr.

Shell cores are made on all six (6) natural gas-fired core machines. The core operation has no control devices. The core machines were constructed between 1970 and 1990.

- (d) One (1) lost foam casting operation, with a maximum throughput of 0.5 tons of metal per hour and 0.3 tons of castings per hour, with a filter box to control PM emissions exhausting indoors. The filter box controls emissions from pouring on the lost foam casting line and emissions from sand (extraction and fill stations). Small amounts of sand are used in the lost foam casting operation. The sand is recycled within the process. The casting operation was constructed in 1992.
- (e) One (1) grinding, cleaning, and finishing operation with a maximum throughput of 1.01 tons of aluminum per hour. Operation consists of band saws to cut off gates and risers as well as other hand-held finishing equipment (i.e., grinders, belt sealers, etc). The grinding, cleaning, and finishing operation was constructed between 1950 and 1955, and has no control devices.
- (f) One (1) sanding handling operation with a maximum throughput of 0.4765 tons of sand per hour, used in conjunction with the lost foam casting process, using filter box for control, exhausting inside.
- (g) One (1) pouring and casting operation, with a maximum throughput of 5.25 tons of metal per hour. Pouring and casting operations are permanent and semi-permanent mold systems that do not require sand, and has no control devices, exhausting inside the plant.

A.3 Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-8-3(c)(3)(I)]

This stationary source also includes the following insignificant activities:

- (a) Three (3) natural gas-fired boilers (ID #1, #2 and #3), each with a maximum heat input of 0.244 MMBtu/hr, exhausting through stack #14. Boilers #1 and #2 were constructed in 1985. Boiler #3 was constructed in 1989.
- (b) Fifteen (15) natural gas-fired torches, each with a maximum heat input capacity of 0.300 MMBtu/hr, venting to the interior of the building.
- (c) Fifty-six (56) natural gas-fired space heaters, each with a maximum heat input of 0.05 MMBtu/hr, venting to the interior of the building.
- (d) One (1) natural gas-fired cafeteria heater, with a maximum heat input of 0.075 MMBtu/hr, exhausting through stack # 12.
- (e) One (1) natural gas-fired office heater, with a maximum heat input of 0.075 MMBtu/hr, exhausting through stack # 13.
- (f) Two (2) natural gas-fired aging ovens, identified as Aging Oven #5 and Aging Oven #6, exhausting to the interior of the building.
- (g) Fugitive dust sources, including paved roads.

A.4 FESOP Applicability [326 IAC 2-8-2]

This stationary source, otherwise required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) to renew a Federally Enforceable State Operating Permit (FESOP).

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-8-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

B.2 Permit Term [326 IAC 2-8-4(2)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]

- (a) This permit, F069-31508-00048, is issued for a fixed term of ten (10) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

B.3 Term of Conditions [326 IAC 2-1.1-9.5]

Notwithstanding the permit term of a permit to construct, a permit to operate, or a permit modification, any condition established in a permit issued pursuant to a permitting program approved in the state implementation plan shall remain in effect until:

- (a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or
- (b) the emission unit to which the condition pertains permanently ceases operation.

B.4 Enforceability [326 IAC 2-8-6] [IC 13-17-12]

Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

B.5 Severability [326 IAC 2-8-4(4)]

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

B.6 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]

This permit does not convey any property rights of any sort or any exclusive privilege.

B.7 Duty to Provide Information [326 IAC 2-8-4(5)(E)]

- (a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.
- (b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.8 Certification [326 IAC 2-8-3(d)][326 IAC 2-8-4(3)(C)(i)][326 IAC 2-8-5(1)]

- (a) A certification required by this permit meets the requirements of 326 IAC 2-8-5(a)(1) if:

- (1) it contains a certification by an "authorized individual", as defined by 326 IAC 2-1.1-1(1), and
 - (2) the certification states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) The Permittee may use the attached Certification Form, or its equivalent with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.
 - (c) An "authorized individual" is defined at 326 IAC 2-1.1-1(1).

B.9 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]

- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. All certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than July 1 of each year to:

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

- (b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) The annual compliance certification report shall include the following:
 - (1) The appropriate identification of each term or condition of this permit that is the basis of the certification;
 - (2) The compliance status;
 - (3) Whether compliance was continuous or intermittent;
 - (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-8-4(3); and
 - (5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

The submittal by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

B.10 Compliance Order Issuance [326 IAC 2-8-5(b)]

IDEM, OAQ may issue a compliance order to this Permittee upon discovery that this permit is in nonconformance with an applicable requirement. The order may require immediate compliance or contain a schedule for expeditious compliance with the applicable requirement.

B.11 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)]

- (a) A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:
- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

The Permittee shall implement the PMPs.

- (b) If required by specific condition(s) in Section D of this permit where no PMP was previously required, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:

- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
- (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
- (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

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

The PMP extension notification does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

The Permittee shall implement the PMPs.

- (c) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions. The PMPs and their submittal do not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (d) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.12 Emergency Provisions [326 IAC 2-8-12]

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation except as provided in 326 IAC 2-8-12.

- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

- (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
- (2) The permitted facility was at the time being properly operated;
- (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
- (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)
Facsimile Number: 317-233-6865

- (5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

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

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-8-4(3)(C)(ii) and must contain the following:

- (A) A description of the emergency;
- (B) Any steps taken to mitigate the emissions; and

(C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
- (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
- (e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-8-3(c)(6) be revised in response to an emergency.
- (f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-8 and any other applicable rules.
- (g) Operations may continue during an emergency only if the following conditions are met:
- (1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.
 - (2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:
 - (A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and
 - (B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

Any operations shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of permits established prior to F069-31508-00048 and issued pursuant to permitting programs approved into the state implementation plan have been either:
- (1) incorporated as originally stated,
 - (2) revised, or

(3) deleted.

(b) All previous registrations and permits are superseded by this permit.

B.14 Termination of Right to Operate [326 IAC 2-8-9][326 IAC 2-8-3(h)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-8-3(h) and 326 IAC 2-8-9.

**B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination
[326 IAC 2-8-4(5)(C)][326 IAC 2-8-7(a)][326 IAC 2-8-8]**

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Federally Enforceable State Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-8-4(5)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:

- (1) That this permit contains a material mistake.
- (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
- (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-8-8(a)]

(c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-8-8(b)]

(d) The reopening and revision of this permit, under 326 IAC 2-8-8(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-8-8(c)]

B.16 Permit Renewal [326 IAC 2-8-3(h)]

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-8-3. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003

Indianapolis, Indiana 46204-2251

- (b) A timely renewal application is one that is:
- (1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
 - (2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-8 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-8-3(g), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.17 Permit Amendment or Revision [326 IAC 2-8-10][326 IAC 2-8-11.1]

- (a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Any such application does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.18 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]

- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-8-15(b) and (c) without a prior permit revision, if each of the following conditions is met:
- (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
 - (2) Any approval required by 326 IAC 2-8-11.1 has been obtained;
 - (3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
 - (4) The Permittee notifies the:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

- (5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-8-15(b)(1) and (c). The Permittee shall make such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ in the notices specified in 326 IAC 2-8-15(b)(1) and (c).

- (b) **Emission Trades [326 IAC 2-8-15(b)]**
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(b).
- (c) **Alternative Operating Scenarios [326 IAC 2-8-15(c)]**
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(7). No prior notification of IDEM, OAQ, or U.S. EPA is required.
- (d) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.19 Source Modification Requirement [326 IAC 2-8-11.1]

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2.

B.20 Inspection and Entry [326 IAC 2-8-5(a)(2)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a FESOP source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

- (b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.21 Transfer of Ownership or Operational Control [326 IAC 2-8-10]

- (a) The Permittee must comply with the requirements of 326 IAC 2-8-10 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Any such application does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.22 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16][326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees to IDEM, OAQ no later than thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.
- (b) Failure to pay may result in administrative enforcement action or revocation of this permit.
- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.23 Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][62 FR 8314] [326 IAC 1-1-6]

For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any condition of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether the Permittee would have been in compliance with the condition of this permit if the appropriate performance or compliance test or procedure had been performed.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-8-4(1)]

C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour.

C.2 Overall Source Limit [326 IAC 2-8]

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

(a) Pursuant to 326 IAC 2-8:

- (1) The potential to emit any regulated pollutant, except particulate matter (PM) and greenhouse gases (GHGs), from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period.
- (2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and
- (3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.
- (4) The potential to emit greenhouse gases (GHGs) from the entire source shall be limited to less than one hundred thousand (100,000) tons of CO₂ equivalent emissions (CO₂e) per twelve (12) consecutive month period.

(b) Pursuant to 326 IAC 2-2 (PSD), potential to emit particulate matter (PM) from the entire source shall be limited to less than two hundred fifty (250) tons per twelve (12) consecutive month period.

(c) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided that the source's potential to emit does not exceed the above specified limits.

(d) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

C.3 Opacity [326 IAC 5-1]

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

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

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

C.4 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

C.5 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator except as provided in 326 IAC 4-2 or in this permit. The Permittee shall not operate a refuse incinerator or refuse burning equipment except as provided in 326 IAC 9-1-2 or in this permit.

C.6 Fugitive Dust Emissions [326 IAC 6-4]

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).

C.7 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted.

C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.
- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
 - (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
 - (2) If there is a change in the following:
 - (A) Asbestos removal or demolition start date;
 - (B) Removal or demolition contractor; or
 - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).

- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

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

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (e) **Procedures for Asbestos Emission Control**
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) **Demolition and Renovation**
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).
- (g) **Indiana Licensed Asbestos Inspector**
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos.

Testing Requirements [326 IAC 2-8-4(3)]

C.9 Performance Testing [326 IAC 3-6]

- (a) For performance testing required by this permit, a test protocol, except as provided elsewhere in this permit, shall be submitted to:

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

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.10 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

Compliance Monitoring Requirements [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

C.11 Compliance Monitoring [326 IAC 2-8-4(3)][326 IAC 2-8-5(a)(1)]

Unless otherwise specified in this permit, for all monitoring requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or of initial start-up, whichever is later, to begin such monitoring. If due to circumstances beyond the Permittee's control, any monitoring equipment required by this permit cannot be installed and operated no later than ninety (90) days after permit issuance or the date of initial startup, whichever is later, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

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

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units or emission units added through a permit revision shall be implemented when operation begins.

C.12 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)][326 IAC 2-8-5(1)]

- (a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale.
- (b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

Corrective Actions and Response Steps [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

C.13 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]

If a regulated substance, as defined in 40 CFR 68, is present at a source in more than a threshold quantity, the Permittee must comply with the applicable requirements of 40 CFR 68.

C.14 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]

Upon detecting an excursion where a response step is required by the D Section or an exceedance of a limitation in this permit:

- (a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:
 - (1) initial inspection and evaluation;
 - (2) recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system); or
 - (3) any necessary follow-up actions to return operation to normal or usual manner of operation.
- (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
 - (1) monitoring results;
 - (2) review of operation and maintenance procedures and records; and/or
 - (3) inspection of the control device, associated capture system, and the process.
- (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (e) The Permittee shall record the reasonable response steps taken.

C.15 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4][326 IAC 2-8-5]

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall submit a description of its response actions to IDEM, OAQ, no later than seventy-five (75) days after the date of the test.
- (b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) days is not practicable, IDEM, OAQ may extend the retesting deadline
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

C.16 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. Support information includes the following:
- (AA) All calibration and maintenance records.
 - (BB) All original strip chart recordings for continuous monitoring instrumentation.
 - (CC) Copies of all reports required by the FESOP.
- Records of required monitoring information include the following:
- (AA) The date, place, as defined in this permit, and time of sampling or measurements.
 - (BB) The dates analyses were performed.
 - (CC) The company or entity that performed the analyses.
 - (DD) The analytical techniques or methods used.
 - (EE) The results of such analyses.
 - (FF) The operating conditions as existing at the time of sampling or measurement.

These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

- (b) Unless otherwise specified in this permit, for all record keeping requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.

C.17 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of this paragraph. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported except that a deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.
- (b) The address for report submittal is:

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

- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (d) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

Stratospheric Ozone Protection

C.18 Compliance with 40 CFR 82 and 326 IAC 22-1

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with applicable standards for recycling and emissions reduction.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (a) Eight (8) natural gas-fired reverberatory furnaces, each melting clean scrap, defined as furnace charge materials, including molten aluminum; T-bar; sow; ingot; billet; pig; aluminum scrap known by the owner 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 365°C (650°F) or higher; aluminum scrap delacquered/decoated at 483°C (900°F) or higher, and runaround scrap.
- (1) Furnace #1, approved for construction in 2012, with a maximum heat input rate of 5.0 million (MM) British thermal units (Btu) per hour with a melting capacity of 1500 lb/hr, or 0.75 tons/hr, using wall flux at a rate of 0.21 lb/hr, and a dressing flux at a rate of 0.21 lb/hr, using no controls, and exhausting through stack #1.
 - (2) Furnace #2, constructed in 1992, and modified in 2012, with a maximum heat input rate of 5.4 million (MM) British thermal units (Btu) per hour with a melting capacity of 1500 lb/hr, or 0.75 tons/hr, using wall flux at a rate of 0.21 lb/hr, and a dressing flux at a rate of 0.21 lb/hr, using no controls, and exhausting through stack #2. Furnace #2 is capable of lost foam casting.
 - (3) Furnace #4, constructed in 1994, and modified in 2012, with a maximum heat input capacity of 3.20 MMBtu per hour and a melting capacity of 1000 lb/hr, or 0.5 tons/hr, using wall flux at a rate of 0.21 lb/hr, and a dressing flux at a rate of 0.21 lb/hr, using no controls, and exhausting through stack #4;
 - (4) Furnace #6, constructed in 1990, and modified in 2012, with a maximum heat input capacity of 4.60 MMBtu per hour and a melting capacity of 1000 lb/hr, or 0.5 tons/hr, using wall flux at a rate of 0.21 lb/hr, and a dressing flux at a rate of 0.21 lb/hr, using no controls, and exhausting through stack #6.
 - (5) Furnace #7, constructed in 1990, and modified in 2012, with a maximum heat input capacity of 4.30 MMBtu per hour and a melting capacity of 1000 lb/hr, or 0.5 tons/hr, using wall flux at a rate of 0.21 lb/hr, and a dressing flux at a rate of 0.21 lb/hr, using no controls, and exhausting through stack #7.
 - (6) Furnace #8, constructed in 1996, and modified in 2012, with a maximum heat input capacity of 3.90 MMBtu per hour and a melting capacity of 1000 lb/hr, or 0.5 tons/hr, using wall flux at a rate of 0.21 lb/hr, and a dressing flux at a rate of 0.21 lb/hr, using no controls, and exhausting through stack #8.
 - (7) Furnace #9, constructed in 1992, and modified in 2012, with a maximum heat input capacity of 6.25 MMBtu per hour and a melting capacity of 1000 lb/hr, or 0.5 tons/hr, using wall flux at a rate of 0.21 lb/hr, and a dressing flux at a rate of 0.21 lb/hr, using no controls, and exhausting through stack #9. Furnace #9 is dedicated to lost foam casting.
 - (8) Furnace #10, constructed in 2005, and modified in 2012, with a maximum heat input capacity of 7.95 MMBtu per hour and a melting capacity of 1000 lb/hr. or 0.5 tons/hr, using wall flux at a rate of 0.21 lb/hr, and a dressing flux at a rate of 0.21 lb/hr, using no controls, and exhausting through stack #10.

Note: Two separate types of flux are used, the first is a "wall flux" (FC-212-CC) for removing

oxides from the walls of the furnaces, and the second is a "drossing flux" (WF-132) that is applied directly to the melt bath. Maximum usage is approximately 150 pounds per month of each flux type per furnace, or 0.21 lb/hr for each furnace.

Under 40 CFR 63, Subpart ZZZZZZ, these are affected facilities.

- (b) One (1) natural gas-fired dry hearth furnace (identified as DHF #14), constructed in 2005, and modified in 2012, melting clean scrap, defined as furnace charge materials, including molten aluminum; T-bar; sow; ingot; billet; pig; aluminum scrap known by the owner 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 365°C (650°F) or higher; aluminum scrap delacquered/decoated at 483°C (900°F) or higher, and runaround scrap, with a maximum throughput rate of 1500 lb/hr, or 0.75 tons/hr, and utilizing three (3) burners, with a combined maximum heat input capacity of 7.95 MMBtu/hr, using wall flux at a rate of 0.21 lb/hr, and a drossing flux at a rate of 0.21 lb/hr, using no controls.

Under 40 CFR 63, Subpart ZZZZZZ, this is an affected facility.

- (c) Six (6) natural gas-fired core machines, with a combined maximum capacity to produce 7106 lbs of cores per hour, or 3.55 tons per hour, consisting of the following:

- (1) two (2) core machines, identified as Dependable 600 #1 and #2, each with a maximum heat input rate of 0.38 MMBtu/hr;
- (2) two (2) core machines, identified as Dependable 400 #1 and #2, each with a maximum heat input rate of 0.27 MMBtu/hr;
- (3) one (1) core machine, identified as U360, with a maximum heat input rate of 1.00 MMBtu/hr; and
- (4) one (1) core machine, identified as Redford with a maximum heat input rate of 0.37 MMBtu/hr.

Shell cores are made on all six (6) natural gas-fired core machines. The core operation has no control devices. The core machines were constructed between 1970 and 1990.

- (d) One (1) lost foam casting operation, with a maximum throughput of 0.5 tons of metal per hour and 0.3 tons of castings per hour, with a filter box to control PM emissions exhausting indoors. The filter box controls emissions from pouring on the lost foam casting line and emissions from sand (extraction and fill stations). Small amounts of sand are used in the lost foam casting operation. The sand is recycled within the process. The casting operation was constructed in 1992.
- (e) One (1) grinding, cleaning, and finishing operation with a maximum throughput of 1.01 tons of aluminum per hour. Operation consists of band saws to cut off gates and risers as well as other hand-held finishing equipment (i.e., grinders, belt sealers, etc). The grinding, cleaning, and finishing operation was constructed between 1950 and 1955, and has no control devices.
- (f) One (1) sanding handling operation with a maximum throughput of 0.4765 tons of sand per hour, used in conjunction with the lost foam casting process, using filter box for control, exhausting inside.
- (g) One (1) pouring and casting operation, with a maximum throughput of 5.25 tons of metal per hour. Pouring and casting operations are permanent and semi-permanent mold systems that

do not require sand, and has no control devices, exhausting inside the plant.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.1.1 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations from Manufacturing Processes), the allowable particulate emission rate from the following emission units shall not exceed the emission limits listed in the table below:

The pounds per hour limitations were calculated with the following equation:

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

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

where E = rate of emission in pounds per hour; and
 P = process weight rate in tons per hour

Emission Unit	Process Weight Rate (tons/hr) (A)	Process Weight Rate of Flux Additions (tons/hr) (B)	Total Process Weight Rate (tons/hr) (A) + (B)	Allowable PM Emissions (326 IAC 6-3-2) (lb/hr)
Furnaces				
Reverberatory Furnace # 1	0.75	0.00021	0.75021	3.38
Reverberatory Furnace # 2	0.75	0.00021	0.75021	3.38
Reverberatory Furnace # 4	0.50	0.00021	0.50021	2.58
Reverberatory Furnace # 6	0.50	0.00021	0.50021	2.58
Reverberatory Furnace # 7	0.50	0.00021	0.50021	2.58
Reverberatory Furnace # 8	0.50	0.00021	0.50021	2.58
Reverberatory Furnace # 9	0.50	0.00021	0.50021	2.58
Reverberatory Furnace # 10	0.50	0.00021	0.50021	2.58
Dry Hearth Furnace DHF #14	0.75	0.00021	0.75021	3.38
Core Machines				
Dependable 600 # 1	0.59	N/A	0.59	2.88
Dependable 600 # 2	0.59	N/A	0.59	2.88
Dependable 400 # 1	0.59	N/A	0.59	2.88
Dependable 400 # 2	0.59	N/A	0.59	2.88
U360	0.59	N/A	0.59	2.88
Redford	0.59	N/A	0.59	2.88
Grinding/Cleaning/Finishing	1.01	N/A	1.01	4.12
Sand Handling	0.48	N/A	0.48	2.50
Pouring/Casting Operation	5.25	N/A	5.25	12.45

D.1.2 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]

- (a) In order to render 326 IAC 2-2 (PSD) not applicable, the Permittee shall melt only clean charge in the reverberatory furnaces (identified as Furnace #1, Furnace #2, Furnace #4, Furnace #6, Furnace #7, Furnace #8, Furnace #9, and Furnace #10) and the dry hearth furnace (identified as DHF #14), at all times.
- (b) Clean charge shall be defined as furnace charge materials, including molten aluminum; T-bar; sow; ingot; billet; pig; aluminum scrap known by the owner 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 365°C (650°F) or higher; aluminum scrap delacquered/decoated at 483°C (900°F) or higher, and runaround scrap.

D.1.3 Hazardous Air Pollutants [326 IAC 2-8] [326 IAC 2-4.1]

Pursuant to 326 IAC 2-8 (Federally Enforceable State Operating Permit Program), the usage of lost foam shall be limited to 19,795 pounds of lost foam per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with this limit, combined with the potential to emit of other HAP emissions from the entire source, shall ensure that total HAPs of the entire source shall be less than 25 tons per year, and that any individual HAP shall be less than 10 tons per year, and shall render the provisions of 326 IAC 2-7 (Part 70 Permit Program) and 326 IAC 2-4.1 (Major Source of Hazardous Air Pollutants) not applicable.

D.1.4 Volatile Organic Compounds BACT [326 IAC 8-1-6]

Pursuant to 326 IAC 8-1-6 (BACT), the Permittee shall comply with the following VOC Best Available Control Technology (BACT):

Lost foam usage shall be limited to 19,795 pounds per twelve (12) consecutive month period, with compliance determined at the end of each month. This is equivalent to 9.9 tons per year of VOC emissions.

D.1.5 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan is required for these facilities and their control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Monitoring Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.1.6 Visible Emissions Notations

- (a) Visible emission notations of the reverberatory furnace exhaust stacks: Stack #1, Stack #2, Stack #4, Stack #6, Stack #7, Stack #8, Stack #9, and Stack #10, shall be performed once per day during normal daylight operations when exhausting to the atmosphere, as follows. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the excursions or Exceedances required by this condition. An abnormal observation shall not be considered a deviation from this permit; however, failure to take reasonable response steps shall be considered a deviation from this permit.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.1.7 Record Keeping Requirements

- (a) In order to document the compliance status with Condition D.1.2, the Permittee shall maintain records that document that only clean charge, as defined by Condition D.1.2(b), has been used in the furnaces.
- (b) In order to document the compliance status with Conditions D.1.3 and D.1.4, the Permittee shall maintain records of the amount of lost foam used on monthly basis. Records shall include purchase orders and invoices necessary to verify the amount used. Records maintained shall be taken monthly and shall be complete and sufficient to establish compliance with the HAP and VOC usage limits established in Conditions D.1.3 and D.1.4. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.
- (c) In order to document the compliance status with Condition D.1.6, the Permittee shall maintain records of visible emissions notations of the furnace exhaust stacks: Stack #1, Stack #2, Stack #4, Stack #6, Stack #7, Stack #8, Stack #9, and Stack #10. For any day that there is not a visible emissions notation, the Permittee shall record the reason for not taking a visible emissions notation (e.g. the process did not operate that day).
- (d) All records shall be maintained in accordance with Section C. Section C - General Record Keeping Requirements of this permit, contains the Permittee's obligation with regard to the record keeping requirements required by this condition.

D.1.8 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.1.3 and D.1.4 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

SECTION D.2 EMISSION UNITS OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)] Insignificant Activities

- (a) Three (3) natural gas-fired boilers (ID #1, #2 and #3), each with a maximum heat input of 0.244 MMBtu/hr, exhausting through stack #14. Boilers #1 and #2 were constructed in 1985. Boiler #3 was constructed in 1989.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions).

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.2.1 Particulate [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating: emission limitations for facilities specified in 326 IAC 6-2-1 (d)), the PM emissions from each of the three (3) 0.244 MMBtu/hr boilers shall not exceed 0.6 pounds per MMBtu heat input.

SECTION E.1 EMISSION UNITS OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4]

- (a) Eight (8) natural gas-fired reverberatory furnaces, each melting clean scrap, defined as furnace charge materials, including molten aluminum; T-bar; sow; ingot; billet; pig; aluminum scrap known by the owner 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 365°C (650°F) or higher; aluminum scrap delacquered/decoated at 483°C (900°F) or higher, and runaround scrap.
- (1) Furnace #1, approved for construction in 2012, with a maximum heat input rate of 5.0 million (MM) British thermal units (Btu) per hour with a melting capacity of 1500 lb/hr, or 0.75 tons/hr, using wall flux at a rate of 0.21 lb/hr, and a drossing flux at a rate of 0.21 lb/hr, using no controls, and exhausting through stack #1.
 - (2) Furnace #2, constructed in 1992, and modified in 2012, with a maximum heat input rate of 5.4 million (MM) British thermal units (Btu) per hour with a melting capacity of 1500 lb/hr, or 0.75 tons/hr, using wall flux at a rate of 0.21 lb/hr, and a drossing flux at a rate of 0.21 lb/hr, using no controls, and exhausting through stack #2. Furnace #2 is capable of lost foam casting.
 - (3) Furnace #4, constructed in 1994, and modified in 2012, with a maximum heat input capacity of 3.20 MMBtu per hour and a melting capacity of 1000 lb/hr, or 0.5 tons/hr, using wall flux at a rate of 0.21 lb/hr, and a drossing flux at a rate of 0.21 lb/hr, using no controls, and exhausting through stack #4;
 - (4) Furnace #6, constructed in 1990, and modified in 2012, with a maximum heat input capacity of 4.60 MMBtu per hour and a melting capacity of 1000 lb/hr, or 0.5 tons/hr, using wall flux at a rate of 0.21 lb/hr, and a drossing flux at a rate of 0.21 lb/hr, using no controls, and exhausting through stack #6.
 - (5) Furnace #7, constructed in 1990, and modified in 2012, with a maximum heat input capacity of 4.30 MMBtu per hour and a melting capacity of 1000 lb/hr, or 0.5 tons/hr, using wall flux at a rate of 0.21 lb/hr, and a drossing flux at a rate of 0.21 lb/hr, using no controls, and exhausting through stack #7.
 - (6) Furnace #8, constructed in 1996, and modified in 2012, with a maximum heat input capacity of 3.90 MMBtu per hour and a melting capacity of 1000 lb/hr, or 0.5 tons/hr, using wall flux at a rate of 0.21 lb/hr, and a drossing flux at a rate of 0.21 lb/hr, using no controls, and exhausting through stack #8.
 - (7) Furnace #9, constructed in 1992, and modified in 2012, with a maximum heat input capacity of 6.25 MMBtu per hour and a melting capacity of 1000 lb/hr, or 0.5 tons/hr, using wall flux at a rate of 0.21 lb/hr, and a drossing flux at a rate of 0.21 lb/hr, using no controls, and exhausting through stack #9. Furnace #9 is dedicated to lost foam casting.
 - (8) Furnace #10, constructed in 2005, and modified in 2012, with a maximum heat input capacity of 7.95 MMBtu per hour and a melting capacity of 1000 lb/hr. or 0.5 tons/hr, using wall flux at a rate of 0.21 lb/hr, and a drossing flux at a rate of 0.21 lb/hr, using no controls, and exhausting through stack #10.

Note: Two separate types of flux are used, the first is a "wall flux" (FC-212-CC) for removing oxides from the walls of the furnaces, and the second is a "drossing flux" (WF-132) that is

applied directly to the melt bath. Maximum usage is approximately 150 pounds per month of each flux type per furnace, or 0.21 lb/hr for each furnace.

Under 40 CFR 63, Subpart ZZZZZZ, these are affected facilities.

- (b) One (1) natural gas-fired dry hearth furnace (identified as DHF #14), constructed in 2005, and modified in 2012, melting clean scrap, defined as furnace charge materials, including molten aluminum; T-bar; sow; ingot; billet; pig; aluminum scrap known by the owner 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 365°C (650°F) or higher; aluminum scrap delacquered/decoated at 483°C (900°F) or higher, and runaround scrap, with a maximum throughput rate of 1500 lb/hr, or 0.75 tons/hr, and utilizing three (3) burners, with a combined maximum heat input capacity of 7.95 MMBtu/hr, using wall flux at a rate of 0.21 lb/hr, and a dressing flux at a rate of 0.21 lb/hr, using no controls.

Under 40 CFR 63, Subpart ZZZZZZ, this is an affected facility.

National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements: Area Source Standards for Aluminum, Copper, and Other Nonferrous Foundries

E.1.1 General Provisions Relating to National Emissions Standards for Hazardous Air Pollutants under 40 CFR Part [40 CFR 63, Subpart A]

- (a) Pursuant to 40 CFR 63.340(b), the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference as 326 IAC 20-70, for the reverberatory furnaces and dry hearth furnace, as specified in 40 CFR 63, Subpart ZZZZZZ in accordance with the schedule in 40 CFR 63, Subpart ZZZZZZ.
- (b) Pursuant to 40 CFR 63.10, the Permittee shall submit all required notifications and reports to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204

E.1.2 National Emission Standards for Hazardous Air Pollutants for Area Sources for Aluminum, Copper, and Other Nonferrous Foundries [40 CFR 63, Subpart ZZZZZZ]

The Permittee shall comply with the following provisions of 40 CFR 63, Subpart ZZZZZZ (included as Attachment A) which are incorporated by reference as 326 IAC 20-70 for aluminum, copper, and other nonferrous foundries for the reverberatory furnaces and the dry hearth furnace.

- (a) 40 CFR 63.11544
- (b) 40 CFR 63.11545(a)
- (c) 40 CFR 63.11550(a)
- (d) 40 CFR 63.11553(a)
- (e) 40 CFR 63.11553(b)
- (f) 40 CFR 63.11553(c)
- (g) 40 CFR 63.11553(e)

There are currently no testing requirements applicable to these facilities.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
CERTIFICATION

Source Name: General Aluminum Manufacturing Company
Source Address: 1345 Henry Street, Huntington, Indiana 46750
FESOP Permit No.: F069-31508-00048

**This certification shall be included when submitting monitoring, testing reports/results
or other documents as required by this permit.**

Please check what document is being certified:

- Annual Compliance Certification Letter
- Test Result (specify)_____
- Report (specify)_____
- Notification (specify)_____
- Affidavit (specify)_____
- Other (specify)_____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
Phone: (317) 233-0178
Fax: (317) 233-6865**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
EMERGENCY OCCURRENCE REPORT**

Source Name: General Aluminum Manufacturing Company
Source Address: 1345 Henry Street, Huntington, Indiana 46750
FESOP Permit No.: F069-31508-00048

This form consists of 2 pages

Page 1 of 2

- | |
|--|
| <p><input type="checkbox"/> This is an emergency as defined in 326 IAC 2-7-1(12)</p> <ul style="list-style-type: none">• The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and• The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16 |
|--|

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency:
Describe the cause of the Emergency:

If any of the following are not applicable, mark N/A

Page 2 of 2

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO ₂ , VOC, NO _x , CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH**

FESOP Usage Report
(Submit Report Quarterly)

Source Name: General Aluminum Manufacturing Company
Source Address: 1345 Henry Street, Huntington, Indiana 46750
FESOP Permit No.: F069-31508-00048
Facility: Lost Foam Operations
Parameter: Lost foam usage limit for HAP emissions
Limit: Less than 19,795 pounds of lost foam per twelve (12) consecutive month period,
with compliance determined at the end of each month.

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

- No deviation occurred in this quarter.
- Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH**

FESOP Quarterly Report

Source Name: General Aluminum Manufacturing Company
Source Address: 1345 Henry Street, Huntington, Indiana 46750
FESOP Permit No.: F069-31508-00048
Facility: Lost Foam Operations
Parameter: VOC Input
Limit: Less than 19,795 pounds of lost foam per twelve (12) consecutive month period,
with compliance determined at the end of each month.

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month (lbs)	Previous 11 Months (lbs)	12 Month Total (lbs)
Month 1			
Month 2			
Month 3			

- No deviation occurred in this quarter.
- Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: General Aluminum Manufacturing Company
Source Address: 1345 Henry Street, Huntington, Indiana 46750
FESOP Permit No.: F069-31508-00048

Months: _____ **to** _____ **Year:** _____

Page 1 of 2

<p>This report shall be submitted quarterly based on a calendar year. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of paragraph (a) of Section C- General Reporting. Any deviation from the requirements of this permit, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".</p>	
<input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
<input type="checkbox"/> THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD	
Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

Subpart ZZZZZZ—National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Aluminum, Copper, and Other Nonferrous Foundries

Source: 74 FR 30393, June 25, 2009, unless otherwise noted.

Applicability and Compliance Dates

§ 63.11544 Am I subject to this subpart?

(a) You are subject to this subpart if you own or operate an aluminum foundry, copper foundry, or other nonferrous foundry as defined in §63.11556, "What definitions apply to this subpart?" that is an area source of hazardous air pollutant (HAP) emissions as defined in §63.2 and meets the criteria specified in paragraphs (a)(1) through (4) of this section. Once you are subject to this subpart, you must remain subject to this subpart even if you subsequently do not meet the criteria in paragraphs (a)(1) through (4) of this section.

(1) Your aluminum foundry uses material containing aluminum foundry HAP, as defined in §63.11556, "What definitions apply to this subpart?"; or

(2) Your copper foundry uses material containing copper foundry HAP, as defined in §63.11556, "What definitions apply to this subpart?"; or

(3) Your other nonferrous foundry uses material containing other nonferrous foundry HAP, as defined in §63.11556, "What definitions apply to this subpart?".

(4) Your aluminum foundry, copper foundry, or other nonferrous foundry has an annual metal melt production (for existing affected sources) or an annual metal melt capacity (for new affected sources) of at least 600 tons per year (tpy) of aluminum, copper, and other nonferrous metals, including all associated alloys. You must determine the annual metal melt production and capacity for the time period as described in paragraphs (a)(4)(i) through (iv) of this section. The quantity of ferrous metals melted in iron or steel melting operations and the quantity of nonferrous metal melted in non-foundry melting operations are not included in determining the annual metal melt production for existing affected sources or the annual metal melt capacity for new affected sources.

(i) If you own or operate a melting operation at an aluminum, copper or other nonferrous foundry as of February 9, 2009, you must determine if you are subject to this rule based on your facility's annual metal melt production for calendar year 2010.

(ii) If you construct or reconstruct a melting operation at an aluminum, copper or other nonferrous foundry after February 9, 2009, you must determine if you are subject to this rule based on your facility's annual metal melt capacity at startup.

(iii) If your foundry with an existing melting operation increases production after calendar year 2010 such that the annual metal melt production equals or exceeds 600 tpy, you must submit a written notification of applicability to the Administrator within 30 days after the end of the calendar year and comply within 2 years after the date of the notification.

(iv) If your foundry with a new melting operation increases capacity after startup such that the annual metal melt capacity equals or exceeds 600 tpy, you must submit a written notification of applicability to the Administrator within 30 days after the capacity increase year and comply at the time of the capacity increase.

(b) This subpart applies to each new or existing affected source located at an aluminum, copper or other nonferrous foundry that is an area source as defined by §63.2. The affected source is the collection of all melting operations located at an aluminum, copper, or other nonferrous foundry.

(c) An affected source is an existing source if you commenced construction or reconstruction of the affected source on or before February 9, 2009.

(d) An affected source is a new source if you commenced construction or reconstruction of the affected source after February 9, 2009.

(e) This subpart does not apply to research or laboratory facilities, as defined in section 112(c)(7) of the Clean Air Act.

(f) You are exempt from the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71, provided you are not otherwise required to obtain a permit under 40 CFR 70.3(a) or 40 CFR 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.

[74 FR 30393, June 25, 2009, as amended at 74 FR 46495, Sept. 10, 2009]

§ 63.11545 What are my compliance dates?

(a) If you own or operate an existing affected source, you must achieve compliance with the applicable provisions of this subpart no later than June 27, 2011.

(b) If you start up a new affected source on or before June 25, 2009, you must achieve compliance with the provisions of this subpart no later than June 25, 2009.

(c) If you start up a new affected source after June 25, 2009, you must achieve compliance with the provisions of this subpart upon startup of your affected source.

Standards and Compliance Requirements

§ 63.11550 What are my standards and management practices?

(a) If you own or operate new or existing affected sources at an aluminum foundry, copper foundry, or other nonferrous foundry that is subject to this subpart, you must comply with the requirements in paragraphs (a)(1) through (3) of this section.

(1) Cover or enclose each melting furnace that is equipped with a cover or enclosure during the melting operation to the extent practicable (e.g., except when access is needed; including, but not limited to charging, alloy addition, and tapping).

(2) Purchase only metal scrap that has been depleted (to the extent practicable) of aluminum foundry HAP, copper foundry HAP, or other nonferrous foundry HAP (as applicable) in the materials charged to the melting furnace, except metal scrap that is purchased specifically for its HAP metal content for use in alloying or to meet specifications for the casting. This requirement does not apply to material that is not scrap (e.g., ingots, alloys, sows) or to materials that are not purchased (e.g., internal scrap, customer returns).

(3) Prepare and operate pursuant to a written management practices plan. The management practices plan must include the required management practices in paragraphs (a)(1) and (2) of this section and may include any other management practices that are implemented at the facility to minimize emissions from melting furnaces. You must inform your appropriate employees of the management practices that they must follow. You may use your standard operating procedures as the management practices plan provided the standard operating procedures include the required management practices in paragraphs (a)(1) and (2) of this section.

(b) If you own or operate a new or existing affected source that is located at a large foundry as defined in §63.11556, you must comply with the additional requirements in paragraphs (b)(1) and (2) of this section.

(1) For existing affected sources located at a large foundry, you must achieve a particulate matter (PM) control efficiency of at least 95.0 percent or emit no more than an outlet PM concentration limit of 0.034 grams per dry standard cubic meter (g/dscm) (0.015 grains per dry standard cubic feet (gr/dscf)).

(2) For new affected sources located at a large foundry, you must achieve a PM control efficiency of at least 99.0 percent or emit no more than an outlet PM concentration limit of at most 0.023 g/dscm (0.010 gr/dscf).

(c) If you own or operate an affected source at a small foundry that subsequently becomes a large foundry after the applicable compliance date, you must meet the requirements in paragraphs (c)(1) through (3) of this section.

(1) You must notify the Administrator within 30 days after the capacity increase or the production increase, whichever is appropriate;

(2) You must modify any applicable permit limits within 30 days after the capacity increase or the production increase to reflect the current production or capacity, if not done so prior to the increase;

(3) You must comply with the PM control requirements in paragraph (b) of this section no later than 2 years from the date of issuance of the permit for the capacity increase or production increase, or in the case of no permit issuance, the date of the increase in capacity or production, whichever occurs first.

(d) These standards apply at all times.

§ 63.11551 What are my initial compliance requirements?

(a) Except as specified in paragraph (b) of this section, you must conduct a performance test for existing and new sources at a large copper or other nonferrous foundry that is subject to §63.11550(b). You must conduct the test within 180 days of your compliance date and report the results in your Notification of Compliance Status according to §63.9(h).

(b) If you own or operate an existing affected source at a large copper or other nonferrous foundry that is subject to §63.11550(b), you are not required to conduct a performance test if a prior performance test was conducted within the past 5 years of the compliance date using the same methods specified in paragraph (c) of this section and you meet either of the following two conditions:

(1) No process changes have been made since the test; or

(2) You demonstrate to the satisfaction of the permitting authority that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process changes.

(c) You must conduct each performance test according to the requirements in §63.7 and the requirements in paragraphs (c)(1) and (2) of this section.

(1) You must determine the concentration of PM (for the concentration standard) or the mass rate of PM in pounds per hour at the inlet and outlet of the control device (for the percent reduction standard) according to the following test methods:

(i) Method 1 or 1A (40 CFR part 60, appendix A-1) to select sampling port locations and the number of traverse points in each stack or duct. If you are complying with the concentration provision in §63.11550(b), sampling sites must be located at the outlet of the control device and prior to any releases to the atmosphere. If you are complying with the percent reduction provision in §63.11550(b), sampling sites must be located at the inlet and outlet of the control device and prior to any releases to the atmosphere.

(ii) Method 2, 2A, 2C, 2D, 2F (40 CFR part 60, appendix A-1), or Method 2G (40 CFR part 60, appendix A-2) to determine the volumetric flow rate of the stack gas.

(iii) Method 3, 3A, or 3B (40 CFR part 60, appendix A-2) to determine the dry molecular weight of the stack gas. You may use ANSI/ASME PTC 19.10-1981, "Flue and Exhaust Gas Analyses" (incorporated by reference—see §63.14) as an alternative to EPA Method 3B.

(iv) Method 4 (40 CFR part 60, appendix A-3) to determine the moisture content of the stack gas.

(v) Method 5 or 5D (40 CFR part 60, appendix A-3) or Method 17 (40 CFR part 60, appendix A-6) to determine the concentration of PM or mass rate of PM (front half filterable catch only). If you choose to comply with the percent reduction PM standard, you must determine the mass rate of PM at the inlet and outlet in pounds per hour and calculate the percent reduction in PM.

(2) Three valid test runs are needed to comprise a performance test. Each run must cover at least one production cycle (charging, melting, and tapping).

(3) For a source with a single control device exhausted through multiple stacks, you must ensure that three runs are performed by a representative sampling of the stacks satisfactory to the Administrator or his or her delegated representative. You must provide data or an adequate explanation why the stack(s) chosen for testing are representative.

§ 63.11552 What are my monitoring requirements?

(a) You must record the information specified in §63.11553(c)(2) to document conformance with the management practices plan required in §63.11550(a).

(b) Except as specified in paragraph (b)(3) of this section, if you own or operate an existing affected source at a large foundry, you must conduct visible emissions monitoring according to the requirements in paragraphs (b)(1) and (2) of this section.

(1) You must conduct visual monitoring of the fabric filter discharge point(s) (outlets) for any VE according to the schedule specified in paragraphs (b)(1)(i) and (ii) of this section.

(i) You must perform a visual determination of emissions once per day, on each day the process is in operation, during melting operations.

(ii) If no VE are detected in consecutive daily visual monitoring performed in accordance with paragraph (b)(1)(i) of this section for 30 consecutive days or more of operation of the process, you may decrease the frequency of visual monitoring to once per calendar week of time the process is in operation, during melting operations. If VE are detected during these inspections, you must resume daily visual monitoring of that operation during each day that the process is in operation, in accordance with paragraph (b)(1)(i) of this section until you satisfy the criteria of this section to resume conducting weekly visual monitoring.

(2) If the visual monitoring reveals the presence of any VE, you must initiate procedures to determine the cause of the emissions within 1 hour of the initial observation and alleviate the cause of the emissions within 3 hours of initial observation by taking whatever corrective action(s) are necessary. You may take more than 3 hours to alleviate a specific condition that causes VE if you identify in the monitoring plan this specific condition as one that could lead to VE in advance, you adequately explain why it is not feasible to alleviate this condition within 3 hours of the time the VE occurs, and you demonstrate that the requested time will ensure alleviation of this condition as expeditiously as practicable.

(3) As an alternative to the monitoring requirements for an existing affected source in paragraphs (b)(1) and (2) of this section, you may install, operate, and maintain a bag leak detection system for each fabric filter according to the requirements in paragraph (c) of this section.

(c) If you own or operate a new affected source located at a large foundry subject to the PM requirements in §63.11550(b)(2) that is equipped with a fabric filter, you must install, operate, and maintain a bag leak detection system for each fabric filter according to paragraphs (c)(1) through (4) of this section.

(1) Each bag leak detection system must meet the specifications and requirements in paragraphs (c)(1)(i) through (viii) of this section.

(i) The bag leak detection system must be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 1 milligram per actual cubic meter (0.00044 grains per actual cubic foot) or less.

(ii) The bag leak detection system sensor must provide output of relative PM loadings. You must continuously record the output from the bag leak detection system using electronic or other means (e.g., using a strip chart recorder or a data logger).

(iii) The bag leak detection system must be equipped with an alarm system that will sound when the system detects an increase in relative particulate loading over the alarm set point established according to paragraph (c)(1)(iv) of this section, and the alarm must be located such that it can be heard by the appropriate plant personnel.

(iv) In the initial adjustment of the bag leak detection system, you must establish, at a minimum, the baseline output by adjusting the sensitivity (range) and the averaging period of the device, the alarm set points, and the alarm delay time.

(v) Following initial adjustment, you must not adjust the averaging period, alarm set point, or alarm delay time without approval from the Administrator or delegated authority, except as provided in paragraph (c)(1)(vi) of this section.

(vi) Once per quarter, you may adjust the sensitivity of the bag leak detection system to account for seasonal effects, including temperature and humidity, according to the procedures identified in the site-specific monitoring plan required by paragraph (c)(2) of this section.

(vii) You must install the bag leak detection sensor downstream of the fabric filter.

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

(2) You must prepare a site-specific monitoring plan for each bag leak detection system. You must operate and maintain each bag leak detection system according to the plan at all times. Each monitoring plan must describe the items in paragraphs (c)(2)(i) through (vi) of this section.

(i) Installation of the bag leak detection system;

(ii) Initial and periodic adjustment of the bag leak detection system, including how the alarm set-point and alarm delay time will be established;

(iii) Operation of the bag leak detection system, including quality assurance procedures;

(iv) How the bag leak detection system will be maintained, including a routine maintenance schedule and spare parts inventory list;

(v) How the bag leak detection system output will be recorded and stored; and

(vi) Corrective action procedures as specified in paragraph (c)(3) of this section.

(3) Except as provided in paragraph (c)(4) of this section, you must initiate procedures to determine the cause of every alarm from a bag leak detection system within 1 hour of the alarm and alleviate the cause of the alarm within 3 hours of the alarm by taking whatever corrective action(s) are necessary. Corrective actions may include, but are not limited to, the following:

(i) Inspecting the fabric filter for air leaks, torn or broken bags or filter media, or any other condition that may cause an increase in PM emissions;

(ii) Sealing off defective bags or filter media;

(iii) Replacing defective bags or filter media, or otherwise repairing the control device;

(iv) Sealing off a defective fabric filter compartment;

(v) Cleaning the bag leak detection system probe, or otherwise repairing the bag leak detection system; or

(4) You may take more than 3 hours to alleviate a specific condition that causes an alarm if you identify in the monitoring plan this specific condition as one that could lead to an alarm, adequately explain why it is not feasible to alleviate this condition within 3 hours of the time the alarm occurs, and demonstrate that the requested time will ensure alleviation of this condition as expeditiously as practicable.

(d) If you use a control device other than a fabric filter for new or existing affected sources subject to §63.11550(b), you must submit a request to use an alternative monitoring procedure as required in §63.8(f)(4).

§ 63.11553 What are my notification, reporting, and recordkeeping requirements?

(a) You must submit the Initial Notification required by §63.9(b)(2) no later than 120 calendar days after June 25, 2009 or within 120 days after the source becomes subject to the standard. The Initial Notification must include the information specified in paragraphs (a)(1) through (3) of this section and may be combined with the Notification of Compliance Status required in paragraph (b) of this section.

(1) The name and address of the owner or operator;

(2) The address (i.e., physical location) of the affected source; and

(3) An identification of the relevant standard, or other requirement, that is the basis of the notification and source's compliance date.

(b) You must submit the Notification of Compliance Status required by §63.9(h) no later than 120 days after the applicable compliance date specified in §63.11545 unless you must conduct a performance test. If you must conduct a performance test, you must submit the Notification of Compliance Status within 60 days of completing the performance test. Your Notification of Compliance Status must indicate if you are a small or large foundry as defined in §63.11556, the production amounts as the basis for the determination, and if you are a large foundry, whether you elect to comply with the control efficiency requirement or PM concentration limit in §63.11550(b). In addition to the information required in §63.9(h)(2) and §63.11551, your notification must include the following certification(s) of compliance, as applicable, and signed by a responsible official:

(1) "This facility will operate in a manner that minimizes HAP emissions from the melting operations to the extent possible. This includes at a minimum that the owners and/or operators of the affected source will cover or enclose each melting furnace that is equipped with a cover or enclosure during melting operations to the extent practicable as required in 63.11550(a)(1)."

(2) "This facility agrees to purchase only metal scrap that has been depleted (to the extent practicable) of aluminum foundry HAP, copper foundry HAP, or other nonferrous foundries HAP (as applicable) in the materials charged to the melting furnace, except for metal scrap that is purchased specifically for its HAP metal content for use in alloying or to meet specifications for the casting as required by 63.11550(a)(2)."

(3) "This facility has prepared and will operate by a written management practices plan according to §63.11550(a)(3)."

(4) If the owner or operator of an existing affected source at a large foundry is certifying compliance based on the results of a previous performance test: "This facility complies with §63.11550(b) based on a previous performance test in accordance with §63.11551(b)."

(5) This certification of compliance is required by the owner or operator that installs bag leak detection systems: "This facility has installed a bag leak detection system in accordance with §63.11552(b)(3) or (c), has prepared a bag leak detection system monitoring plan in accordance with §63.11552(c), and will operate each bag leak detection system according to the plan."

(c) You must keep the records specified in paragraphs (c)(1) through (5) of this section.

(1) As required in §63.10(b)(2)(xiv), you must keep a copy of each notification that you submitted to comply with this subpart and all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted.

(2) You must keep records to document conformance with the management practices plan required by §63.11550 as specified in paragraphs (c)(2)(i) and (ii) of this section.

(i) For melting furnaces equipped with a cover or enclosure, records must identify each melting furnace equipped with a cover or enclosure and document that the procedures in the management practices plan were followed during the monthly inspections. These records may be in the form of a checklist.

(ii) Records documenting that you purchased only metal scrap that has been depleted of HAP metals (to the extent practicable) charged to the melting furnace. If you purchase scrap metal specifically for the HAP metal content for use in alloying or to meet specifications for the casting, you must keep records to document that the HAP metal is included in the material specifications for the cast metal product.

(3) You must keep the records of all performance tests, inspections and monitoring data required by §§63.11551 and 63.11552, and the information identified in paragraphs (c)(3)(i) through (vi) of this section for each required inspection or monitoring.

(i) The date, place, and time of the monitoring event;

(ii) Person conducting the monitoring;

(iii) Technique or method used;

(iv) Operating conditions during the activity;

(v) Results, including the date, time, and duration of the period from the time the monitoring indicated a problem (e.g., VE) to the time that monitoring indicated proper operation; and

(vi) Maintenance or corrective action taken (if applicable).

(4) If you own or operate a new or existing affected source at a small foundry that is not subject to §63.11550(b), you must maintain records to document that your facility melts less than 6,000 tpy total of copper, other nonferrous metal, and all associated alloys (excluding aluminum) in each calendar year.

(5) If you use a bag leak detection system, you must keep the records specified in paragraphs (c)(5)(i) through (iii) of this section.

(i) Records of the bag leak detection system output.

(ii) Records of bag leak detection system adjustments, including the date and time of the adjustment, the initial bag leak detection system settings, and the final bag leak detection system settings.

(iii) The date and time of all bag leak detection system alarms, and for each valid alarm, the time you initiated corrective action, the corrective action taken, and the date on which corrective action was completed.

(d) Your records must be in a form suitable and readily available for expeditious review, according to §63.10(b)(1). As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each recorded action. For records of annual metal melt production, you must keep the records for 5 years from the end of the calendar year. You must keep each record onsite for at least 2 years after the date of each recorded action according to §63.10(b)(1). You may keep the records offsite for the remaining 3 years.

(e) If a deviation occurs during a semiannual reporting period, you must submit a compliance report to your permitting authority according to the requirements in paragraphs (e)(1) and (2) of this section.

(1) The first reporting period covers the period beginning on the compliance date specified in §63.11545 and ending on June 30 or December 31, whichever date comes first after your compliance date. Each subsequent reporting period covers the semiannual period from January 1 through June 30 or from July 1 through December 31. Your compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date comes first after the end of the semiannual reporting period.

(2) A compliance report must include the information in paragraphs (e)(2)(i) through (iv) of this section.

(i) Company name and address.

(ii) Statement by a responsible official, with the official's name, title, and signature, certifying the truth, accuracy and completeness of the content of the report.

(iii) Date of the report and beginning and ending dates of the reporting period.

(iv) Identification of the affected source, the pollutant being monitored, applicable requirement, description of deviation, and corrective action taken.

[74 FR 30393, June 25, 2009, as amended at 74 FR 46495, Sept. 10, 2009]

Other Requirements and Information

§ 63.11555 What General Provisions apply to this subpart?

Table 1 to this subpart shows which parts of the General Provisions in §§63.1 through 63.16 apply to you.

§ 63.11556 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act, in §63.2, and in this section as follows:

Aluminum foundry means a facility that melts aluminum and pours molten aluminum into molds to manufacture aluminum castings (except die casting) that are complex shapes. For purposes of this subpart, this definition does not include primary or secondary metal producers that cast molten aluminum to produce simple shapes such as sows, ingots, bars, rods, or billets.

Aluminum foundry HAP means any compound of the following metals: beryllium, cadmium, lead, manganese, or nickel, or any of these metals in the elemental form.

Annual copper and other nonferrous foundry metal melt capacity means, for new affected sources, the lower of the copper and other nonferrous metal melting operation capacity, assuming 8,760 operating hours per year or, if applicable, the maximum permitted copper and other nonferrous metal melting operation production rate for the melting operation calculated on an annual basis. Unless otherwise specified in the permit, permitted copper

and other nonferrous metal melting operation rates that are not specified on an annual basis must be annualized assuming 24 hours per day, 365 days per year of operation. If the permit limits the operating hours of the melting operation(s) or foundry, then the permitted operating hours are used to annualize the maximum permitted copper and other nonferrous metal melt production rate. The annual copper and other nonferrous metal melt capacity does not include the melt capacity for ferrous metal melted in iron or steel foundry melting operations that are co-located with copper or other nonferrous melting operations or the nonferrous metal melted in non-foundry melting operations.

Annual copper and other nonferrous foundry metal melt production means, for existing affected sources, the quantity of copper and other nonferrous metal melted in melting operations at the foundry in a given calendar year. For the purposes of this subpart, metal melt production is determined on the basis of the quantity of metal charged to the melting operations. The annual copper and nonferrous metal melt production does not include the melt production of ferrous metal melted in iron or steel foundry melting operations that are co-located with copper and other nonferrous melting operations or the nonferrous metal melted in non-foundry melting operations.

Annual metal melt capacity, for new affected sources, means the lower of the aluminum, copper, and other nonferrous metal melting operation capacity, assuming 8,760 operating hours per year or, if applicable, the maximum permitted aluminum, copper, and other nonferrous metal melting operation production rate for the melting operation calculated on an annual basis. Unless otherwise specified in the permit, permitted aluminum, copper, and other nonferrous metal melting operation rates that are not specified on an annual basis must be annualized assuming 24 hours per day, 365 days per year of operation. If the permit limits the operating hours of the melting operation(s) or foundry, then the permitted operating hours are used to annualize the maximum permitted aluminum, copper, and other nonferrous metal melt production rate. The annual metal melt capacity does not include the melt capacity for ferrous metal melted in iron or steel foundry melting operations that are co-located with aluminum, copper, or other nonferrous melting operations or the nonferrous metal melted in non-foundry melting operations.

Annual metal melt production means, for existing affected sources, the quantity of aluminum, copper, and other nonferrous metal melted in melting operations at the foundry in a given calendar year. For the purposes of this subpart, annual metal melt production is determined on the basis of the quantity of metal charged to the melting operations. The annual metal melt production does not include the melt production of ferrous metal melted in iron or steel foundry melting operations that are co-located with aluminum, copper, or other nonferrous melting operations or the nonferrous metal melted in non-foundry melting operations.

Bag leak detection system means a system that is capable of continuously monitoring relative PM (*i.e.*, dust) loadings in the exhaust of a baghouse to detect bag leaks and other upset conditions. 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 continuously monitor relative PM loadings.

Copper foundry means a foundry that melts copper or copper-based alloys and pours molten copper or copper-based alloys into molds to manufacture copper or copper-based alloy castings (excluding die casting) that are complex shapes. For purposes of this subpart, this definition does not include primary or secondary metal producers that cast molten copper to produce simple shapes such as sows, ingots, billets, bars, anode copper, rods, or copper cake.

Copper foundry HAP means any compound of any of the following metals: lead, manganese, or nickel, or any of these metals in the elemental form.

Deviation means any instance where an affected source subject to this subpart, or an owner or operator of such a source:

- (1) Fails to meet any requirement or obligation established by this subpart, including but not limited to any emissions limitation or work practice standard;
- (2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or
- (3) Fails to meet any emissions limitation in this subpart during startup, shutdown, or malfunction, regardless of whether or not such failure is permitted by this subpart.

Die casting means operations classified under the North American Industry Classification System codes 331521 (Aluminum Die-Casting Foundries) and 331522 (Nonferrous (except Aluminum) Die-Casting Foundries) and comprises establishments primarily engaged in introducing molten aluminum, copper, and other nonferrous metal, under high pressure, into molds or dies to make die-castings.

Large foundry means, for an existing affected source, a copper or other nonferrous foundry with an annual metal melt production of copper, other nonferrous metals, and all associated alloys (excluding aluminum) of 6,000 tons or greater. For a new affected source, *large foundry* means a copper or other nonferrous foundry with an annual metal melt capacity of copper, other nonferrous metals, and all associated alloys (excluding aluminum) of 6,000 tons or greater.

Material containing aluminum foundry HAP means a material containing one or more aluminum foundry HAP. Any material that contains beryllium, cadmium, lead, or nickel in amounts greater than or equal to 0.1 percent by weight (as the metal), or contains manganese in amounts greater than or equal to 1.0 percent by weight (as the metal), as shown in formulation data provided by the manufacturer or supplier, such as the Material Safety Data Sheet for the material, is considered to be a material containing aluminum foundry HAP.

Material containing copper foundry HAP means a material containing one or more copper foundry HAP. Any material that contains lead or nickel in amounts greater than or equal to 0.1 percent by weight (as the metal), or contains manganese in amounts greater than or equal to 1.0 percent by weight (as the metal), as shown in formulation data provided by the manufacturer or supplier, such as the Material Safety Data Sheet for the material, is considered to be a material containing copper foundry HAP.

Material containing other nonferrous foundry HAP means a material containing one or more other nonferrous foundry HAP. Any material that contains chromium, lead, or nickel in amounts greater than or equal to 0.1 percent by weight (as the metal), as shown in formulation data provided by the manufacturer or supplier, such as the Material Safety Data Sheet for the material, is considered to be a material containing other nonferrous foundry HAP.

Melting operations (the affected source) means the collection of furnaces (e.g., induction, reverberatory, crucible, tower, dry hearth) used to melt metal ingot, alloyed ingot and/or metal scrap to produce molten metal that is poured into molds to make castings. Melting operations dedicated to melting ferrous metal at an iron and steel foundry are not included in this definition and are not part of the affected source.

Other nonferrous foundry means a facility that melts nonferrous metals other than aluminum, copper, or copper-based alloys and pours the nonferrous metals into molds to manufacture nonferrous metal castings (excluding die casting) that are complex shapes. For purposes of this subpart, this definition does not include primary or secondary metal producers that cast molten nonferrous metals to produce simple shapes such as sows, ingots, bars, rods, or billets.

Other nonferrous foundry HAP means any compound of the following metals: chromium, lead, and nickel, or any of these metals in the elemental form.

Small foundry means, for an existing affected source, a copper or other nonferrous foundry with an annual metal melt production of copper, other nonferrous metals, and all associated alloys (excluding aluminum) of less than 6,000 tons. For a new affected source, *small foundry* means a copper or other nonferrous foundry with an annual metal melt capacity of copper, other nonferrous metals, and all associated alloys (excluding aluminum) of less than 6,000 tons.

§ 63.11557 Who implements and enforces this subpart?

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

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or Tribal agency under 40 CFR part 63, subpart E, the authorities contained in paragraph (c) of this section are retained by the Administrator of the U.S. EPA and are not transferred to the State, local, or Tribal agency.

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

(1) Approval of alternatives to the applicability requirements in §63.11544, the compliance date requirements in §63.11545, and the applicable standards in §63.11550.

(2) Approval of an alternative nonopacity emissions standard under §63.6(g).

(3) Approval of a major change to a test method under §63.7(e)(2)(ii) and (f). A "major change to test method" is defined in §63.90(a).

(4) Approval of a major change to monitoring under §63.8(f). A "major change to monitoring" is defined in §63.90(a).

(5) Approval of a waiver of recordkeeping or reporting requirements under §63.10(f), or another major change to recordkeeping/reporting. A "major change to recordkeeping/reporting" is defined in §63.90(a).

§ 63.11558 [Reserved]

Table 1 to Subpart ZZZZZZ of Part 63—Applicability of General Provisions to Aluminum, Copper, and Other Nonferrous Foundries Area Sources

As required in §63.11555, "What General Provisions apply to this subpart?," you must comply with each requirement in the following table that applies to you.

Citation	Subject	Applies to subpart ZZZZZZ?	Explanation
§63.1(a)(1), (a)(2), (a)(3), (a)(4), (a)(6), (a)(10)–(a)(12), (b)(1), (b)(3),	Applicability	Yes	§63.11544(f) exempts affected sources from the obligation to obtain a title

(c)(1), (c)(2), (c)(5), (e)			V operating permit.
§63.1(a)(5), (a)(7)–(a)(9), (b)(2), (c)(3), (c)(4), (d)	Reserved	No	
§63.2	Definitions	Yes	
§63.3	Units and Abbreviations	Yes	
§63.4	Prohibited Activities and Circumvention	Yes	
§63.5	Preconstruction Review and Notification Requirements	Yes	
§63.6(a), (b)(1)–(b)(5), (b)(7), (c)(1), (c)(2), (c)(5), (e)(1), (e)(3)(i), (e)(3)(iii)–(e)(3)(ix), (f)(2), (f)(3), (g), (i), (j)	Compliance with Standards and Maintenance Requirements	Yes	
§63.6(f)(1)	Compliance with Nonopacity Emission Standards	No	Subpart ZZZZZZ requires continuous compliance with all requirements in this subpart.
§63.6(h)(1), (h)(2), (h)(5)–(h)(9)	Compliance with Opacity and Visible Emission Limits	No	Subpart ZZZZZZ does not contain opacity or visible emission limits.
§63.6(b)(6), (c)(3), (c)(4), (d), (e)(2), (e)(3)(ii), (h)(3), (h)(5)(iv)	Reserved	No	
§63.7	Applicability and Performance Test Dates	Yes	
§63.8(a)(1), (b)(1), (f)(1)–(5), (g)	Monitoring Requirements	Yes	
§63.8(a)(2), (a)(4), (b)(2)–(3), (c), (d), (e), (f)(6), (g)	Continuous Monitoring Systems	No	Subpart ZZZZZZ does not require a flare or CPMS, COMS or CEMS.
§63.8(a)(3)	[Reserved]	No	
§63.9(a), (b)(1), (b)(2)(i)–(iii), (b)(5), (c), (d), (e), (h)(1)–(h)(3), (h)(5),	Notification Requirements	Yes	Subpart ZZZZZZ requires submission of Notification of

(h)(6), (j)			Compliance Status within 120 days of compliance date unless a performance test is required.
§63.9(b)(2)(iv)–(v), (b)(4), (f), (g), (i)	No		
§63.9(b)(3), (h)(4)	Reserved	No	
§63.10(a), (b)(1), (b)(2)(i)–(v), (vii), (vii)(C), (viii), (ix), (b)(3), (d)(1)–(2), (d)(4), (d)(5), (f)	Recordkeeping and Reporting Requirements	Yes	
§63.10(b)(2)(vi), (b)(2)(vii)(A)–(B), (c), (d)(3), (e)	No	Subpart <i>ZZZZZZ</i> does not require a CPMS, COMS, CEMS, or opacity or visible emissions limit.	
§63.10(c)(2)–(c)(4), (c)(9)	Reserved	No	
§63.11	Control Device Requirements	No	
§63.12	State Authority and Delegations	Yes	
§§63.13–63.16	Addresses, Incorporations by Reference, Availability of Information, Performance Track Provisions	Yes	

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a
Federally Enforceable State Operating Permit Renewal

Source Background and Description

Source Name:	General Aluminum Manufacturing Company
Source Location:	1345 Henry Street, Huntington, Indiana 46750
County:	Huntington
SIC Code:	3365 (Aluminum Foundries)
Permit Renewal No.:	F069-31508-00048
Permit Reviewer:	Jack Harmon

The Office of Air Quality (OAQ) has reviewed the operating permit renewal application from General Aluminum Manufacturing Company relating to the operation of a stationary aluminum foundry melting only clean charge. On February 17, 2012, General Aluminum Manufacturing Company submitted an application to the OAQ requesting to renew its operating permit. General Aluminum Manufacturing Company was issued its first FESOP F069-19499-00048 on November 30, 2007. Since that issuance, the source was issued a FESOP Administrative Amendment No. 069-31413-00048 on February 23, 2012. Additional information was received on June 29, and July 3, 2012.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units:

- (a) Eight (8) natural gas-fired reverberatory furnaces, each melting clean scrap, defined as furnace charge materials, including molten aluminum; T-bar; sow; ingot; billet; pig; aluminum scrap known by the owner 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 365°C (650°F) or higher; aluminum scrap delacquered/decoated at 483°C (900°F) or higher, and runaround scrap.
- (1) Furnace #1, approved for construction in 2012, with a maximum heat input rate of 5.0 million (MM) British thermal units (Btu) per hour with a melting capacity of 1500 lb/hr, or 0.75 tons/hr, using wall flux at a rate of 0.21 lb/hr, and a drossing flux at a rate of 0.21 lb/hr, using no controls, and exhausting through stack #1.
 - (2) Furnace #2, constructed in 1992, and modified in 2012, with a maximum heat input rate of 5.4 million (MM) British thermal units (Btu) per hour with a melting capacity of 1500 lb/hr, or 0.75 tons/hr, using wall flux at a rate of 0.21 lb/hr, and a drossing flux at a rate of 0.21 lb/hr, using no controls, and exhausting through stack #2. Furnace #2 is capable of lost foam casting.
 - (3) Furnace #4, constructed in 1994, and modified in 2012, with a maximum heat input capacity of 3.20 MMBtu per hour and a melting capacity of 1000 lb/hr, or 0.5 tons/hr, using wall flux at a rate of 0.21 lb/hr, and a drossing flux at a rate of 0.21 lb/hr, using no controls, and exhausting through stack #4;
 - (4) Furnace #6, constructed in 1990, and modified in 2012, with a maximum heat input capacity of 4.60 MMBtu per hour and a melting capacity of 1000 lb/hr, or 0.5 tons/hr, using wall flux at a rate of 0.21 lb/hr, and a drossing flux at a rate of 0.21 lb/hr, using no controls, and exhausting through stack #6.

- (5) Furnace #7, constructed in 1990, and modified in 2012, with a maximum heat input capacity of 4.30 MMBtu per hour and a melting capacity of 1000 lb/hr, or 0.5 tons/hr, using wall flux at a rate of 0.21 lb/hr, and a drossing flux at a rate of 0.21 lb/hr, using no controls, and exhausting through stack #7.
- (6) Furnace #8, constructed in 1996, and modified in 2012, with a maximum heat input capacity of 3.90 MMBtu per hour and a melting capacity of 1000 lb/hr, or 0.5 tons/hr, using wall flux at a rate of 0.21 lb/hr, and a drossing flux at a rate of 0.21 lb/hr, using no controls, and exhausting through stack #8.
- (7) Furnace #9, constructed in 1992, and modified in 2012, with a maximum heat input capacity of 6.25 MMBtu per hour and a melting capacity of 1000 lb/hr, or 0.5 tons/hr, using wall flux at a rate of 0.21 lb/hr, and a drossing flux at a rate of 0.21 lb/hr, using no controls, and exhausting through stack #9. Furnace #9 is dedicated to lost foam casting.
- (8) Furnace #10, constructed in 2005, and modified in 2012, with a maximum heat input capacity of 7.95 MMBtu per hour and a melting capacity of 1000 lb/hr. or 0.5 tons/hr, using wall flux at a rate of 0.21 lb/hr, and a drossing flux at a rate of 0.21 lb/hr, using no controls, and exhausting through stack #10.

Note: Two separate types of flux are used, the first is a "wall flux" (FC-212-CC) for removing oxides from the walls of the furnaces, and the second is a "drossing flux" (WF-132) that is applied directly to the melt bath. Maximum usage is approximately 150 pounds per month of each flux type per furnace, or 0.21 lb/hr for each furnace.

Under 40 CFR 63, Subpart ZZZZZZ, these are affected facilities.

- (b) One (1) natural gas-fired dry hearth furnace (identified as DHF #14), constructed in 2005, and modified in 2012, melting clean scrap, defined as furnace charge materials, including molten aluminum; T-bar; sow; ingot; billet; pig; aluminum scrap known by the owner 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 365°C (650°F) or higher; aluminum scrap delacquered/decoated at 483°C (900°F) or higher, and runaround scrap, with a maximum throughput rate of 1500 lb/hr, or 0.75 tons/hr, and utilizing three (3) burners, with a combined maximum heat input capacity of 7.95 MMBtu/hr, using wall flux at a rate of 0.21 lb/hr, and a drossing flux at a rate of 0.21 lb/hr, using no controls.

Under 40 CFR 63, Subpart ZZZZZZ, this is an affected facility.

- (c) Six (6) natural gas-fired core machines, with a combined maximum capacity to produce 7106 lbs of cores per hour, or 3.55 tons per hour, consisting of the following:
 - (1) two (2) core machines, identified as Dependable 600 #1 and #2, each with a maximum heat input rate of 0.38 MMBtu/hr;
 - (2) two (2) core machines, identified as Dependable 400 #1 and #2, each with a maximum heat input rate of 0.27 MMBtu/hr;
 - (3) one (1) core machine, identified as U360, with a maximum heat input rate of 1.00 MMBtu/hr; and
 - (4) one (1) core machine, identified as Redford with a maximum heat input rate of 0.37 MMBtu/hr.

Shell cores are made on all six (6) natural gas-fired core machines. The core operation has no control devices. The core machines were constructed between 1970 and 1990.

(d) One (1) lost foam casting operation, with a maximum throughput of 0.5 tons of metal per hour and 0.3 tons of castings per hour, with a filter box to control PM emissions exhausting indoors. The filter box controls emissions from pouring on the lost foam casting line and emissions from sand (extraction and fill stations). Small amounts of sand are used in the lost foam casting operation. The sand is recycled within the process. The casting operation was constructed in 1992.

(e) One (1) grinding, cleaning, and finishing operation with a maximum throughput of 1.01 tons of aluminum per hour. Operation consists of band saws to cut off gates and risers as well as other hand-held finishing equipment (i.e., grinders, belt sealers, etc). The grinding, cleaning, and finishing operation was constructed between 1950 and 1955, and has no control devices.

Note: The source has confirmed that this process has a lower maximum throughput capacity than the melting process, based on maximum capacity of the equipment used in this process.

(f) One (1) sanding handling operation with a maximum throughput of 0.4765 tons of sand per hour, used in conjunction with the lost foam casting process, using filter box for control, exhausting inside.

(g) One (1) pouring and casting operation, with a maximum throughput of 5.25 tons of metal per hour. Pouring and casting operations are permanent and semi-permanent mold systems that do not require sand, and has no control devices, exhausting inside the plant.

Note: There are no shotblast units at this facility, according to information supplied by the source.

Emission Units and Pollution Control Equipment Constructed and/or Operated without a Permit
--

There are no emission units constructed and/or operated without a permit.

Emission Units and Pollution Control Equipment Removed From the Source

The source has removed the following emission units and pollution control devices:

- (a) Furnace #5 constructed in 2005 with a maximum heat input capacity of 2.90 MMBtu per hour and a melting capacity of 0.5 TPH exhausting through Stack #5;
- (b) Furnace #11 constructed in 1990 with a maximum heat input capacity of 3.35 MM Btu per hour and a melting capacity of 0.5 TPH exhausting through stack #11.
- (c) One (1) natural gas-fired steam generating boiler (ID #4) with a maximum heat input capacity of 1.344 MMBtu/hr, exhausting through stacks 15 and 16. Boiler #4 was constructed in 1965.
- (d) One(1) natural gas-fired core machine, identified as Dependable 200, with a maximum heat input rate of 0.17 MMBtu/hr.

Note: These units were removed from the permit in FESOP Administrative Amendment No. 069-31413-00048, issued February 23, 2012.

Insignificant Activities

The source also consists of the following insignificant activities:

- (a) Three (3) natural gas-fired boilers (ID #1, #2 and #3), each with a maximum heat input of 0.244 MMBtu/hr, exhausting through stack #14. Boilers #1 and #2 were constructed in 1985. Boiler #3 was constructed in 1989.
- (b) Fifteen (15) natural gas-fired torches, each with a maximum heat input capacity of 0.300 MMBtu/hr, venting to the interior of the building.
- (c) Fifty-six (56) natural gas-fired space heaters, each with a maximum heat input of 0.05 MMBtu/hr, venting to the interior of the building.
- (d) One (1) natural gas-fired cafeteria heater, with a maximum heat input of 0.075 MMBtu/hr, exhausting through stack # 12.
- (e) One (1) natural gas-fired office heater with a maximum heat input of 0.075 MMBtu/hr, exhausting through stack # 13.
- (f) Two (2) natural gas-fired aging ovens, identified as Aging Oven #5 and Aging Oven #6, exhausting to the interior of the building.
- (g) Fugitive dust sources, including paved roads.

Existing Approvals

Since the issuance of the FESOP No. 069-19499-00048, issued on November 30, 2007, the source has constructed or has been operating under the following additional approvals:

- (a) Administrative Amendment No. 069-31413-00048, issued on February 23, 2012.

All terms and conditions of previous permits issued pursuant to permitting programs approved into the State Implementation Plan have been either incorporated as originally stated, revised, or deleted by this permit. All previous registrations and permits are superseded by this permit.

Enforcement Issue

There are no enforcement actions pending.

Emission Calculations

See Appendix A of this document for detailed emission calculations.

County Attainment Status

The source is located in Huntington County.

Pollutant	Designation
SO ₂	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O ₃	Unclassifiable or attainment effective June 15, 2004, for the 8-hour ozone standard. ¹
PM ₁₀	Unclassifiable effective November 15, 1990.
NO ₂	Cannot be classified or better than national standards.
Pb	Not designated.

¹Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.
 Unclassifiable or attainment effective April 5, 2005, for PM2.5.

- (a) **Ozone Standards**
 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 ozone. Huntington County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (b) **PM_{2.5}**
 Huntington County has been classified as attainment for PM_{2.5}. On May 8, 2008 U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM_{2.5} emissions. These rules became effective on July 15, 2008. On May 4, 2011 the air pollution control board issued an emergency rule establishing the direct PM_{2.5} significant level at ten (10) tons per year. This rule became effective, June 28, 2011. Therefore, direct PM_{2.5} and SO₂ emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.
- (c) **Other Criteria Pollutants**
 Huntington County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7, and there is no applicable New Source Performance Standard that was in effect on August 7, 1980, fugitive emissions are not counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Note: This source melts only clean charge in its furnaces, as defined in Secondary Aluminum NESHAP 40 CFR 63, Subpart RRR, and, therefore, is not a secondary aluminum production plant. Therefore, the source is not considered to be 1 of the 28 source categories. This determination was made in FESOP No. 069-19499-00048, issued November 30, 2007.

Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source.

Unrestricted Potential Emissions	
Pollutant	Tons/year
PM	Less than 100
PM ₁₀	Less than 100
PM _{2.5}	Less than 100
SO ₂	Less than 100
VOC	Less than 100
CO	Less than 100
NO _x	Less than 100
GHGs as CO ₂ e	Less than 100,000

Unrestricted Potential Emissions	
Pollutant	Tons/year
Single HAP	Greater than 10
Total HAP	Greater than 25

Appendix A of this TSD reflects the unrestricted potential emissions of the source.

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of all criteria pollutants is less than 100 tons per year.
- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of GHGs is less than one hundred thousand (100,000) tons of CO₂ equivalent emissions (CO₂e) per year.
- (c) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is equal to or greater than ten (10) tons per year and/or the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is equal to or greater than twenty-five (25) tons per year. However, the Permittee has agreed to limit the source's single HAP emissions and total HAP emissions below Title V levels. Therefore, the Permittee will be issued a FESOP Renewal.

Potential to Emit After Issuance

The source has opted to remain a FESOP source. The table below summarizes the potential to emit, reflecting all limits of the emission units. Any control equipment is considered enforceable only after issuance of this FESOP and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of Renewal (tons/year)									Worst Single HAP
	PM	PM ₁₀ *	PM _{2.5} **	SO ₂	NO _x	VOC	CO	GHGs	Total HAPs	
Reverberatory and Dry Hearth Furnaces (Process Emissions)	25.30	25.30	25.30	0.46	0.00	3.22	0.00	0.00	0.00	0.00
Natural Gas Combustion (furnaces and other units)	0.49	1.98	1.98	0.16	26.02	1.43	21.86	31417.90	4.55E-01	4.34E-01 (Hexane)
Core Machines***	25.30	25.30	25.30	0.00	0.00	3.22	0.00	0.00	1.30E+00	8.46E-01 (Dimethylphth-alate)
Lost Foam Casting Operation	0.00	0.00	0.00	0.00	0.00	9.90	0.00	0.00	9.9E+00	9.9E+00 (Styrene)
Grinding/Cleaning/Finishing	7.08	0.02	0.02	0.00	0.00	0.00	0.00	0.00	8.85E-02	3.89E-02 (Manganese)
Sand Handling	7.51	1.13	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pouring/Casting	0.34	0.34	0.34	0.46	0.23	3.22	0.00	0.00	0.00	0.00
Fugitive Emissions (Paved Roads)	0.37	0.07	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total PTE of Entire Source	66.40	54.15	54.09	1.08	26.25	20.99	21.86	31417.90	1.17E+01	9.90E+00 (Styrene)

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of Renewal (tons/year)									Worst Single HAP
	PM	PM ₁₀ *	PM _{2.5} **	SO ₂	NO _x	VOC	CO	GHGs	Total HAPs	
Title V Major Source Thresholds	NA	100	100	100	100	100	100	100,000 CO ₂ e	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	250	100,000 CO ₂ e	NA	NA

*Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".
 **PM_{2.5} listed is direct PM_{2.5}.
 ***Emissions for Core operations in previous permit were for VOC content for the resins used only, and contained no particulate process emissions. In this renewal, particulate emissions are also included. See Appendix A of this document for details. This is a Title I change.

- (a) This existing stationary source is not major for PSD because the emissions of each regulated pollutant, excluding GHGs, are less than two hundred fifty (<250) tons per year, emissions of GHGs are less than one hundred thousand (<100,000) tons of CO₂ equivalent emissions (CO₂e) per year, and it is not in one of the twenty-eight (28) listed source categories.

Federal Rule Applicability

Compliance Assurance Monitoring (CAM)

- (a) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the permit, because the unlimited potential to emit of the source is less than the Title V major source thresholds and the source is not required to obtain a Part 70 or Part 71 permit.

New Source Performance Standards (NSPS)

- (b) The requirements of New Source Performance Standard, 326 IAC 12, 40 CFR Part 60.260, Subpart Z, (Standards of Performance for Ferroalloy Production Facilities) are not included in this permit because the source does not operate an electric submerged arc furnace.
- (c) The requirements of the New Source Performance Standard, 326 IAC 12, 40 CFR Part 60.190, Subpart S, (Standards of Performance for Primary Aluminum Production Plants) are not included in this permit because the source is not a primary aluminum reduction plant.
- (d) There are no other New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included for this renewal.

National Emissions Standards for Hazardous Air Pollutants (NESHAP)

- (e) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Primary Aluminum Reduction Plants, 40 CFR 63.840, Subpart LL, are not included in this permit because the source is not a primary aluminum reduction plant.
- (f) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Secondary Aluminum Production, 40 CFR 63, Subpart RRR, are not included in this permit because it does not meet the definition of a secondary aluminum production facility. The definition of a secondary aluminum production states that 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. This source is a die casting process

that melts only clean charge, customer returns or internal scrap and does not operate a sweat furnace, thermal chip dryer or scrap dryer/delacquering kiln/decoating kiln.

- (g) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Primary Nonferrous Metals at Area Source - Zinc, Cadmium, or Beryllium, 40 CFR 63, Subpart GGGGGG, are not included in this permit because this facility is not a zinc, cadmium, or beryllium production facility.
- (h) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Secondary Nonferrous Metals Processing - Area Sources, 40 CFR 63, Subpart TTTTTT, are not included in this permit because it does not meet the definition of a brass or bronze ingot making facility, or a magnesium processing facility, or a zinc processing plant.
- (i) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Area Source Standards for Aluminum, Copper, and Other Nonferrous Foundries, 40 CFR 63, Subpart ZZZZZZ (6Z), are included in this permit for the reverberatory furnaces, identified as Furnaces #1, #2, #4, #6, #7, #8, #9, and #10, and the dry hearth furnace, identified as DHF#14, because this source is an aluminum foundry as defined in 63.11556 that is an area source of hazardous air pollutants (HAPs) as defined in 63.2. Therefore, these units are subject to 40 CFR 63, Subpart ZZZZZZ (6Z).

The following requirements are applicable to these facilities:

- (1) 40 CFR 63.11544
- (2) 40 CFR 63.11545(a)
- (3) 40 CFR 63.11550(a)
- (4) 40 CFR 63.11553(a)
- (5) 40 CFR 63.11553(b)
- (6) 40 CFR 63.11553(c)
- (7) 40 CFR 63.11553(e)

There are no testing requirements at this time.

The requirements of the National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Area Source Standards for Aluminum, Copper, and Other Nonferrous Foundries, 40 CFR 63, Subpart ZZZZZZ (6Z) are shown in their entirety in Attachment A to the permit.

- (j) There are no other National Emission Standards for Hazardous Air Pollutants (NESHAP) applicable to this source.

State Rule Applicability - Entire Source

326 IAC 1-7 (Stack Height Provisions)

This source is subject to the requirements of 326 IAC 1-7 because there are emission points at this source that have the potential to emit particulate matter (PM) or sulfur dioxide (SO₂) greater than 25 tons per year, each. Therefore, the requirements of 327 IAC 1-7 do apply to the reverberatory and dry hearth furnaces and to the core operations.

326 IAC 2-6 (Emission Reporting)

This source is not subject to 326 IAC 2-6 (Emission Reporting) because it is not required to have an operating permit pursuant to 326 IAC 2-7 (Part 70); it is not located in Lake, Porter, or LaPorte County, and its potential to emit lead is less than 5 tons per year. Therefore, this rule does not apply.

326 IAC 5-1 (Opacity Limitations)

This source is subject to the opacity limitations specified in 326 IAC 5-1-2

326 IAC 6.5 PM Limitations Except Lake County

This source is not subject to 326 IAC 6.5 because it is not located in one of the following counties: Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo or Wayne.

326 IAC 6.8 PM Limitations for Lake County

This source is not subject to 326 IAC 6.8 because it is not located in Lake County.

State Rule Applicability – Individual Facilities

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

PSD applicability is discussed under the PTE of the Entire Source After Issuance of the FESOP section above.

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

This source would be subject to the requirements of 325 IAC 2-4.1 because the lost foam casting operation has the potential to emit greater than 10 tons per year of a single HAP. However, the source has elected to limit its production to keep its emissions of a single HAP to less than 10 tons per year. Therefore, the requirements of 326 IAC 2-4.1 do not apply.

326 IAC 2-8-4 (FESOP)

The potential to emit of a single HAP from the lost foam casting operation is greater than 10 tons per year. In order to limit the source to less than 10 tons per year of a single HAP, the lost foam usage shall be limited to 19,795 pounds per twelve (12) consecutive month period, with compliance determined at the end of each month. This limit will limit single HAP emissions from the lost foam casting operation to less than 10 tons per year, and, when combined with the entire source, to limit single HAP to less than 10 tons per year and to limit total HAPs to less than 25 tons per year, in order to render 326 IAC 2-7 (Part 70 Permit Program) not applicable. This limit is consistent with the limit in the existing permit.

326 IAC 6-2-4 (Particulate Emissions Limitations for Sources of Indirect Heating)

The three natural gas-fired boilers, identified as ID#1, #2, and #3, are subject to the requirements of 326 IAC 6-2-4 because each boiler is a source of indirect heat, each has the potential to emit particulate matter, and each was constructed on or after September 21, 1983. Pursuant to 326 IAC 6-2-4, particulate emissions shall be calculated using the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

Where: Pt = pounds of particulate matter emitted per million btu heat input.
 Q = total source maximum operating capacity rating in million btu per hour heat input.

The value of Q is defined as follows, for each boiler. As each unit is added to a facility, the value of Q increases for each progressive new unit added, and is cumulative.

<u>Boiler Emission Unit ID / Construction Date</u>	<u>Individual Heat Input Value (MMBtu/hr)</u>	<u>Value of Q (MMBtu/hr)</u>
Boiler Unit #1 / (Constructed 1985)	0.244	0.244
Boiler Unit #2 / (Constructed 1985)	0.244	0.488
Boiler Unit #3 / (Constructed 1989)	0.244	0.732

However, pursuant to 326 IAC 6-2-4(a), for Q less than 10 MMBtu/hr, the value of Pt shall not exceed 0.6 pounds particulate per MMBtu heat input. Therefore, the particulate emissions limitation for each boiler, identified as #1, #2, and #3 shall not exceed 0.6 lb PM / MMBtu, each.

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

This source is subject to the requirements of 326 IAC 6-3-2 because it is a manufacturing process that has the potential to emit particulate matter. Pursuant to 326 IAC 6-3-2 (Particulate Emissions from Manufacturing Processes), the particulate emissions from this stationary aluminum foundry shall not exceed the pound per hour limit as shown in the table below:

Emission Unit	Process Weight Rate (tons/hr) (A)	Process Weight Rate of Flux Additions (tons/hr) (B)	Total Process Weight Rate (tons/hr) (A) + (B)	Allowable PM Emissions (326 IAC 6-3-2) (lb/hr)
Furnaces				
Reverberatory Furnace # 1	0.75	0.00021	0.75021	3.38
Reverberatory Furnace # 2	0.75	0.00021	0.75021	3.38
Reverberatory Furnace # 4	0.50	0.00021	0.50021	2.58
Reverberatory Furnace # 6	0.50	0.00021	0.50021	2.58
Reverberatory Furnace # 7	0.50	0.00021	0.50021	2.58
Reverberatory Furnace # 8	0.50	0.00021	0.50021	2.58
Reverberatory Furnace # 9	0.50	0.00021	0.50021	2.58
Reverberatory Furnace # 10	0.50	0.00021	0.50021	2.58
Dry Hearth Furnace DHF #14	0.75	0.00021	0.75021	3.38
Core Operations				
Dependable 600 # 1	0.59	N/A	0.59	2.88
Dependable 600 # 2	0.59	N/A	0.59	2.88
Dependable 400 # 1	0.59	N/A	0.59	2.88
Dependable 400 # 2	0.59	N/A	0.59	2.88
U360	0.59	N/A	0.59	2.88
Redford	0.59	N/A	0.59	2.88
Pouring/Casting Operation	5.25	N/A	5.25	12.45
Sand Handling	0.48	N/A	0.48	2.50
Grinding/Finishing	1.01	N/A	1.01	4.12

The pounds per hour limitations were calculated with the following equation:

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

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

Note: The Lost Foam Casting Operation was shown in the table of emission limits under 326 IAC 6-3-2 in the previous permit. However, the casting particulate emissions are included in the Pouring/Casting limits in the above table and the particulate emissions from the sand system are included in the Sand Handling in the above table. The Lost Foam Casting Operation includes only VOC and HAP emissions from the use of the styrofoam only, and, as such, has no particulate emissions. Therefore, the particulate emissions limits have been removed from this table. This is a Title I change. All other emissions limits in the above table are the same as the previous permit.

According to the emissions calculations in Appendix A of this document, all of these operations can comply with these limits without the use of a control device because the uncontrolled potential to emit particulate matter (PM) of each process is less than the limits established under 326 IAC 6-3-2.

326 IAC 6-4 (Fugitive Dust Emissions)

Pursuant to 326 IAC 6-4(Fugitive Dust Emissions), 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 7-1.1 Sulfur Dioxide Emission Limitations

This source is not subject to 326 IAC 326 IAC 7-1.1 because its unlimited potential to emit SO₂ is less than 25 tons/year or 10 pounds/hour. Therefore, the requirements of 326 IAC 7-1.1 do not apply.

326 IAC 8-1-6 (VOC: New Facilities; General Reduction Requirements)

FESOP 069-19499-00048, issued on November 30, 2007, established a BACT limit of 19,795 pounds of lost foam usage per twelve (12) consecutive month period, which is equivalent to 9.9 tons per year of VOC emissions, with compliance determined at the end of each month. This BACT limit shall be continued in this FESOP Renewal 069-31508-00048.

There are no other VOC requirements applicable to this source.

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions; however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-8-4. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

If the Compliance Determination Requirements are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this source are as follows:

Emission Unit / Stack No.	Parameter	Frequency	Range	Excursions and Exceedances
Furnace #1 / Stack #1	Visible Emissions	Daily	Normal-Abnormal	Response Steps
Furnace #2 / Stack #2	Visible Emissions	Daily	Normal-Abnormal	Response Steps
Furnace #4 / Stack #4	Visible Emissions	Daily	Normal-Abnormal	Response Steps

Emission Unit / Stack No.	Parameter	Frequency	Range	Excursions and Exceedances
Furnace #6 / Stack #6	Visible Emissions	Daily	Normal-Abnormal	Response Steps
Furnace #7 / Stack #7	Visible Emissions	Daily	Normal-Abnormal	Response Steps
Furnace #8 / Stack #8	Visible Emissions	Daily	Normal-Abnormal	Response Steps
Furnace #9 / Stack #9	Visible Emissions	Daily	Normal-Abnormal	Response Steps
Furnace #10 / Stack #10	Visible Emissions	Daily	Normal-Abnormal	Response Steps

Visible emissions notation is required for each of the furnaces because these units are uncontrolled, and are subject to state applicability requirement due to the uncontrolled potential to emit particulate matter exhausting through a stack (326 IAC 1-7 (Stack Height Provisions)).

There are no other compliance determination or monitoring requirements for this source. Testing is not required for the grinding operation because the source can easily comply with the limit established under 326 IAC 6-3-2 without the use of controls. There are no other permit limits for this operation. The emission factors were evaluated and accepted under FESOP 069-19499-00048, issued November 30, 2007, and have been re-evaluated in this renewal. There have been no compliance issues with the source.

Recommendation

The staff recommends to the Commissioner that the FESOP Renewal be approved. This recommendation is based on the following facts and conditions:

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

An application for the purposes of this review was received on February 20, 2012. Additional information was received on June 26, 2012. Additional information was received on June 29, and July 3, 2012.

Conclusion

The operation of this stationary aluminum foundry melting only clean charge shall be subject to the conditions of the attached FESOP Renewal No. 069-31508-00048.

IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Jack Harmon at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 233-4228 or toll free at 1-800-451-6027 extension 3-4228.
- (b) A copy of the findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>

- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

**Appendix A: Emission Calculations
Emissions Summary**

Company Name: General Aluminum Manufacturing
 Address: 1345 Henry Street, Huntington, Indiana 46750
 Permit Number: F069-31508-00048
 Plt ID: 069-00048
 Reviewer: Jack Harmon
 Date: 2012

UNLIMITED POTENTIAL TO EMIT IN TONS PER YEAR (CRITERIA POLLUTANTS)

Process	PM	PM10	PM2.5	SO ₂	Nox	VOC	CO	GHG, as CO ₂ e	Total HAPs	Worst HAP	HAP
Reverberatory and Dry Hearth Furnaces (Process Emissions)	25.30	25.30	25.30	0.46	0.00	3.22	0.00	0.00	0.00	0.00	N/A
Natural Gas Combustion	0.49	1.98	1.98	0.16	26.02	1.43	21.86	31417.90	0.49	0.47	Hexane
Pouring/Casting	0.34	0.34	0.34	0.46	0.23	3.22	0.00	0.00	0.00	0.00	N/A
Lost Foam Casting Operation *	0.00	0.00	0.00	0.00	0.00	51.25	0.00	0.00	51.25	51.25	Styrene
Grinding/Cleaning/Finishing	7.08	0.02	0.02	0.00	0.00	0.00	0.00	0.0	0.09	0.04	Manganese
Sand Handling	7.51	1.13	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A
Core Machines	25.30	25.30	25.30	0.00	0.00	3.22	0.00	0.00	1.30	0.85	Dimethylphthalate
Fugitive Dust Sources (Paved Roads)	0.37	0.07	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A
Total Potential to Emit	66.40	54.15	54.09	1.08	26.25	62.34	21.86	31417.90	53.13	51.25	Styrene

LIMITED EMISSIONS IN TONS PER YEAR (CRITERIA POLLUTANTS)

Process	PM	PM10	PM2.5	SO ₂	Nox	VOC	CO	GHG, as CO ₂ e	Total HAPs	Worst HAP	HAP
Reverberatory and Dry Hearth Furnaces (Process Emissions)	25.30	25.30	25.30	0.46	0.00	3.22	0.00	0.00	0.00	0.00	N/A
Natural Gas Combustion	0.49	1.98	1.98	0.16	26.02	1.43	21.86	31,417.90	0.49	0.47	Hexane
Pouring/Casting	0.34	0.34	0.34	0.46	0.23	3.22	0.00	0.00	0.00	0.00	N/A
Lost Foam Casting Operation *	0.00	0.00	0.00	0.00	0.00	9.90	0.00	0.00	9.90	9.90	Styrene
Grinding/Cleaning/Finishing	7.08	0.02	0.02	0.00	0.00	0.00	0.00	0.0	0.09	0.04	Manganese
Sand Handling	7.51	1.13	1.13	0.00	0.00	0.00	0.00	0.0	0.00	0.00	N/A
Core Machines	25.30	25.30	25.30	0.00	0.00	3.22	0.00	0.00	1.30	0.85	Dimethylphthalate
Fugitive Dust Sources (Paved Roads)	0.37	0.07	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A
TOTAL Emissions After Issuance	66.40	54.15	54.09	1.08	26.25	20.99	21.86	31,417.90	11.78	9.90	Styrene

* All VOCs are HAPs.

Appendix A: Emission Calculations
Secondary Metal Production: Aluminum Furnaces

Company Name: General Aluminum Manufacturing
 Address: 1345 Henry Street, Huntington, Indiana 46750
 Permit Number: 069-31508-00048
 Plt ID: 069-00048
 Reviewer: Jack Harmon
 Date: 2012

Furnace Process Emissions (Metal and Flux)

	Maximum Throughput*		Maximum Throughput			
	(lbs/hr)		(tons/hr)			
	10,504		5.25			
Emission Factor (lbs/ton metal produced)						
	PM **	PM10/PM2.5	SOx ***	Nox***	VOC ***	CO
	1.10	1.10	0.02	0.01	0.14	--
Potential to Emit (tons/yr)						
	PM	PM10/PM2.5	SOx	NOx	VOC	CO
PTE (lbs/hr)	5.8	5.8	0.11	0.05	0.74	--
PTE (lbs/day)	139	139	2.52	1.26	17.6	--
PTE (tons/yr)	25.30	25.30	0.46	0.23	3.22	--

Two types of flux are used in each furnace. Only clean charge is used in the furnaces.

*Last page of this document shows the detail of each flux maximum usage for each furnace, and the metal throughput for each furnace.

** PM/PM10 emission factor of 1.1 lb/ton is for furnaces with clean metal charge from Vol. 1 Section 11.3 (1991 Edition) by STAPPA/ALAPCO.

*** Emission factors are from FIRE version 6.24 (SCC#s 3-04-001-14 Aluminum Pouring and Casting).

Methodology

PTE (lbs/hr) = Maximum Throughput (lbs metal/hr) x 1/2000 (ton metal/lbs metal) x Emission Factor (lbs/ton metal)

PTE (lbs/day) = Maximum Throughput (lbs metal/hr) x 1/2000 (ton metal/lbs metal) x Emission Factor (lbs/ton metal) x 24 (hrs/day)

PTE (tons/yr) = Maximum Throughput (lbs metal/hr) x 1/2000 (ton metal/lbs metal) x Emission Factor (lbs/ton metal) x 8760 (hrs/yr) x 1/2000 (ton/lbs)

Appendix A: Emissions Calculations
Production Limited, Natural Gas Combustion

Company Name: General Aluminum Manufacturing
 Address: 1345 Henry Street, Huntington, Indiana 46750
 Permit Number: 069-31508-00048
 Pit ID: 069-00048
 Reviewer: Jack Harmon
 Date: 2012

E/U Category	MMBtu/hr
Furnaces	48.55
Core machines	2.67
Boilers	0.732
Aging Ovens	1.20
Other Nat Gas Units	7.45
TOTAL	60.602

Total Heat Input Capacity
MMBtu/hr
60.602

Total Potential Throughput
MMSCF/yr
520.46

Total Natural Gas Combustion - Entire Source (see Emission Unit Listing on last page for detailed listing)

Emission Factors (lb/MMSCF)	PM**	PM10**	SO ₂	NOx ***	VOC	CO
Potential to Emit (tons/yr)	0.49	1.98	0.16	26.02	1.43	21.86

Emission factors from AP-42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (July, 1998).

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

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

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMSCF = 1,000,000 Standard Cubic Feet of Gas

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) = Total Potential Throughput (MMSCF/yr) x Emission Factor (lbs/MMSCF) x 1/2,000 (ton/lbs)

Emission Factor (lb/MMCF)	HAPs - Organics					Totals
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	
Potential to Emit (tons/yr)	5.46E-04	3.12E-04	1.95E-02	4.68E-01	8.85E-04	4.90E-01

Emission Factor (lb/MMCF)	HAPs - Metals					Totals
	Lead	Cadmium	Chromium	Manganese	Nickel	
Potential to Emit (tons/yr)	1.30E-04	2.86E-04	3.64E-04	9.89E-05	5.46E-04	1.43E-03

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 Totals 4.91E-01

Methodology

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

PTE (tons/yr) = Total Potential Throughput (MMCF/yr) x Emission Factor (lbs/MMCF) x 1/2,000 (ton/lbs)

Emission Factor in lb/MMcf	Greenhouse Gas		
	CO ₂	CH ₄	N ₂ O
Potential Emission in tons/yr	31,228	0.6	0.6
Summed Potential Emissions in tons/yr	31,229		
CO ₂ e Total in tons/yr	31,418		

The N₂O Emission Factor for uncontrolled is 2.2. The N₂O Emission Factor for low Nox burner is 0.64.

Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.

Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

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

CO₂e (tons/yr) = CO₂ Potential Emission ton/yr x CO₂ GWP (1) + CH₄ Potential Emission ton/yr x CH₄ GWP (21) + N₂O Potential Emission ton/yr x N₂O GWP (310).

Appendix A: Emission Calculations
Secondary Metal Production: Aluminum Pouring/Casting

Company Name: General Aluminum Manufacturing
 Address: 1345 Henry Street, Huntington, Indiana 46750
 Permit Number: 069-31508-00048
 Plt ID: 069-00048
 Reviewer: Jack Harmon
 Date: 2012

Maximum Throughput
(lbs/hr)
10,500

Maximum Throughput
(tons/hr)
5.25

	Emission Factor (lbs/ton metal poured)					
	PM *	PM10 *	SOx **	NOx **	VOC **	CO ***
		0.015	0.015	0.02	0.01	0.14
	Potential to Emit (tons/yr)					
	PM *	PM10 *	SOx **	NOx **	VOC **	CO
	PTE (lbs/hr)	0.08	0.08	0.11	0.05	0.74
PTE (lbs/day)	1.89	1.89	2.52	1.26	17.6	--
PTE (tons/yr)	0.34	0.34	0.46	0.23	3.22	--

* Emission factors are from FIRE version 6.24

** Emission Factors are from FIRE version 6.24 (SCC# 3-04-001-14) for aluminum pouring and casting.

*** Emission Factors referenced in the August 11, 2006 memo from IDEM to Indiana Cast Metals Association were developed for pouring/casting operations in iron foundries where metal is poured into molds and cores made from sand and binder chemicals. Permanent Mold casting has less available carbon. This determination was made during the initial FESOP permit for this source, number F06-19499-00048, issued November 30, 2007. Pouring and casting operations are permanent and semi-permanent mold systems that do not require sand.

Methodology

PTE (lbs/hr) = Maximum Throughput (lbs metal/hr) x 1/2000 (ton metal/lbs metal) x Emission Factor (lbs/ton metal)

PTE (lbs/day) = Maximum Throughput (lbs metal/hr) x 1/2000 (ton metal/lbs metal) x Emission Factor (lbs/ton metal) x 24 (hrs/day)

PTE (tons/yr) = Maximum Throughput (lbs metal/hr) x 1/2000 (ton metal/lbs metal) x Emission Factor (lbs/ton metal) x 8760 (hrs/yr) x 1/2000 (ton/lbs)

**Appendix A: Emission Calculations
VOC and HAP Emissions from Lost Foam**

Company Name: General Aluminum Manufacturing
 Address: 1345 Henry Street, Huntington, Indiana 46750
 Permit Number: 069-31508-00048
 Plt ID: 069-00048
 Reviewer: Jack Harmon
 Date: 2012

	Weight of Castings Using "Lost Foam" (lbs/yr)	Lost Foam		VOC Emissions		HAPs (Styrene) Emissions	
		Usage of "Lost Foam"/casting	Usage of "Lost Foam" per year (lbs/yr)	(tons/yr)	(lbs/yr)	(tons/yr)	(lbs/yr)
Unlimited Potential (Based on Maximum process capacity)	546,645	0.1875	102,496	51.2	102,496	51.2	102,496
Limited PTE *	105,575	0.1875	19,795	9.9	19,795	9.9	19,795

Potential to emit is based on the production capacity for the lost foam operation of castings produced and maximum lost foam usage, provided by source. VOC and HAP emissions from the lost foam process are assumed to be 100% emission rate and 100% VOC and HAPs (Styrene); therefore, usage = emissions, and VOC = HAPs. Other pollutants in the Lost Foam molding process are accounted for in the pouring calculations and sand handling calculations.
 *The usage limit of lost foam will limit single HAPs to less than 10 tons per year, and render 326 IAC 2-2 not applicable, and will limit VOC emissions to less than 25 tons per year and comply with the BACT under 326 IAC 8-1-6, established in FESOP No. 069-19499-00048, issued November 30, 2007 and maintained in this renewal.

Methodology

Lost foam material usage (lb/yr) = lost foam castings maximum per year x lbs of lost foam per casting.
 PTE HAP (tons/yr) = Lost foam material Usage (lbs/) x Weight % HAP x 1 ton/2000 lbs.
 PTE VOC (tons/yr) = Maximum Throughput Rate (tons/hr) x 8760 (hrs/yr) x Weight % VOC

Appendix A: Emission Calculations
Secondary Metal Production: Aluminum Grinding, Cleaning and Sand Handling

Company Name: General Aluminum Manufacturing
 Address: 1345 Henry Street, Huntington, Indiana 46750
 Permit Number: 069-31508-00048
 Plt ID: 069-00048
 Reviewer: Jack Harmon
 Date: 2012

Process:	Maximum Throughput Rate	Pollutant	Emission Factor	PTE Before Controls	Type of control	Control Efficiency	PTE After Controls
	(tons metal/hr)		(lb/ton metal produced)	(ton/yr)		(%)	(ton/yr)
Grinding/Cleaning/Finishing	1.01	PM	1.60	7.08	none	0.00%	7.08
SCC# 3-04-003-40		PM-10/PM2.5	4.50E-03	0.02	none	0.00%	0.0199
		chromium	8.00E-04	0.0035	none	0.00%	0.0035
		cobalt	8.00E-04	0.0035	none	0.00%	0.0035
		nickel	8.80E-03	0.0389	none	0.00%	0.0389
		manganese	8.80E-03	0.0389	none	0.00%	0.0389
		lead	8.00E-04	0.0035	none	0.00%	0.0035
			Total HAPs		0.0885		

Process:	Maximum Throughput Rate	Pollutant	Emission Factor	PTE Before Controls	Type of control	Control Efficiency	PTE After Controls
	(tons sand/hr)		(lb/ton sand handled)	(ton/yr)		(%)	(ton/yr)
Sand Handling *	0.4765	PM	3.60	7.51	none	0.00%	7.51
SCC# 3-04-003-50		PM-10/PM2.5	0.54	1.13	none	0.00%	1.13

Throughput rate is different from melt throughput rate because grinding is the slowest process, and not all product produced goes through this process. Emission factors below are from the determination in FESOP F069-19499-00048, issued November 30, 2007, and have been continued in this renewal. Emission factors for PM from grinding/finishing operations are from a Bernard S. Gutow Article, Modern Castings, January 1972. Emission factors for PM10 grinding/finishing are from FIRE version 6.23 - Grey Iron Foundries, Castings Finishing (SCC 3-04-003-60). Emission factors for metal HAPs are from SPECIATE version 3.2 - Aluminum Foundry, Reverberatory Furnace (Profile # 42304). Emission factors for sand handling are from FIRE version 6.23 - Grey Iron Foundries, Sand Grinding/Handling (SCC 3-04-003-50). * Small amounts of sand are used in the lost foam operation. The sand is recycled within the process.

Methodology:

PTE (tons/yr) = Maximum Throughput (tons metal/hr) x Emission Factor (lbs/ton metal) x 8760 (hrs/yr) x 1/2000 (ton/lbs)
 HAP Emission Factor (lb/ton metal produced) = PM emission factor (lb/ton metal) x weight percent HAP (%)

**Appendix A: Emission Calculations
PM, VOC and HAP Emissions from Core Machines**

Company Name: General Aluminum Manufacturing
 Address: 1345 Henry Street, Huntington, Indiana 46750
 Permit Number: 069-31413-00048
 Plt ID: 069-00048
 Reviewer: Jack Harmon
 Date: 2012

Maximum Throughput of Metal (lbs/hr) 1.199	Maximum Throughput of Metal (tons/hr) 5.25
---	--

Note: See "Emissions Units Listing" on last page of these calculations for details.

	Emission Factor (lbs/ton metal poured)		
	PM *	PM10 *	PM2.5
	1.10	1.10	1.10
	Potential to Emit		
	PM *	PM10 *	PM2.5
lb/hr	5.78	5.78	5.78
tons/yr	25.30	25.30	25.30

* Emission factors are from AP-42, Table 12.10-7, Core Making/Baking for Gray Iron Foundries, and is in terms of metal throughput rates, and not core throughput rates. Core making process is an independent process in foundries, and the emissions from the core process is the same for aluminum as it is for gray iron. Therefore, these emission factors apply to this core process in this aluminum foundry. PM 10 and PM2.5 is presumed to be equal to PM. The source requested an emission factor based on an Ohio document, but IDEM, OAQ kept the original factor, which is more conservative.

Methodology

PTE (lbs/hr) = Maximum Throughput (lbs metal/hr) x 1/2000 (ton metal/lbs metal) x Emission Factor (lbs/ton metal)

PTE (tons/yr) = Maximum Throughput (lbs metal/hr) x 1/2000 (ton metal/lbs metal) x Emission Factor (lbs/ton metal) x 8760 (hrs/yr) x 1/2000 (ton/lbs)

Process: Core Department (Iron-surface coating chemicals used)	Maximum Throughput Rate (tons/hr)	Pollutant	Weight % Pollutant (lb/ton coating)	PTE VOC (ton/yr)
Instadraw 1700	0.000023	VOC	100%	0.20
Furan Binder 1000	0.00043	VOC	35.0%	1.32
MEKP 1400	0.00023	VOC	52.0%	1.05
Black Diamond	0.000075	VOC	100%	0.66
Total				3.22

Methodology:

PTE (tons/yr) = Max. Throughput Rate (tons/hr) x 8760 (hrs/yr) x Weight % pollutant

Note: There are no controls utilized in the core department.

Process: SO ₂ Core Forming Chemicals Used	HAP	Material Usage (lbs/hr)	Weight % HAP in Material	PTE HAP (lbs/hr)	PTE HAP (tons/yr)
Furan Binder 1000	Methanol	0.86	10.0%	0.09	0.38
	Formaldehyde	0.86	2.00%	0.02	0.08
MEKP 1400	Dimethylphthalate	0.46	42.0%	0.19	0.85
Total HAP Emissions				0.30	1.30

Methodology

PTE HAP (tons/yr) = Material Usage (lbs/hr) x 8760 (hrs/yr) x Weight % HAP x 1 ton/2000 lbs.

PTE VOC (tons/yr) = Maximum Throughput Rate (tons/hr) x 8760 (hrs/yr) x Weight % VOC

**Appendix A: Emission Calculations
Fugitive Dust Emissions - Paved Roads**

Company Name: General Aluminum Manufacturing
Address: 1345 Henry Street, Huntington, Indiana 46750
Permit Number: 069-31413-00048
Plt ID: 069-00048
Reviewer: Jack Harmon
Date: 2012

Paved Roads at Industrial Site

The following calculations determine the amount of emissions created by paved roads, based on 8,760 hours of use and AP-42, Ch 13.2.1 (1/2011).

Vehicle Information (provided by source)

Type	Maximum number of vehicles per day	Number of one-way trips per day per vehicle	Maximum trips per day (trip/day)	Maximum Weight Loaded (tons/trip)	Total Weight driven per day (ton/day)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/day)	Maximum one-way miles (miles/yr)
Employee (Parking Lot)	20.0	1.0	20.0	1.8	36.0	232.32	0.044	0.9	321.2
Trucks to/From Die Shop	1.0	1.0	1.0	40.0	40.0	84.48	0.016	0.0	5.8
Trucks to/From Foundry	10.0	1.0	10.0	40.0	400.0	31.68	0.006	0.1	21.9
Trucks To/From Machining	5.0	1.0	5.0	40.0	200.0	168.96	0.032	0.2	58.4
Fork Trucks Between Foundry and Machining	10.0	1.0	10.0	4.0	40.0	300.96	0.057	0.6	208.1
Light Duty Vans (Delivery to Foundry)	4.0	1.0	4.0	4.0	16.0	31.68	0.006	0.0	8.8
Totals			50.0		732.0			1.7	624.2

Average Vehicle Weight Per Trip = 14.6 tons/trip
 Average Miles Per Trip = 0.03 miles/trip

Unmitigated Emission Factor, $E_f = [k * (sL)^{0.91} * (W)^{1.02}]$ (Equation 1 from AP-42 13.2.1)

	PM	PM10	PM2.5	
where k =	0.011	0.0022	0.00054	lb/VMT = particle size multiplier (AP-42 Table 13.2.1-1)
W =	14.6	14.6	14.6	tons = average vehicle weight (provided by source)
sL =	9.7	9.7	9.7	g/m ² = silt loading value for paved roads at iron and steel production facilities - Table 13.2.1-3

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, $E_{ext} = E_f * [1 - (p/4N)]$ (Equation 2 from AP-42 13.2.1)

Mitigated Emission Factor, $E_{ext} = E_f * [1 - (p/4N)]$
 where p = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)
 N = 365 days per year

	PM	PM10	PM2.5	
Unmitigated Emission Factor, $E_f =$	1.343	0.269	0.0659	lb/mile
Mitigated Emission Factor, $E_{ext} =$	1.228	0.246	0.0603	lb/mile
Dust Control Efficiency =	80%	80%	80%	Control from speed limit reduction (RACM, Table 2.1.1-3)

Process	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Vehicle (entering plant) (one-way trip)	0.22	0.04	0.01	0.20	0.04	0.01	0.04	0.01	0.00
Vehicle (leaving plant) (one-way trip)	0.04	0.01	0.00	0.04	0.01	0.00	0.01	0.00	0.00
	0.14	0.03	0.01	0.13	0.03	0.01	0.03	0.01	0.00
	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
Totals	0.40	0.08	0.02	0.37	0.07	0.02	0.07	0.01	0.00

Methodology

Total Weight driven per day (ton/day) = [Maximum Weight Loaded (tons/trip)] * [Maximum trips per day (trip/day)]
 Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip)] / [5280 ft/mile]
 Maximum one-way miles (miles/day) = [Maximum trips per year (trip/day)] * [Maximum one-way distance (mi/trip)]
 Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per day (ton/day)] / SUM[Maximum trips per day (trip/day)]
 Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/day)] / SUM[Maximum trips per year (trip/day)]
 Unmitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] * [Unmitigated Emission Factor (lb/mile)] * (ton/2000 lbs)
 Mitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] * [Mitigated Emission Factor (lb/mile)] * (ton/2000 lbs)
 Controlled PTE (tons/yr) = [Mitigated PTE (tons/yr)] * [1 - Dust Control Efficiency]

Abbreviations

PM = Particulate Matter
 PM10 = Particulate Matter (<10 um)
 PM2.5 = Particle Matter (<2.5 um)
 PTE = Potential to Emit

Appendix A: Emissions Calculations

Emission Unit Listing

(For Reference Detail Only)

Company Name: General Aluminum Manufacturing Company
Address City IN Zip: 1345 Henry Street, Huntington, Indiana, 46750
Permit Number: 069-31508-00048
Pit ID: 069-00048
Reviewer: Jack Harmon
Date: 2012

Furnaces

Furnace No.	MMBtu/hr	Capacity (tph)	Capacity (lb/hr)
#1	5.00	0.75	1500
#2	5.40	0.75	1500
#4	3.20	0.5	1000
#6	4.60	0.5	1000
#7	4.30	0.5	1000
#8	3.90	0.5	1000
#9	6.25	0.5	1000
#10	7.95	0.5	1000
DHF#14	7.95	0.75	1500
TOTAL	48.55	5.25	10500.00

Core Machines

Machines No.	MMBtu/hr	Capacity (tph)
Dependable 600 #1	0.38	3.55
Dependable 600 #2	0.38	
Dependable 400 #1	0.27	
Dependable 400 #2	0.27	
U360	1.00	
Redford	0.37	
TOTAL	2.67	3.55

Boilers

Boilers No.	MMBtu/hr	Date of Construction
#1	0.244	1985
#2	0.244	1985
#3	0.244	1985
Total	0.732	

Other Natural Gas Units

Units No.	MMBtu/hr each	No. Units	Total MMBtu/hr
Torches	0.3	15	4.50
Space Heaters	0.05	56	2.80
Cafeteria Heater	0.075	1	0.075
Office Heater	0.075	1	0.075
TOTAL			7.45

Furnaces Throughput Capacity

Furnaces No	Metal Capacity (lb/hr)	Wall Flux Capacity (lb/hr)	Drossing Flux Capacity (lb/hr)	Total Capacity (lb/hr)	Total Capacity (tph)
#1	1500.00	0.21	0.21	1500.42	0.75021
#2	1500.00	0.21	0.21	1500.42	0.75021
#4	1000.00	0.21	0.21	1000.42	0.50021
#6	1000.00	0.21	0.21	1000.42	0.50021
#7	1000.00	0.21	0.21	1000.42	0.50021
#8	1000.00	0.21	0.21	1000.42	0.50021
#9	1000.00	0.21	0.21	1000.42	0.50021
#10	1000.00	0.21	0.21	1000.42	0.50021
DHF#14	1500.00	0.21	0.21	1500.42	0.75021
TOTAL	10500.00	1.89	1.89	10503.78	5.25

Flux usage is 150 lbs/month each flux type. 150 x 12 mos = 1800 lb/yr / 8760 = 0.21 lb/hr each flux

Aging Ovens

Ovens No.	MMBtu/hr each	No. Units	Total MMBtu/hr
Aging Oven #5	0.6	1	0.60
Aging Oven #6	0.6	1	0.60
TOTAL			1.20



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: Gary Applegate
General Aluminum Manufacturing Company
13663 Short Rd
Wapakoneta, OH 45895

DATE: September 6, 2012

FROM: Matt Stuckey, Branch Chief
Permits Branch
Office of Air Quality

SUBJECT: Final Decision
FESOP
069-31508-00048

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

Final Applicant Cover letter.dot 11/30/07



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

September 6, 2012

TO: Huntington Twp Public Library

From: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Subject: **Important Information for Display Regarding a Final Determination**

Applicant Name: General Aluminum Manufacturing Company
Permit Number: 069-31508-00048

You previously received information to make available to the public during the public comment period of a draft permit. Enclosed is a copy of the final decision and supporting materials for the same project. Please place the enclosed information along with the information you previously received. To ensure that your patrons have ample opportunity to review the enclosed permit, **we ask that you retain this document for at least 60 days.**

The applicant is responsible for placing a copy of the application in your library. If the permit application is not on file, or if you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185.

Enclosures
Final Library.dot 11/30/07

Mail Code 61-53

IDEM Staff	CDENNY 09/06/2012 General Aluminum Manufacturing Company 069-31508-00048 (final)		AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING	
Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: CERTIFICATE OF MAILING ONLY	

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handling Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee
											Remarks
1		Gary Applegate General Aluminum Manufacturing Company 13663 Short Rd Wapakoneta OH 45895 (Source CAATS)									
2		Gary Barlow GM General Aluminum Manufacturing Company 1345 Henry St, PO Box 709 Huntington IN 46705-0709 (RO CAATS)									
3		Huntington Town Council and Mayors Office 300 Cherry St. Huntington IN 46750 (Local Official)									
4		Huntington County Board of Commissioners 354 N. Jefferson St. Suite 201 Huntington IN 46750 (Local Official)									
5		Huntington City Twp Public Library 200 W Market Huntington IN 46750-2655 (Library)									
6		Frederick & Iva Moore 6019 W 650 N Ligonier IN 46767 (Affected Party)									
7		Ms. Mary Shipley 10968 E 100 S Marion IN 46953 (Affected Party)									
8		Huntington County Health Department 354 N. Jefferson Street, Suite 201 Huntington IN 46750 (Health Department)									
9		Melvin & Deborah Gillespie 5616 N 200 E Huntington IN 46750 (Affected Party)									
10		Michael Blankestyn TRC Environmental Corporation 670 Morrison Raod Suite 220 Gahanna OH 43230 (Consultant)									
11											
12											
13											
14											
15											

Total number of pieces Listed by Sender	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is \$50,000 per piece subject to a limit of \$50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is \$500. The maximum indemnity payable is \$25,000 for registered mail, sent with optional postal insurance. See Domestic Mail Manual R900, S913, and S921 for limitations of coverage on inured and COD mail. See International Mail Manual for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.
---	--	--	--