



## INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

*Michael R. Pence*  
Governor

*Thomas W. Easterly*  
Commissioner

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

TO: Interested Parties / Applicant

DATE: June 4, 2013

RE: Muncie Casting Corporation / 035 - 32941 - 00061

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



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Aaron Vest  
Muncie Casting Corporation  
1406 E 18th St  
Muncie, IN 47302

June 4, 2013

Re: F035-32941-00061  
First Significant Revision to  
F035-29148-00061

Dear Mr. Vest:

Muncie Casting Corporation was issued a Federally Enforceable State Operating Permit (FESOP) Second Renewal No. F035-29148-00061 on February 8, 2011 for a stationary aluminum and gray and ductile iron foundry located at 1406 East 18th Street, Muncie, IN 47302. On March 12, 2013, the Office of Air Quality (OAQ) received an application from the source requesting to construct and operate one (1) new GOFF shotblast machine for cleaning metal castings into a new expansion onto the existing Iron Foundry building, as well as make other administrative changes to the permit. The attached Technical Support Document (TSD) provides additional explanation of the changes to the source/permit. Pursuant to the provisions of 326 IAC 2-8-11.1, these changes to the permit are required to be reviewed in accordance with the Significant Permit Revision (SPR) procedures of 326 IAC 2-8-11.1(f). Pursuant to the provisions of 326 IAC 2-8-11.1, a significant permit revision to this permit is hereby approved as described in the attached Technical Support Document (TSD).

The following construction conditions are applicable to the proposed project:

1. General Construction Conditions  
The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).
2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
3. Effective Date of the Permit  
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.
4. Pursuant to 326 IAC 2-1.1-9 (Revocation), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

Pursuant to 326 IAC 2-8-11.1, this permit shall be revised by incorporating the significant permit revision into the permit. All other conditions of the permit shall remain unchanged and in effect. Attached

Muncie Casting Corporation  
Muncie, Indiana  
Permit Reviewer: Sarah Street

Page 2 of 2  
FESOP SPR No. F035-32941-00061

please find the entire revised permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5.  
If you have any questions on this matter, please contact Sarah Street, of my staff, at 317-232-8427 or 1-800-451-6027, and ask for extension 2-8427.

Sincerely,

 for IC

Iryn Calilung, Section Chief  
Permits Branch  
Office of Air Quality

Attachments: Technical Support Document and revised permit

IC/ss

cc: File - Delaware County  
Delaware County Health Department  
U.S. EPA, Region V  
Compliance and Enforcement Branch



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# FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) RENEWAL OFFICE OF AIR QUALITY

**Muncie Casting Corporation**  
**1406 East 18<sup>th</sup> Street**  
**Muncie, Indiana 47302**

(herein identified 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 provision of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; and 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.

Operation Permit No.: F035-29148-00061

*Original signed by:*  
Iryn Calilung, Section Chief  
Permits Branch  
Office of Air Quality

Issuance Date: February 8, 2011

Expiration Date: February 8, 2021

Significant Permit Revision No.: F035-32941-00061

Issued by:

*[Signature]* for IC  
Iryn Calilung, Section Chief  
Permits Branch  
Office of Air Quality

Issuance Date:

June 4, 2013

Expiration Date: February 8, 2021

## TABLE OF CONTENTS

<b>SECTION A</b>	<b>SOURCE SUMMARY .....</b>	<b>5</b>
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>SECTION B</b>	<b>GENERAL CONDITIONS .....</b>	<b>10</b>
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]	
B.3	Term of Conditions [326 IAC 2-1-1-9.5]	
B.4	Enforceability [326 IAC 2-8-6]	
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 Revision Requirement [326 IAC 2-8-11.1]	
B.20	Inspection and Entry [326 IAC 2-8-5(a)(2)] [IC13-14-2-2] [IC 13-17-3-2] [IC13-30-3-1]	
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]	
<b>SECTION C</b>	<b>SOURCE OPERATION CONDITIONS .....</b>	<b>19</b>
	<b>Emission Limitations and Standards [326 IAC 2-8-4(1)]</b>	
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(3)]	
C.6	Fugitive Dust Emissions [326 IAC 6-4]	
C.7	Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61 Subpart M]	
	<b>Testing Requirements [326 IAC 2-8-4(3)]</b>	
C.8	Performance Testing [326 IAC 3-6]	
	<b>Compliance Requirements [326 IAC 2-1.1-11]</b>	
C.9	Compliance Requirements [326 IAC 2-1.1-11]	
	<b>Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]</b>	
C.10	Compliance Monitoring [326 IAC 2-8-4(3)] [326 IAC 2-8-5(a)(1)]	
C.11	Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)] [326 IAC 2-8-5(1)]	
	<b>Corrective Actions and Response Steps [326 IAC 2-8-4] [326 IAC 2-8-5]</b>	

- C.12 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]
- 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

**SECTION D.1 FACILITY OPERATION CONDITIONS**

**Iron Foundry ..... 26**

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

- D.1.1 PM [326 IAC 2-2]
- D.1.2 PM<sub>10</sub>, PM<sub>2.5</sub> and CO [326 IAC 2-8-4] [326 IAC 2-2]
- D.1.3 Particulate Matter (PM) [326 IAC 6-3-2]
- D.1.4 Furnace Operations

**Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]**

- D.1.5 Record Keeping Requirements
- D.1.6 Reporting Requirements

**SECTION D.2 FACILITY OPERATION CONDITIONS**

**Aluminum Foundry ..... 30**

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

- D.2.1 PM [326 IAC 2-2]
- D.2.2 PM<sub>10</sub>, PM<sub>2.5</sub> and CO [326 IAC 2-8-4] [326 IAC 2-2]
- D.2.3 Particulate Matter (PM) [326 IAC 6-3-2]
- D.2.4 Material Usage [40 CFR 63, Subpart RRR]

**Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]**

- D.2.5 Record Keeping Requirements
- D.2.6 Reporting Requirements

**SECTION D.3 FACILITY OPERATION CONDITIONS**

**Sand Handling Operations ..... 34**

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

- D.3.1 PM [326 IAC 2-2]
- D.3.2 PM<sub>10</sub>, PM<sub>2.5</sub> and CO [326 IAC 2-8-4] [326 IAC 2-2]
- D.3.3 Particulate Matter (PM) [326 IAC 6-3-2]
- D.3.4 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

**Compliance Determination Requirements**

- D.3.5 Particulate Control

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

- D.3.6 Visible Emissions Notations
- D.3.7 Parametric Monitoring
- D.3.8 Broken or Failed Bag Detection

**Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]**

D.3.9 Record Keeping Requirements

D.3.10 Reporting Requirements

**SECTION D.4 FACILITY OPERATION CONDITIONS**

**Cleaning and Finishing Operations ..... 39**

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

D.4.1 PM [326 IAC 2-2]

D.4.2 PM<sub>10</sub>, PM<sub>2.5</sub> [326 IAC 2-8-4] [326 IAC 2-2]

D.4.3 Particulate Matter (PM) [326 IAC 6-3-2]

D.4.4 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

**Compliance Determination Requirements**

D.4.5 Particulate Control

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

D.4.6 Visible Emissions Notations

D.4.7 Parametric Monitoring

D.4.8 Broken or Failed Bag Detection

**Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]**

D.4.9 Record Keeping Requirements

D.4.10 Reporting Requirements

**SECTION D.5 FACILITY OPERATION CONDITIONS**

**Core and Mold Making ..... 43**

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

D.5.1 Volatile Organic Compounds [326 IAC 8-1-6]

**SECTION D.6 FACILITY OPERATION CONDITIONS**

**Additional Operations ..... 44**

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

D.6.1 Volatile Organic Compounds [326 IAC 8-1-6]

**SECTION D.7 FACILITY OPERATION CONDITIONS**

**Insignificant Activities ..... 45**

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

D.7.1 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

D.7.2 Particulate Matter (PM) [325 IAC 6-3-2]

D.7.3 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

**SECTION E.1 FACILITY OPERATION CONDITIONS ..... 48**

**National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements  
40 CFR 63]**

E.1.1 General Provisions Relating to NESHAP Subpart ZZZZZ [40 CFR Part 63, Subpart A]

E.1.2 NESHAP for Iron and Steel Foundries Area Sources [40 CFR Part 63, Subpart ZZZZZ]

**Certification Form ..... 49**

**Emergency Occurrence Form ..... 50**

**Quarterly Report Form ..... 52**

**Quarterly Deviation and Compliance Monitoring Report Form ..... 57**

**Attachment A - National Emissions Standards for Hazardous Air Pollutants for Iron and Steel  
Foundries Area Sources - Subpart ZZZZZ**

## 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 and gray and ductile iron foundry.

Source Address:	1406 East 18 <sup>th</sup> Street, Muncie, Indiana 47302
General Source Phone:	765-288-2611
SIC Code:	3365 (Aluminum Foundries), 3321 (Gray and Ductile Iron Foundries)
County Location:	Delaware
Source Location Status:	Attainment for ozone under the 8-hour standard Attainment for all other criteria pollutants
Source Status:	Federally Enforceable State Operating Permit (FESOP) Minor Source, under PSD and Emission Offset Rules; Minor Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

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

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

#### **Iron Foundry**

- (a) One (1) charge handling operation, identified as EU1, installed in 1992, with a throughput capacity of 0.45 tons of iron per hour.
- (b) Two (2) electric melting furnaces, one labeled as the 1,000 pound furnace and one labeled as the 500 pound furnace and collectively identified as EU2, installed in 1992, and having a throughput capacity of 0.45 tons of iron per hour total limited by a single power supply.  
  
Under NESHAP ZZZZZ, the two (2) electric melt furnaces identified as EU2 is considered and affected facility.
- (c) One (1) magnesium treatment of ductile iron operation, identified as EU3, installed in 1992, with a throughput capacity of 0.09 tons of iron per hour. Magnesium treatment is only performed on ductile iron, which is a maximum of 20% of the total iron melted.
- (d) One (1) pouring and casting operation, identified as EU4, installed in 1992, with a throughput capacity of 0.45 tons of iron per hour.
- (e) One (1) casting and cooling operation, identified as EU5, installed in 1992, with a throughput capacity of 0.45 tons of iron castings per hour.
- (f) One (1) shakeout operation (physically located in the aluminum foundry), identified as EU6, installed in 1992, with a throughput capacity of 0.45 tons of iron castings per hour.

Exhaust fans #1, #2 and #3 are located above the pouring lines and furnaces in the Iron Foundry.



### **Aluminum Foundry**

- (g) Seven (7) electric melting furnaces, collectively identified as EU 7, consisting of the following:

- (1) Three (3) 2,300 pound furnaces, installed in 1992.
- (2) One (1) 700 pound furnace, installed in 1992.
- (3) Two (2) 2,300 pound furnaces, installed in 2003.
- (4) One (1) 2,300 pound furnace, installed in 2007.

The total throughput capacity of the seven (7) electric melting furnaces collectively identified as EU7 is 7.25 tons of aluminum per hour.

- (h) One (1) natural gas-fired melting furnace, (300 pound furnace) identified as EU8, rated at 1.0 million British thermal units per hour, installed in 1980, with a throughput capacity of 0.09 tons of aluminum per hour.
- (i) One (1) magnesium treatment in the aluminum foundry, identified as EU9, installed in 1992, with a throughput capacity of 1.45 tons of magnesium per hour, 6.24 tons of aluminum per hour. Magnesium treatment is only performed on a maximum of 85% of the total aluminum melted.
- (j) One (1) pouring and casting operation, identified as EU10, installed in 1980, with a throughput capacity of 7.34 tons of aluminum per hour.
- (k) One (1) casting and cooling operation, identified as EU11, installed in 1980, with a throughput capacity of 7.34 tons of aluminum per hour.
- (l) One (1) shakeout operation, identified as EU12, installed in 1980, with a throughput capacity of 7.34 tons of aluminum per hour.

Exhaust fans #5 through #8 are located above or near the cooling lines and the 700 pound and two (2) 2,300 pound furnaces in the Aluminum Foundry.

### **Sand Handling Operations**

NOTE: Emission units identified as EU13 and EU17 through EU21 are physically located in the aluminum foundry but the units are used for both the aluminum foundry and the iron foundry.

- (m) Enclosed Sand System, pneumatically conveyed, with a maximum throughput capacity of 236,520 tons/year of sand (using the combined maximum process capacity of the four sand mixers) and maximum throughput capacity of 61,320 tons/year (using the combined maximum process capacity of the mechanical and thermal sand reclamation units) for the sand reclamation process, consisting of the following units:
  - (1) Three (3) sand storage silos, one silo with a capacity of 10 tons and two silos with capacities of 40 tons each, equipped with bin-top filter banks and exhausting through Stacks #9, #10 and #11.
  - (2) One (1) Strong Scott sand mixer, identified as EU18, utilizing a phenolic urethane nobake binder system, installed in 1980, with a throughput capacity of 6.0 tons of sand per hour.
  - (3) One (1) Kloster sand mixer, identified as EU19, utilizing a phenolic urethane nobake binder system, installed in 1994, with a throughput capacity of 9.0 tons of sand per hour.

- (4) One (1) Palmer core mixer #1, identified as EU20, utilizing a phenolic urethane nobake binder system, installed in 1994, with a throughput capacity of 6.0 tons of sand per hour.
- (5) One (1) Palmer core mixer #2, identified as EU21, utilizing an acrylic-epoxy cold box binder system, installed in 1998, with a throughput capacity of 6.0 tons of sand per hour.
- (6) One (1) mechanical sand reclamation unit, identified as EU13, installed in 1991, with a throughput capacity of 6.0 tons of sand per hour.
- (7) One (1) thermal sand reclamation unit, identified as EU17, equipped with two (2) natural gas-fired burners, rated at 1.0 million British thermal units per hour each, equipped with a baghouse, installed in 1998, exhausted through Stack 12, with a throughput capacity of 1 ton of sand per hour.

### **Core and Mold Making Operations**

NOTE: Emission units identified as EU22 through EU24 are physically located in the aluminum foundry but the units are used for both the aluminum foundry and the iron foundry.

- (n) One (1) CB-22 core machine, identified as EU22, installed in 1998, with a throughput capacity of 0.5 tons of cores per hour using a phenolic urethane no-bake binder system. This unit is also equipped with a caustic soda scrubber which does not have to be operated at all times.
- (o) One (1) Dependable 420 core machine, identified as EU23, installed in 1998, with a throughput capacity of 0.5 tons of cores per hour using a phenolic urethane no-bake binder system. This unit is also equipped with a caustic soda scrubber which does not have to be operated at all times.
- (p) U-180 and Horizontal Bottom Blow core making operations collectively identified as EU24 include the following:
  - (1) One (1) U-180 core machine, installed in 1998, with a throughput capacity of 0.045 tons of cores per hour using a shell binder system.
  - (2) One (1) U-180 core machine, installed in 2004, with a throughput capacity of 0.045 tons of cores per hour using a shell binder system.
  - (3) One (1) U-180 core machine, installed in 2005, with a throughput capacity of 0.045 tons of cores per hour using a shell binder system.
  - (4) Two (2) Horizontal Bottom Blow core machines, installed in 2007, each with a maximum throughput capacity of 0.045 tons of cores per hour using a shell binder system.

### **Cleaning/Finishing Operations**

NOTE: Emission units identified as EU14 through EU16 and EU27 are physically located in the iron foundry but the units are used for both the aluminum foundry and the iron foundry.

- (q) One (1) GOFF steel shot blast machine, identified as EU14, equipped with a baghouse, installed in 1993, exhausted through Stack 4 or inside the building, with a throughput capacity of 4.67 tons of aluminum or iron casting per hour.

- (r) One (1) GOFF steel shot blast machine, identified as EU27, approved for construction in 2013, with a maximum throughput capacity of 4.67 tons of aluminum or iron casting per hour, equipped with a baghouse for control, and exhausting to either Stack 13 or inside the building;
- (s) One (1) small aluminum shot blast machine identified as EU15, equipped with a Viking baghouse, installed in 1993, exhausted inside the building, with a throughput capacity of 0.70 tons of aluminum or iron castings per hour.
- (t) One (1) sand blaster machine, identified as EU16, equipped with a Blast-It-All baghouse, installed in 1980, exhausted inside the building, with a throughput capacity of 0.70 tons of aluminum or iron castings per hour.

#### **Miscellaneous Operations**

- (u) One (1) surface coating spray application process (in the mold and core making areas), identified as EU26, installed in 1980, with a throughput capacity of 8,637 pounds of coating materials per year.

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

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This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month.
- (b) The following VOC and HAP storage containers: storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons; vessels storing lubricating oil, hydraulic oils, machining oils, and machining fluids.
- (c) Refractory storage not requiring air pollution control equipment.
- (d) Equipment used exclusively for the following: Packaging lubricants and greases, filling drums, pails or other packaging containers with lubricating oils, waxes, and greases.
- (e) Application of oils, greases lubricants or other nonvolatile materials applied as temporary protective coatings.
- (f) Machining where an aqueous cutting coolant continuously floods the machining interface.
- (g) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6. Parts washer (covered cold cleaner), with a throughput capacity of 40 gallon [326 IAC 8-3]
- (h) Cleaners and solvents characterized as follows: having a vapor pressure equal to or less than 2 kiloPascals; 15 millimeters of mercury; or 0.3 pounds per square inch measured at 38EC (100EF) or; having a vapor pressure equal to or less than 0.7 kiloPascals; 5 millimeters of mercury; or 0.1 pounds per square inch measured at 20EC (68EF); the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months.
- (i) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, and welding equipment. [326 IAC 6-3-2]
- (j) Closed loop heating and cooling systems.

- (k) Any operation using aqueous solutions containing less than 1 percent by weight of VOCs excluding HAPs.
- (l) Water based adhesives that are less than or equal to 5 percent by volume of VOCs excluding HAPs.
- (m) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.
- (n) Paved and unpaved roads and parking lots with public access.
- (o) Grinding and machining operations controller with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4,000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations. [326 IAC 6-3-2]
- (p) Filter or coalescer media changeout.
- (q) Mold release agents using low volatile products (vapor pressure less than or equal to 2 kiloPascals measured at 38EC).
- (r) A laboratory as defined in 326 IAC 2-7-1(21)(D).
- (s) Other activities with insignificant thresholds:
  - (1) Two (2) electric heat treating machines;
  - (2) Woodworking activities in the pattern shop (sawing, cutting, routing and planing). [326 IAC 6-3-2]
- (t) Experimental sand and shot blasters for research and development.
- (u) One (1) large electric heat treat furnace, one (1) medium electric heat treat furnace, and one (1) small electric heat treat furnace, each with negligible emissions.
- (v) Four (4) core shooters, constructed in 2007, each with a maximum capacity of 100 pounds of shell sand per day, each with negligible emissions.

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

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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]

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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)]

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- (a) This permit, F035-29148-00061, 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]

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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]

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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)]

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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)]

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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)]

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- (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)]

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- (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)]**

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- (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)]**

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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)]**

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- (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.

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

- (a) All terms and conditions of permits established prior to F035-29148-00061 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.

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**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.

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**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)]**

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- (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]**

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- (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(c).
- (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]**

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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]**

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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]**

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- (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]**

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- (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]**

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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 CO<sub>2</sub> equivalent emissions (CO<sub>2</sub>e) 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 one hundred (100) 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]**

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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]**

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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]**

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

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- (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.8 Performance Testing [326 IAC 3-6]**

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- (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.9 Compliance Requirements [326 IAC 2-1.1-11]**

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

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

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- (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.12 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]**

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Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

- (a) The Permittee shall maintain the most recently submitted written emergency reduction plans (ERPs) consistent with safe operating procedures.
- (b) Upon direct notification by IDEM, OAQ that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

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

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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]**

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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.

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**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)]**

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**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]**

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- (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**

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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

## FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-8-4(10)]:

#### Iron Foundry

- (a) One (1) charge handling operation identified as EU1, installed in 1992, with a throughput capacity of 0.45 tons of iron per hour.
- (b) Two (2) electric melting furnaces, one labeled as the 1,000 pound furnace and one labeled as the 500 pound furnace and collectively identified as EU2, installed in 1992, and having a throughput capacity of 0.45 tons of iron per hour total limited by a single power supply.  
  
Under NESHAP ZZZZZ, the two (2) electric melt furnaces, identified as EU2, is considered an affected facility.
- (c) One (1) magnesium treatment of ductile iron operation identified as EU3, installed in 1992, with a throughput capacity of 0.09 tons of iron per hour. Magnesium treatment is only performed on ductile iron, which is a maximum of 20% of the total iron melted.
- (d) One (1) pouring/casting operation identified as EU4 installed in 1992, with a throughput capacity of 0.45 tons of iron per hour.
- (e) One (1) casting cooling operation identified as EU5 installed in 1992, with a throughput capacity of 0.45 tons of iron castings per hour.
- (f) One (1) shakeout operation (physically located in the aluminum foundry) identified as EU6, installed in 1992, with a throughput capacity of 0.45 tons of iron castings per hour.

#### Note

Exhaust fans #1, #2 and #3 are located above the pouring lines and furnaces in the Iron Foundry.

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

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

#### D.1.1 PM [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 not applicable, the throughput for the iron foundry shall be limited as follows:

- (a) The total throughput of iron to the iron foundry, including the iron charge handling operation (EU1), the two (2) electric melting furnaces (EU2), the iron pouring/casting operation (EU4), the iron casting cooling operation (EU5), and the iron shakeout operation (EU6) shall not exceed 1,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (b) The throughput of iron to the iron magnesium treatment operation (EU3) shall not exceed 200 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (c) PM emissions from the iron charge handling operation (EU1) shall not exceed 0.60 pound per ton of iron throughput.

- (d) PM emissions from each of the (2) electric melting furnaces (EU2) shall not exceed 0.45 pound per ton of iron throughput each.
- (e) PM emissions from the iron magnesium treatment operation (EU3) shall not exceed 1.80 pounds per ton of iron throughput.
- (f) PM emissions from the iron pouring/casting operation (EU4) shall not exceed 4.2 pounds per ton of iron throughput.
- (g) PM emissions from the iron casting cooling operation (EU5) shall not exceed 4.2 pounds per ton of iron throughput;
- (h) PM emissions from the iron shakeout operation (EU6) shall not exceed 3.2 pounds per ton of iron throughput;

Compliance with these limitations, combined with the limited potential to emit from other emission units at this source, shall limit the source-wide PTE of PM to less than 100 tons per twelve (12) consecutive month period and shall render the requirements of 326 IAC 2-2 and 326 IAC 2-7 not applicable.

D.1.2 PM<sub>10</sub>, PM<sub>2.5</sub>, and CO [326 IAC 2-8-4][326 IAC 2-2]

Pursuant to 326 IAC 2-8-4 and in order to render the requirements of 326 IAC 2-2 not applicable, the PM<sub>10</sub>, PM<sub>2.5</sub>, and CO emissions for the iron foundry shall be limited as follows:

- (a) The total throughput of iron to the iron foundry, including the iron charge handling operation (EU1), the two (2) electric melting furnaces (EU2), the iron pouring/casting operation (EU4), the iron casting cooling operation (EU5), and the iron shakeout operation (EU6) shall not exceed 1,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (b) The throughput of iron to the iron magnesium treatment operation (EU3) shall not exceed 200 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (c) PM<sub>10</sub> emissions from the iron charge handling operation (EU1) shall not exceed 0.36 pound per ton of iron throughput.
- (d) PM<sub>2.5</sub> emissions from the iron charge handling operation (EU1) shall not exceed 0.36 pound per ton of iron throughput.
- (e) PM<sub>10</sub> emissions from the one (1) electric melting furnace, identified as the 1000 pound furnace, and one of two furnaces which make up EU2, shall not exceed 0.43 pound per ton of iron throughput.
- (f) PM<sub>2.5</sub> emissions from the one (1) electric melting furnace, identified as the 1000 pound furnace, and one of two furnaces which make up EU2, shall not exceed 0.43 pound per ton of iron throughput.
- (g) PM<sub>10</sub> emissions from the one (1) electric melting furnace, identified as the 500 pound furnace and one of two furnaces which make up (EU2), shall not exceed 0.43 pound per ton of iron throughput.
- (h) PM<sub>2.5</sub> emissions from the one (1) electric melting furnace, identified as the 500 pound furnaces and one of two furnaces which make up (EU2), shall not exceed 0.43 pound per ton of iron throughput.
- (i) PM<sub>10</sub> emissions from the iron magnesium treatment operation (EU3) shall not exceed

1.80 pounds per ton of iron throughput.

- (j) PM<sub>2.5</sub> emissions from the iron magnesium treatment operation (EU3) shall not exceed 1.80 pounds per ton of iron throughput.
- (k) PM<sub>10</sub> emissions from the iron pouring/casting operation (EU4) shall not exceed 2.06 pound per ton of iron throughput.
- (l) PM<sub>2.5</sub> emissions from the iron pouring/casting operation (EU4) shall not exceed 2.06 pound per ton of iron.
- (m) PM<sub>10</sub> emissions from the iron casting cooling operation (EU5) shall not exceed 2.06 pound per ton of iron throughput.
- (n) PM<sub>2.5</sub> emissions from the iron casting cooling operation (EU5) shall not exceed 2.06 pound per ton of iron.
- (o) PM<sub>10</sub> emissions from the iron shakeout operation (EU6) shall not exceed 2.24 pounds per ton of iron throughput.
- (n) PM<sub>2.5</sub> emissions from the iron shakeout operation (EU6) shall not exceed 2.24 pounds per ton of iron throughput.
- (p) The CO emissions from the pouring/casting (EU4), iron casting cooling (EU5) and iron shakeout (EU6) operations in the iron foundry shall be limited to 7.0 pound per ton of iron throughput.

Compliance with these limits, combined with the limited PTE from all other emission units at this source, shall limit the source-wide total potential to emit of PM<sub>10</sub>, PM<sub>2.5</sub>, and CO to less than 100 tons per 12 consecutive month period and shall render 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (PSD) not applicable.

#### D.1.3 Furnace Operations

The two (2) electric melting furnaces, identified as EU2, shall each not exceed a melt throughput of 0.45 tons of iron per hour.

#### D.1.4 Particulate Matter (PM) [326 IAC 6-3-2]

- (a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rates from the facilities listed in this section shall not exceed the stated particulate emission rates listed in the following table:

Emission Unit	Process Weight Rate (tons per hour)	Allowable Particulate Emission Rate (pounds per hour)
Charge Handling EU1	0.45	2.40
Two (2) Electric Melting Furnaces (EU2)	0.45 total**	2.40 total**
Magnesium Treatment (EU3)	0.09	0.817
Pouring/Casting (EU4)	0.45	2.40
Casting/Cooling (EU5)	0.45	2.40
Shakeout (EU6)*	0.519	2.64

\*The process weight rates for the pouring/casting, casting cooling, and shakeout operations in the iron foundry include maximum metal and sand throughputs.

\*\* The two (2) iron melting furnaces cannot be operated simultaneously due to power supply limitations. The source has claimed that a major modification with a significant capital investment would be required in order to allow both furnaces to operate simultaneously.

(b) The pounds per hour limitations were calculated using 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:

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

### **Record Keeping and Reporting Requirement [326 IAC 2-8-4(3)] [326 IAC 2-8-16]**

#### **D.1.5 Record Keeping Requirements**

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- (a) To document the compliance status with Conditions D.1.1 and D.1.2, the Permittee shall maintain records of iron throughput as applicable for each of the facilities included in Conditions D.1.1 and D.1.2.
- (b) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

#### **D.1.6 Reporting Requirements**

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A quarterly summary of the information to document the compliance status with Conditions D.1.1 and D.1.2 shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report 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).



## SECTION D.2

## FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-8-4(10)]:

#### Aluminum Foundry

(g) Seven (7) electric melting furnaces, collectively identified as EU7, consisting of the following:

- (1) Three (3) 2,300-pound furnaces, installed in 1992
- (2) One (1) 700 pound furnace, installed in 1992
- (3) Two (2) 2,300-pound furnaces, installed in 2003
- (4) One (1) 2,300 pound furnace, installed in 2007

The total throughput capacity of the seven (7) electric arc melting furnaces collectively identified as EU-7 is 7.25 tons of aluminum per hour.

(h) One (1) natural gas-fired melting furnace, (300 pound furnace), identified as EU8, installed in 1980 and rated at 1.0 million British thermal units per hour with a throughput capacity of 0.09 tons of aluminum per hour.

(i) One (1) magnesium treatment operation in the aluminum foundry, identified as EU9, installed in 1992, with a throughput capacity of 1.45 tons of magnesium per hour, 6.24 tons of aluminum per hour. Magnesium treatment is only performed on a maximum of 85% of the total aluminum melted.

(j) One (1) pouring/casting operation identified as EU10, installed in 1980, with a throughput capacity of 7.34 tons of aluminum per hour.

(k) One (1) casting cooling operation identified as EU11, installed in 1980, with a throughput capacity of 7.34 tons of aluminum per hour.

(l) One (1) shakeout operation identified as EU12, installed in 1980, with a throughput capacity of 7.34 tons of aluminum per hour.

Note exhaust fans #5 through #8 are located above or near the cooling lines and the 700 Lb and two (2) 2,300 Lb furnaces in the Aluminum Foundry.

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

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

#### D.2.1 PM [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 not applicable, the throughput for the aluminum foundry shall be limited as follows:

- (a) The total throughput of aluminum to the aluminum foundry, including the melting furnaces (EU7) and (EU8), the aluminum pouring/casting operation (EU10), the aluminum casting cooling operation (EU11), and the aluminum shakeout operation (EU12), shall not exceed 12,042 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (b) The throughput of aluminum to the aluminum magnesium treatment operation (EU9) shall not exceed 10,236 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

- (c) PM emissions from the seven (7) melting furnaces (EU7) and the one (1) melting furnace (EU8) shall not exceed 1.90 pounds per ton of aluminum throughput;
- (d) PM emissions from the aluminum magnesium treatment operation (EU9) shall not exceed 1.80 pounds per ton of aluminum throughput.
- (e) PM emissions from the aluminum pouring/casting operation (EU10) shall not exceed 4.2 pounds per ton of aluminum throughput.
- (f) PM emissions from the aluminum casting cooling operation (EU11) shall not exceed 4.2 pounds per ton of aluminum throughput.
- (g) PM emissions from the aluminum shakeout operation (EU12) shall not exceed 3.2 pounds per ton of aluminum throughput.

Compliance with these limits, combined with the limited PTE from all other emission units at this source, shall limit the source-wide total potential to emit of PM to less than 100 tons per 12 consecutive month period and shall render 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (PSD) not applicable.

#### D.2.2 PM<sub>10</sub>, PM<sub>2.5</sub>, and CO [326 IAC 2-8-4][326 IAC 2-2]

Pursuant to 326 IAC 2-8-4 and in order to render the 326 IAC 2-2 not applicable, the PM<sub>10</sub>, PM<sub>2.5</sub>, and CO emissions for the aluminum foundry shall be limited as follows:

- (a) The total throughput of aluminum to the aluminum foundry, including the melting furnaces (EU7) and (EU8), the aluminum pouring/casting operation (EU10), the aluminum casting cooling operation (EU11), and the aluminum shakeout operation (EU12), shall not exceed 12,042 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (b) The throughput of aluminum to the aluminum magnesium treatment operation (EU9) shall not exceed 10,236 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (c) PM<sub>10</sub> emissions from the seven (7) melting furnaces (EU7) and the one (1) melting furnace (EU8) shall not exceed 1.70 pounds per ton of aluminum throughput.
- (d) PM<sub>2.5</sub> emissions from the seven (7) melting furnaces and (EU7) and the one (1) melting furnace (EU8) shall not exceed 1.70 pounds per ton of aluminum throughput.
- (e) PM<sub>10</sub> emissions from the aluminum magnesium treatment operation (EU9) shall not exceed 1.80 pounds per ton of aluminum throughput.
- (f) PM<sub>2.5</sub> emissions from the aluminum magnesium treatment operation (EU9) shall not exceed 1.80 pounds per ton of aluminum throughput.
- (g) PM<sub>10</sub> emissions from the aluminum pouring/casting operation (EU10) shall not exceed 2.06 pound per ton of aluminum throughput.
- (h) PM<sub>2.5</sub> emissions from the aluminum pouring/casting operation (EU10) shall not exceed 2.06 pound per ton of aluminum throughput.
- (i) PM<sub>10</sub> emissions from the aluminum casting cooling operation (EU11) shall not exceed 2.06 pound per ton of aluminum throughput.
- (j) PM<sub>2.5</sub> emissions from the aluminum casting cooling operation (EU11) shall not exceed 2.06 pound per ton of aluminum throughput.

- (k) PM<sub>10</sub> emissions from the aluminum shakeout operation (EU12) shall not exceed 2.24 pounds per ton of aluminum throughput.
- (l) PM<sub>2.5</sub> emissions from the aluminum shakeout operation (EU12) shall not exceed 2.24 pounds per ton of aluminum throughput.
- (m) CO emissions from the pouring/casting (EU10), iron casting cooling (EU11) and iron shakeout (EU12) operations in the iron foundry shall be limited to 7.0 pound per ton of iron throughput.

Compliance with these limits, combined with the limited PTE from all other emission units at this source, shall limit the source-wide total potential to emit of PM<sub>10</sub>, PM<sub>2.5</sub>, and CO to less than 100 tons per 12 consecutive month period and shall render 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (PSD) not applicable.

#### D.2.3 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rates from the facilities listed in this section shall not exceed the stated particulate emission rates listed in the following table:

Aluminum Foundry Emission Unit	Process Weight Rate (tons per hour)	Allowable Particulate Emission Rate (pounds per hour)
Six (6) 2,300lb Melting Furnace (EU7)	1.15 each	1.02 each
700 lb Melting Furnace (EU7)	0.23	1.53
300 lb Melting Furnace (EU8)	0.09	0.82
Magnesium Treatment (EU9)	1.45	5.26
Pouring/Casting (EU10)	7.34	15.59
Casting Cooling (EU11)*	7.34	15.59
Shakeout (EU12)*	7.34	15.59

\*The process weight rates for the pouring/casting, casting cooling, and shakeout operations in both the iron and aluminum foundry include maximum metal and sand throughputs.

The pounds per hour limitations were calculated using 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:

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

#### D.2.4 Material Usage [40 CFR 63, Subpart RRR]

The Permittee shall only melt clean charge, customer returns, or internal scrap in the aluminum foundry as defined under 40 CFR 63.1503. Therefore, the requirements of 40 CFR 63, Subpart RRR do not apply.

## **Record Keeping and Reporting Requirement [326 IAC 2-8-4(3)] [326 IAC 2-8-16]**

### **D.2.5 Record Keeping Requirements**

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- (a) To document the compliance status with Conditions D.2.1 and D.2.2, the Permittee shall maintain records of aluminum throughput as applicable for each of the facilities included in Condition D.2.1 and D.2.2.
- (b) To document the compliance status with Condition D.2.4, the Permittee shall maintain records of determinations of the type, quality and origin of all materials melted at this source required under Condition D.2.4.
- (c) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

### **D.2.6 Reporting Requirements**

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A quarterly summary of the information to document the compliance status with Conditions D.2.1 and D.2.2 shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report 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).

## SECTION D.3

## FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-8-4(10)]:

#### Sand Handling Operations

NOTE: the following emissions units are located in the aluminum foundry but are used for both the aluminum and the iron foundry.

- (m) Enclosed Sand System, pneumatically conveyed, with a maximum throughput capacity of 236,520 tons/year of sand (using the combined maximum process capacity of the four sand mixers) and maximum throughput capacity of 61,320 tons/year (using the combined maximum process capacity of the mechanical and thermal sand reclamation units) for the sand reclamation process, consisting of the following units:
- (1) Three (3) sand storage silos, one silo with a capacity of 10 tons and two silos with capacities of 40 tons each, equipped with bin-top filter banks and exhausting through Stacks #9, #10 and #11.
  - (2) One (1) Strong Scott sand mixer, identified as EU18, utilizing a phenolic urethane nobake binder system, installed in 1980, with a throughput capacity of 6.0 tons of sand per hour.
  - (3) One (1) Kloster sand mixer, identified as EU19, utilizing a phenolic urethane nobake binder system, installed in 1994, with a throughput capacity of 9.0 tons of sand per hour.
  - (4) One (1) Palmer core mixer #1, identified as EU20, utilizing a phenolic urethane nobake binder system, installed in 1994, with a throughput capacity of 6.0 tons of sand per hour.
  - (5) One (1) Palmer core mixer #2, identified as EU21, utilizing an acrylic-epoxy cold box binder system, installed in 1998, with a throughput capacity of 6.0 tons of sand per hour.
  - (6) One (1) mechanical sand reclamation unit, identified as EU13, installed in 1991, with a throughput capacity of 6.0 tons of sand per hour.
  - (7) One (1) thermal sand reclamation unit, identified as EU17, equipped with two (2) natural gas-fired burners, rated at 1.0 million British thermal units per hour each, equipped with a baghouse, installed in 1998, exhausted through Stack 12, with a throughput capacity of 1 ton of sand per hour.

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

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

#### D.3.1 PM [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 not applicable, the throughput for the sand handling operations shall be limited as follows:

- (a) The throughput of sand to the mechanical sand reclamation unit (EU13) shall not exceed 9,675 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (b) The throughput of sand to the thermal sand reclamation unit (EU17) shall not exceed 9,675 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

- (c) The combined throughput of sand to the Kloster Sand Mixer (EU19), the Palmer Core Mixer #1 (EU20), the Palmer Core Mixer #2 (EU21), and the Strong Scott Sand Mixer (EU18) shall not exceed 9,675 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (d) PM emissions from the mechanical sand reclamation unit (EU13) shall not exceed 3.6 pounds per ton of sand throughput.
- (e) PM emissions from the baghouse controlling the thermal sand reclamation unit (EU17) shall not exceed 0.10 pound per ton of sand throughput.
- (f) PM emissions from the Kloster Sand Mixer (EU19), the Palmer Core Mixer #1 (EU20), the Palmer Core Mixer #2 (EU21), and the Strong Scott Sand Mixer (EU18) shall not exceed 0.36 pounds per ton of sand throughput.

Compliance with these limits, combined with the limited PTE from all other emission units at this source, shall limit the source-wide total potential to emit of PM<sub>10</sub> and PM<sub>2.5</sub> to less than 100 tons per 12 consecutive month period and shall render 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (PSD) not applicable.

#### D.3.2 PM<sub>10</sub> and PM<sub>2.5</sub> [326 IAC 2-8-4][326 IAC 2-2]

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Pursuant to 326 IAC 2-8-4 and in order to render 326 IAC 2-2 not applicable the PM<sub>10</sub> and PM<sub>2.5</sub> emissions for the sand handling operations shall be limited as follows:

- (a) The throughput of sand to the mechanical sand reclamation unit (EU13) shall not exceed 9,675 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (b) The throughput of sand to the thermal sand reclamation unit (EU17) shall not exceed 9,675 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (a) PM<sub>10</sub> emissions from the mechanical sand reclamation unit (EU13) shall not exceed 0.54 pounds per ton of sand throughput.
- (b) PM<sub>2.5</sub> emissions from the mechanical sand reclamation unit (EU13) shall not exceed 0.54 pounds per ton of sand throughput.
- (c) PM<sub>10</sub> emissions from the baghouse controlling the thermal sand reclamation unit (EU17) shall not exceed 4.926 pounds per ton of sand throughput.
- (d) PM<sub>2.5</sub> emissions from the baghouse controlling the thermal sand reclamation unit (EU17) shall not exceed 4.926 pounds per ton of sand throughput.
- (e) PM<sub>10</sub> emissions from the Kloster Sand Mixer (EU19), the Palmer Core Mixer #1 (EU20), the Palmer Core Mixer #2 (EU21), and the Strong Scott Sand Mixer (EU18) shall not exceed 0.54 pounds per ton of sand throughput.
- (f) PM<sub>2.5</sub> emissions from the Kloster Sand Mixer (EU19), the Palmer Core Mixer #1 (EU20), the Palmer Core Mixer #2 (EU21), and the Strong Scott Sand Mixer (EU18) shall not exceed 0.54 pounds per ton of sand throughput.

Compliance with these limits, combined with the limited PTE from all other emission units at this source, shall limit the source-wide total potential to emit of PM<sub>10</sub> and PM<sub>2.5</sub> to less than 100 tons per 12 consecutive month period and shall render 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (PSD) not applicable.

#### D.3.3 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rates from the facilities listed in this section shall not exceed the stated particulate emission rates listed in the following table:

Emission Unit	Process Weight Rate (tons per hour)	Allowable Particulate Emission Rate (pounds per hour)
Mechanical Sand Reclamation Unit (EU13)	6.0	13.6
Thermal Sand Reclamation Unit (EU17)	1.0	4.10
Strong Scott Mixer (EU18)	6.0	13.6
Kloster Mixer (EU19)	9.0	17.9
Palmer Core Mixer #1 (EU20)	6.0	13.6
Palmer Core Mixer #2 (EU21)	6.0	13.6

The pounds per hour limitations were calculated using 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:

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

#### D.3.4 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

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 Determination Requirements

#### D.3.5 Particulate Control

- (a) In order to comply with conditions D.3.1 and D.3.2, the baghouse for particulate control shall be in operation and control emissions from the thermal sand reclamation unit (EU17) at all times that the thermal sand reclamation unit (EU17) is in operation.
- (b) In order to comply with condition D.3.1, the inherent moisture and binder resins shall be used with the Strong Scott and Kloster sand mixers and the two (2) Palmer core mixers at all times that the mixers are in operation.

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

#### D.3.6 Visible Emissions Notations

- (a) Visible emission notations of the four (4) mixers (EU18 - EU21) and the thermal sand reclamation unit (EU17), respectively, shall be performed once per day during normal daylight operations when exhausting to the atmosphere. 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. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

#### D.3.7 Parametric Monitoring

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The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the thermal sand reclamation unit (EU17) at least daily when the process is in operation. When for any reading, the pressure drop across the baghouse is outside the normal range of 2.0 to 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps. Section C – Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

The instruments used for determining the pressure shall comply with Section C – Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated or replaced at least once every six (6) months.

#### D.3.8 Broken or Failed Bag Detection

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- (a) For a single compartment baghouses controlling emissions from a process operated continuously, failed units and the associated process shall be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (b) For a single compartment baghouses controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed units have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the emissions unit. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

### **Record Keeping and Reporting Requirement [326 IAC 2-8-4(3)] [326 IAC 2-8-16]**

#### D.3.9 Record Keeping Requirements

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- (a) To document the compliance status with Conditions D.3.1(a) and D.3.2(a), the Permittee shall maintain records of the total sand throughput to the mechanical sand reclamation unit (EU13) on a monthly basis.



- (b) To document the compliance status with Conditions D.3.1(b) and D.3.2(b), the Permittee shall maintain records of the total sand throughput to the thermal sand reclamation unit (EU17) on a monthly basis.
- (c) To document the compliance status with Conditions D.3.1(c) and D.3.2(c), the Permittee shall maintain records of combined sand throughput to the Kloster Sand Mixer (EU19), the Palmer Core Mixer #1 (EU20), the Palmer Core Mixer #2 (EU21), and the Strong Scott Sand Mixer (EU18) on a monthly basis.
- (d) To document the compliance status with Condition D.3.6, the Permittee shall maintain records of daily visible emission notations of the four (4) mixers (EU18 - EU21) and the thermal sand reclamation unit (EU17), respectively. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g., the process did not operate that day).
- (e) To document the compliance status with Condition D.3.7, the Permittee shall maintain the following:

Daily records of the total static pressure drop during normal operation. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading, (e.g., the process did not operate that day).
- (f) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

#### D.3.10 Reporting Requirements

A quarterly summary of the information to document the compliance status with Conditions D.3.1 and D.3.2 shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report 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).

## **SECTION D.4 FACILITY OPERATION CONDITIONS**

### **Facility Description [326 IAC 2-8-4(10)]:**

#### **Cleaning/Finishing Operations**

NOTE: Emission units identified as EU14 through EU16 and EU27 are physically located in the iron foundry but the units are used for both the aluminum foundry and the iron foundry.

- (q) One (1) GOFF steel shot blast machine, identified as EU14, equipped with a baghouse, installed in 1993, exhausted through Stack 4 or inside the building, with a throughput capacity of 4.67 tons of aluminum or iron casting per hour.
- (r) One (1) GOFF steel shot blast machine, identified as EU27, approved for construction in 2013, with a maximum throughput capacity of 4.67 tons of aluminum or iron casting per hour, equipped with a baghouse for control, and exhausting to either Stack 13 or inside the building;
- (s) One (1) small aluminum shot blast machine identified as EU15, equipped with a Viking baghouse, installed in 1993, exhausted inside the building, with a throughput capacity of 0.70 tons of aluminum or iron castings per hour.
- (t) One (1) sand blaster machine, identified as EU16, equipped with a Blast-It-All baghouse, installed in 1980, exhausted inside the building, with a throughput capacity of 0.70 tons of aluminum or iron castings per hour.

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

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

#### **D.4.1 PM [326 IAC 2-2]**

In order to render the requirements of 326 IAC 2-2 not applicable, the throughput for the cleaning/finishing operations shall be limited as follows:

- (a) The throughput of metal castings to the GOFF shot blast machine (EU14) shall not exceed 3,912.60 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (b) The throughput of metal castings to the GOFF shot blast machine (EU27) shall not exceed 3,912.60 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (c) The throughput of metal castings to the small shot blast machine (EU15) shall not exceed 1,174 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;
- (d) The throughput of metal castings to the sand blaster machine (EU16) shall not exceed 1,174 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (e) The PM emissions from the baghouse controlling the GOFF shot blast machine (EU14) shall not exceed 0.85 pound per ton of metal castings throughput.
- (f) The PM emissions from the baghouse controlling the GOFF shot blast machine (EU27) shall not exceed 0.85 pound per ton of metal castings throughput.

- (g) The PM emissions from the baghouse controlling the small shot blast machine (EU15) shall not exceed 0.85 pound per ton of metal castings throughput.
- (h) The PM emissions from the baghouse controlling the sand blaster machine (EU16) shall not exceed 0.85 pound per ton of metal castings throughput.

Compliance with these limits, combined with the limited PTE from all other emission units at this source, shall limit the source-wide total potential to emit of PM to less than 100 tons per 12 consecutive month period and shall render 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (PSD) not applicable.

#### D.4.2 PM<sub>10</sub> and PM<sub>2.5</sub> [326 IAC 2-8-4][326 IAC 2-2]

Pursuant to 326 IAC 2-8-4 and in order to render 326 IAC 2-2 not applicable, the PM<sub>10</sub> and PM<sub>2.5</sub> emissions for the cleaning/finishing operations shall be limited as follows:

- (a) The throughput of metal castings to the GOFF shot blast machine (EU14) shall not exceed 3,912.60 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (b) The throughput of metal castings to the GOFF shot blast machine (EU27) shall not exceed 3,912.60 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (c) The throughput of metal castings to the small shot blast machine (EU15) shall not exceed 1,174 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;
- (d) The PM<sub>10</sub> emissions from the baghouse controlling the GOFF shot blast machine (EU14) shall not exceed 1.7 pounds per ton of metal castings throughput.
- (e) The PM<sub>2.5</sub> emissions from the baghouse controlling the GOFF shot blast machine (EU14) shall not exceed 1.7 pounds per ton of metal castings throughput.
- (f) The PM<sub>10</sub> emissions from the baghouse controlling the GOFF shot blast machine (EU27) shall not exceed 1.7 pounds per ton of metal castings throughput.
- (g) The PM<sub>2.5</sub> emissions from the baghouse controlling the GOFF shot blast machine (EU27) shall not exceed 1.7 pounds per ton of metal castings throughput.
- (h) The PM<sub>10</sub> emissions from the baghouse controlling the small shot blast machine (EU15) shall not exceed 1.7 pounds per ton of metal castings throughput.
- (i) The PM<sub>2.5</sub> emissions from the baghouse controlling the small shot blast machine (EU15) shall not exceed 1.7 pounds per ton of metal castings throughput.
- (j) The PM<sub>10</sub> emissions from the baghouse controlling the sand blaster machine (EU16) shall not exceed 1.7 pounds per ton of metal castings throughput.
- (k) The PM<sub>2.5</sub> emissions from the baghouse controlling the sand blaster machine (EU16) shall not exceed 1.7 pounds per ton of metal castings throughput.

Compliance with these limits, combined with the limited PTE from all other emission units at this source, shall limit the source-wide total potential to emit of PM<sub>10</sub> and PM<sub>2.5</sub> to less than 100 tons per 12 consecutive month period and shall render 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (PSD) not applicable.

#### D.4.3 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rates from the facilities listed in this section shall not exceed the stated particulate emission rates listed in the following table:

Emission Unit	Process Weight Rate (tons per hour)	Allowable Particulate Emission Rate (pounds per hour)
GOFF Shot Blaster (EU14)	4.67	11.51
GOFF Shot Blaster (EU27)	4.67	11.51
Small Aluminum Shot Blaster (EU15)	0.7	3.10
Sand Blaster (EU16)	0.7	3.10

The pounds per hour limitations were calculated using 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:

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

#### D.4.4 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

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 Determination Requirements

#### D.4.5 Particulate Control

In order to comply with conditions D.4.1 and D.4.2, the baghouses for particulate control shall be in operation and control emissions from the three (3) shot blaster machines (EU14, EU27, and EU15) and the one (1) sand blaster machine (EU16) at all times that the three (3) shot blaster machines (EU14, EU27, and EU15) and the one (1) sand blaster machine (EU16) are in operation.

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

#### D.4.6 Visible Emissions Notations

- Visible emission notations of the stack exhausts 4 and 13 for the GOFF shot blasters (EU14 and EU27) shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- 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.
- 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. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

#### D.4.7 Parametric Monitoring

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The Permittee shall record the total static pressure drop across the baghouses used in conjunction with the GOFF blasters (EU14 and EU27) at least daily when the process is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 2.0 to 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps. Section C – Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated or replaced at least once every six (6) months.

#### D.4.8 Broken or Failed Bag Detection

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- (a) For a single compartment baghouses controlling emissions from a process operated continuously, failed units and the associated process shall be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (b) For a single compartment baghouses controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed units have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the emissions unit. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the pressure reading of the baghouse pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

### **Record Keeping and Reporting Requirement [326 IAC 2-8-4(3)] [326 IAC 2-8-16]**

#### D.4.9 Record Keeping Requirements

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- (a) To document the compliance status with Conditions D.4.1 and D.4.2, the Permittee shall maintain records of the throughput of metal castings to each of the GOFF shot blast machines (EU14 and EU27), the small shot blast machine (EU15) and the sand blaster machine (EU16) on a monthly basis.
- (b) To document the compliance status with Condition D.4.6, the Permittee shall maintain records of daily visible emission notations of the stack exhausts 4 and 13 for the GOFF shot blasters (EU14 and EU27). The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g., the process did not operate that day).

- (c) To document the compliance status with Condition D.4.7, the Permittee shall maintain the following:  
  
Daily records of the pressure drop during normal operation. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading, (e.g., the process did not operate that day).
- (d) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

#### D.4.10 Reporting Requirements

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A quarterly summary of the information to document the compliance status with Conditions D.4.1 and D.4.2 shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report 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).

## SECTION D.5

## FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-8-4(10)]:

#### Core and Mold Making Operations

NOTE: Emission units identified as EU22 through EU24 are physically located in the aluminum foundry but the units are used for both the aluminum foundry and the iron foundry.

- (n) One (1) CB-22 core machine, identified as EU22, equipped with a caustic soda scrubber (does not have to be operated at all times), installed in 1998, with a throughput capacity of 0.5 tons of cores per hour.
- (o) One (1) Dependable 420 core machine, identified as EU23, equipped with a caustic soda scrubber (does not have to be operated at all times), installed in 1998, with a throughput capacity of 0.5 tons of cores per hour.
- (p) U-180 core making operations used for both foundries, identified as EU24, including the following:
  - (1) One (1) U-180 core machine, utilizing a shell binder system, installed in 1998, with a throughput capacity of 0.045 tons of cores per hour.
  - (2) One (1) U-180 core machine, utilizing a shell binder system, installed in January 2004, with a throughput capacity of 0.045 tons of cores per hour.
  - (3) Two (2) U-180 core machines, each utilizing a shell binder system, installed in 2005, and each with maximum capacity of 0.045 tons of cores per hour.

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

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

#### D.5.1 Volatile Organic Compounds [326 IAC 8-1-6]

Any change or modification which may increase the potential emissions of VOC to twenty-five (25) tons per year from the core machines (EU22 - EU24), the four (4) U-180 core machines, and/or pattern parting booth and the core release application area (EU26) must be approved by the Office of Air Quality before such change may occur.

#### D.5.2 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

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.

## **SECTION D.6 FACILITY OPERATION CONDITIONS**

### **Facility Description [326 IAC 2-8-4(10)]:**

#### **Additional Operations**

- (u) One (1) surface coating spray application process (in the mold and core making areas), identified as EU26, installed in 1980, with a throughput capacity of 8,637 pounds of coating materials per year.

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

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

#### **D.6.1 Volatile Organic Compounds [326 IAC 8-1-6]**

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Any change or modification which may increase the potential emissions of VOC to twenty-five (25) tons per year from the core machines (EU22 - EU24), the four (4) U-180 core machines, and/or pattern parting booth and the core release application area (EU26) must be approved by the Office of Air Quality before such change may occur.



## SECTION D.7

## FACILITY OPERATION CONDITIONS

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

- (g) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6. Parts washer (covered cold cleaner), with a throughput capacity of 40 gallon [326 IAC 8-3]
- (i) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, and welding equipment. [326 IAC 6-3-2]
- (o) Grinding and machining operations controller with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4,000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations. [326 IAC 6-3-2]
- (s) Other activities with insignificant thresholds:
  - (1) Two (2) electric heat treating machines;
  - (2) Woodworking activities in the pattern shop (sawing, cutting, routing and planing). [326 IAC 6-3-2]

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

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

#### D.7.1 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2,

- (a) The owner or operator of a cold cleaner degreaser shall ensure the following control equipment and operating requirements are met:
  - (1) Equip the degreaser with a cover.
  - (2) Equip the degreaser with a device for draining cleaned parts.
  - (3) Close the degreaser cover whenever parts are not being handled in the degreaser.
  - (4) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases.
  - (5) Provide a permanent, conspicuous label that lists the operating requirements in subdivisions (3), (4), (6), and (7).
  - (6) Store waste solvent only in closed containers.
  - (7) Prohibit the disposal or transfer of waste solvent in such a manner that could allow greater than twenty percent (20%) of the waste solvent (by weight) to evaporate into the atmosphere.
- (b) The owner or operator of a cold cleaner degreaser subject to this subsection shall ensure the following additional control equipment and operating requirements are met:

- (1) Equip the degreaser with one (1) of the following control devices if the solvent is heated to a temperature of greater than forty-eight and nine-tenths (48.9) degrees Celsius (one hundred twenty (120) degrees Fahrenheit):
  - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
  - (B) A water cover when solvent used is insoluble in, and heavier than, water.
  - (C) A refrigerated chiller.
  - (D) Carbon adsorption.
  - (E) An alternative system of demonstrated equivalent or better control as those outlined in clauses (A) through (D) that is approved by the department. An alternative system shall be submitted to the U.S. EPA as a SIP revision.
- (2) Ensure the degreaser cover is designed so that it can be easily operated with one (1) hand if the solvent is agitated or heated.
- (3) If used, solvent spray:
  - (A) must be a solid, fluid stream; and
  - (B) shall be applied at a pressure that does not cause excessive splashing.

#### D.7.2 Particulate Matter (PM) [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. This limit applies to the following units:

- (a) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, and welding equipment. [326 IAC 6-3-2]
- (b) Grinding and machining operations controller with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4,000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations. [326 IAC 6-3-2]
- (c) Other activities with insignificant thresholds:
  - (1) Woodworking activities in the pattern shop (sawing, cutting, routing and planing). [326 IAC 6-3-2]

#### D.7.3 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

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.

## SECTION E.1

## FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-8-4(10)]:

#### Iron Foundry

- (b) Two (2) electric melting furnaces, one labeled as the 1,000 pound furnace and one labeled as the 500 pound furnace and collectively identified as EU2, installed in 1992, with a throughput capacity of 0.45 tons of iron per hour total limited by single power supply.

Under NESHAP ZZZZZ, the two (2) electric melt furnaces identified as EU2 are considered affected facilities.

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

### National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements [40 CFR 63]

#### E.1.1 General Provisions Relating to NESHAP Subpart ZZZZZ [40 CFR Part 63, Subpart A]

Pursuant to 40 CFR 63.460(b), the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, Appendix C of 40 CFR Part 63, Subpart ZZZZZ in accordance with the schedule in 40 CFR 63 Subpart ZZZZZ.

#### E.1.2 NESHAP for Iron and Steel Foundries Area Sources [40 CFR Part 63, Subpart ZZZZZ]

The Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart ZZZZZ except as otherwise specified in 40 CFR Part 63, Subpart ZZZZZ (included as Attachment A of this permit):

- (1) 40 CFR 63.10880
- (2) 40 CFR 63.10881
- (3) 40 CFR 63.10885
- (4) 40 CFR 63.10886
- (5) 40 CFR 63.10890
- (6) 40 CFR 63.10895
- (7) 40 CFR 63.10896
- (8) 40 CFR 63.10897
- (9) 40 CFR 63.10898
- (10) 40 CFR 63.10899
- (11) 40 CFR 63.10900
- (12) 40 CFR 63.10905
- (13) 40 CFR 63.10906

## INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY

### FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) CERTIFICATION

Source Name: Muncie Casting Corporation  
Source Address: 1406 East 18<sup>th</sup> Street, Muncie, Indiana 47302  
FESOP No.: F035-29148-00061

**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 BRANCH  
100 North Senate Avenue  
Indianapolis, Indiana 46204-2251  
Phone: 317-233-5674  
Fax: 317-233-5967**

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

Source Name: Muncie Casting Corporation  
Source Address: 1406 East 18<sup>th</sup> Street, Muncie, Indiana 47302  
FESOP No.: F035-29148-00061

**This form consists of 2 pages**

**Page 1 of 2**

- |   |
|---|
| <input type="checkbox"/> This is an emergency as defined in 326 IAC 2-7-1(12) <ul style="list-style-type: none"><li>• The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and</li><li>• The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-5967), and follow the other requirements of 326 IAC 2-7-16</li></ul> |
|---|

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 <sub>2</sub> , VOC, NO <sub>x</sub> , 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 DATA SECTION**

**FESOP Quarterly Report**

Source Name: Muncie Casting Corporation  
Source Address: 1406 East 18<sup>th</sup> Street, Muncie, Indiana 47302  
FESOP No.: F035-29148-00061  
Facility: Iron charge handling (EU1), two (2) iron melt furnaces (EU2), iron magnesium treatment (EU3), iron pouring/casting (EU4), iron casting cooling (EU5), iron shakeout (EU6)  
Parameter: Iron throughput to limit PM and PM10 emissions  
Limit: The total throughput of iron to the iron foundry, including EU1, EU2, EU4, EU5, and EU6 shall not exceed 1,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

The throughput of iron to the iron magnesium treatment operation (EU3) shall not exceed 200 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

YEAR: \_\_\_\_\_

Month	Unit ID	Column 1	Column 2	Column 1 + Column 2
		Iron Throughput This Month (tons)	Iron Throughput Previous 11 Months (tons)	12 Month Total Iron Throughput (tons)
Month 1	EU1, EU2, EU4, EU5, EU6			
	EU3			
Month 2	EU1, EU2, EU4, EU5, EU6			
	EU3			
Month 3	EU1, EU2, EU4, EU5, EU6			
	EU3			

☐ 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 DATA SECTION

### FESOP Quarterly Report

Source Name: Muncie Casting Corporation  
Source Address: 1406 East 18<sup>th</sup> Street, Muncie, Indiana 47302  
FESOP No.: F035-29148-00061  
Facility: Six (6) 2300 lb and one (1) 700 lb melt furnaces (EU7), one (1) 300 lb melt furnace (EU8), aluminum magnesium treatment (EU9), aluminum pouring/casting (EU10), aluminum casting cooling (EU11), aluminum shakeout (EU12)  
Parameter: Aluminum throughput to limit PM and PM10 emissions  
Limit: The total throughput of aluminum to the aluminum foundry, including the six (6) 2,300 lb melting furnaces and one (1) 700 lb melting furnace (EU7), the one (1) 300 lb melting furnace (EU8), the aluminum pouring/casting operation (EU10), the aluminum casting cooling operation (EU11), and the aluminum shakeout operation (EU12), shall not exceed 12,042 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

The throughput of aluminum to the aluminum magnesium treatment operation (EU9) shall not exceed 10,236 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

YEAR: \_\_\_\_\_

Month	Unit ID	Column 1	Column 2	Column 1 + Column 2
		Aluminum Throughput This Month (tons)	Aluminum Throughput Previous 11 Months (tons)	12 Month Total Aluminum Throughput (tons)
Month 1	EU7, EU8, EU10, EU11, EU12			
	EU9			
Month 2	EU7, EU8, EU10, EU11, EU12			
	EU9			
Month 3	EU7, EU8, EU10, EU11, EU12			
	EU9			

☐ 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 DATA SECTION**

**FESOP Quarterly Report**

Source Name: Muncie Casting Corporation  
Source Address: 1406 East 18<sup>th</sup> Street, Muncie, Indiana 47302  
FESOP No.: F035-29148-00061  
Facility: Kloster Sand Mixer (EU19), Palmer Core Mixer #1 (EU20), Palmer Core Mixer #2 (EU21), Strong Scott Sand Mixer (EU18)  
Parameter: Sand throughput to limit PM and PM10 emissions  
Limit: The combined throughput of sand to EU18, EU19, EU20, and EU21 shall not exceed 9,675 tons per twelve (12) consecutive month period.

YEAR: \_\_\_\_\_

Month	Column 1	Column 2	Column 1 + Column 2
	Sand Throughput This Month (tons)	Sand Throughput Previous 11 Months (tons)	12 Month Total Sand Throughput (tons)
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 DATA SECTION**

**FESOP Quarterly Report**

Source Name: Muncie Casting Corporation  
Source Address: 1406 East 18<sup>th</sup> Street, Muncie, Indiana 47302  
FESOP No.: F035-29148-00061  
Facility: mechanical sand reclamation unit (EU13), thermal sand reclamation unit (EU17)  
Parameter: Sand throughput to limit PM and PM10 emissions  
Limit: The throughput of sand to the mechanical sand reclamation unit (EU13) shall not exceed 9,675 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

The throughput of sand to the thermal sand reclamation unit (EU17) shall not exceed 9,675 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

YEAR: \_\_\_\_\_

Month	Unit ID	Column 1	Column 2	Column 1 + Column 2
		Sand Throughput This Month (tons)	Sand Throughput Previous 11 Months (tons)	12 Month Total Sand Throughput (tons)
Month 1	EU13			
	EU17			
Month 2	EU13			
	EU17			
Month 3	EU13			
	EU17			

☐ 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 DATA SECTION**

**FESOP Quarterly Report**

Source Name: Muncie Casting Corporation  
Source Address: 1406 East 18<sup>th</sup> Street, Muncie, Indiana 47302  
FESOP No.: F035-29148-00061  
Facility: GOFF shot blast machine (EU14), GOFF shot blast machine (EU27), small shot blast machine (EU15), sand blaster machine (EU16)  
Parameter: Metal casting throughput to limit PM and PM10 emissions  
Limit: (1) The throughput of metal castings to the GOFF shot blast machine (EU14) shall not exceed 3,912.60 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;  
(2) The throughput of metal castings to the GOFF shot blast machine (EU27) shall not exceed 3,912.60 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;  
(3) The throughput of metal castings to the small shot blast machine (EU15) shall not exceed 1,174 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;  
(4) The throughput of metal castings to the sand blaster machine (EU16) shall not exceed 1,174 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

YEAR: \_\_\_\_\_

Month	Unit ID	Column 1	Column 2	Column 1 + Column 2
		Metal Casting Throughput This Month (tons)	Metal Casting Throughput Previous 11 Months (tons)	12 Month Total Metal Casting Throughput (tons)
Month 1	EU14			
	EU15			
	EU16			
	EU27			
Month 2	EU14			
	EU15			
	EU16			
	EU27			
Month 3	EU14			
	EU15			
	EU16			
	EU27			

☐ 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 DATA SECTION**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)  
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Muncie Casting Corporation  
Source Address: 1406 East 18<sup>th</sup> Street, Muncie, Indiana 47302  
FESOP No.: F035-29148-00061

Months: \_\_\_\_\_ to \_\_\_\_\_ Year: \_\_\_\_\_

Page 1 of 2

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, 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.

☐ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

☐ 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:**

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

Form Completed By: \_\_\_\_\_

Title/Position: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

**Attachment A to  
FEDERALLY ENFORCEABLE STATE  
OPERATING PERMIT (FESOP) RENEWAL**

**National Emission Standards for Hazardous Air Pollutants (NESHAP)  
for Iron and Steel Foundries Area Sources**

**Muncie Casting Corporation  
1406 East 18<sup>th</sup> Street  
Muncie, Indiana 47302**

**Title 40: Protection of Environment**  
**Part 63 - National Emission Standards for Hazardous Air Pollutants (NESHAP) for Iron and Steel Foundries Area Sources (Subpart ZZZZZ)**

SOURCE: 73 FR 252, Jan. 2, 2008, unless otherwise noted.

***Applicability and Compliance Dates***

**§ 63.10880 *Am I subject to this subpart?***

(a) You are subject to this subpart if you own or operate an iron and steel foundry that is an area source of hazardous air pollutant (HAP) emissions.

(b) This subpart applies to each new or existing affected source. The affected source is each iron and steel foundry.

(1) An affected source is existing if you commenced construction or reconstruction of the affected source before September 17, 2007.

(2) An affected source is new if you commenced construction or reconstruction of the affected source on or after September 17, 2007. If an affected source is not new pursuant to the preceding sentence, it is not new as a result of a change in its compliance obligations pursuant to § 63.10881(d).

(c) On and after January 2, 2008, if your iron and steel foundry becomes a major source as defined in § 63.2, you must meet the requirements of 40 CFR part 63, subpart EEEEE.

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

(e) 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 by law to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a). Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart.

(f) If you own or operate an existing affected source, you must determine the initial applicability of the requirements of this subpart to a small foundry or a large foundry based on your facility's metal melt production for calendar year 2008. If the metal melt production for calendar year 2008 is 20,000 tons or less, your area source is a small foundry. If your metal melt production for calendar year 2008 is greater than 20,000 tons, your area source is a large foundry. You must submit a written notification to the Administrator that identifies your area source as a small foundry or a large foundry no later than January 2, 2009.

(g) If you own or operate a new affected source, you must determine the initial applicability of the requirements of this subpart to a small foundry or a large foundry based on your facility's annual metal melting capacity at startup. If the annual metal melting capacity is 10,000 tons or less, your area source is a small foundry. If the annual metal melting capacity is greater than 10,000 tons, your area source is a large foundry. You must submit a written notification to the Administrator that identifies your area source as a small foundry or a large foundry no later than 120 days after startup.

**§ 63.10881 *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 by the dates in paragraphs (a)(1) through (3) of this section.

(1) Not later than January 2, 2009 for the pollution prevention management practices for metallic scrap in § 63.10885(a) and binder formulations in § 63.10886.

(2) Not later than January 4, 2010 for the pollution prevention management practices for mercury in § 63.10885(b).

(3) Except as provided in paragraph (d) of this section, not later than 2 years after the date of your large foundry's notification of the initial determination required in § 63.10880(f) for the standards and management practices in § 63.10895.

(b) If you have a new affected source for which the initial startup date is on or before January 2, 2008, you must achieve compliance with the provisions of this subpart not later than January 2, 2008.

(c) If you own or operate a new affected source for which the initial startup date is after January 2, 2008, you must achieve compliance with the provisions of this subpart upon startup of your affected source.

(d) Following the initial determination for an existing affected source required in § 63.10880(f),

(1) Beginning January 1, 2010, if the annual metal melt production of your small foundry exceeds 20,000 tons during the preceding calendar year, you must submit a notification of foundry reclassification to the Administrator within 30 days and comply with the requirements in paragraphs (d)(1)(i) or (ii) of this section, as applicable.

(i) If your small foundry has never been classified as a large foundry, you must comply with the requirements for a large foundry no later than 2 years after the date of your foundry's notification that the annual metal melt production exceeded 20,000 tons.

(ii) If your small foundry had previously been classified as a large foundry, you must comply with the requirements for a large foundry no later than the date of your foundry's most recent notification that the annual metal melt production exceeded 20,000 tons.

(2) If your facility is initially classified as a large foundry (or your small foundry subsequently becomes a large foundry), you must comply with the requirements for a large foundry for at least 3 years before reclassifying your facility as a small foundry, even if your annual metal melt production falls below 20,000 tons. After 3 years, you may reclassify your facility as a small foundry provided your annual metal melt production for the preceding calendar year was 20,000 tons or less. If you reclassify your large foundry as a small foundry, you must submit a notification of reclassification to the Administrator within 30 days and comply with the requirements for a small foundry no later than the date you notify the Administrator of the reclassification. If the annual metal melt production exceeds 20,000 tons during a subsequent year, you must submit a notification of reclassification to the Administrator within 30 days and comply with the requirements for a large foundry no later than the date you notify the Administrator of the reclassification.

(e) Following the initial determination for a new affected source required in § 63.10880(g),

(1) If you increase the annual metal melt capacity of your small foundry to exceed 10,000 tons, you must submit a notification of reclassification to the Administrator within 30 days and comply with the requirements for a large foundry no later than the startup date for the new equipment, if applicable, or the date of issuance for your revised State or Federal operating permit.

(2) If your facility is initially classified as a large foundry (or your small foundry subsequently becomes a large foundry), you must comply with the requirements for a large foundry for at least 3 years before reclassifying your facility as a small foundry. After 3 years, you may reclassify your facility as a small foundry provided your most recent annual metal melt capacity is 10,000 tons or less. If you reclassify your large foundry as a small foundry, you must notify the Administrator within 30 days and comply with the requirements for a small foundry no later than the date your melting equipment was removed or taken out of service, if applicable, or the date of issuance for your revised State or Federal operating permit.

#### ***Pollution Prevention Management Practices for New and Existing Affected Sources***

##### ***§ 63.10885 What are my management practices for metallic scrap and mercury switches?***

(a) *Metallic scrap management program.* For each segregated metallic scrap storage area, bin or pile, you must comply with the materials acquisition requirements in paragraph (a)(1) or (2) of this section. You must keep a copy of the material specifications onsite and readily available to all personnel with material acquisition duties, and provide a copy to each of your scrap providers. You may have certain scrap subject to paragraph (a)(1) of this section and



other scrap subject to paragraph (a)(2) of this section at your facility provided the metallic scrap remains segregated until charge make-up.

(1) *Restricted metallic scrap.* You must prepare and operate at all times according to written material specifications for the purchase and use of only metal ingots, pig iron, slitter, or other materials that do not include post-consumer automotive body scrap, post-consumer engine blocks, post-consumer oil filters, oily turnings, lead components, chlorinated plastics, or free liquids. For the purpose of this subpart, "free liquids" is defined as material that fails the paint filter test by EPA Method 9095B, "Paint Filter Liquids Test" (revision 2), November 2004 (incorporated by reference—see § 63.14). The requirements for no free liquids do not apply if the owner or operator can demonstrate that the free liquid is water that resulted from scrap exposure to rain.

(2) *General iron and steel scrap.* You must prepare and operate at all times according to written material specifications for the purchase and use of only iron and steel scrap that has been depleted (to the extent practicable) of organics and HAP metals in the charge materials used by the iron and steel foundry. The materials specifications must include at minimum the information specified in paragraph (a)(2)(i) or (ii) of this section.

(i) Except as provided in paragraph (a)(2)(ii) of this section, specifications for metallic scrap materials charged to a scrap preheater or metal melting furnace to be depleted (to the extent practicable) of the presence of used oil filters, chlorinated plastic parts, accessible lead-containing components (such as batteries and wheel weights), and a program to ensure the scrap materials are drained of free liquids.

(ii) For scrap charged to a cupola metal melting furnace that is equipped with an afterburner, specifications for metallic scrap materials to be depleted (to the extent practicable) of the presence of chlorinated plastics, accessible lead-containing components (such as batteries and wheel weights), and a program to ensure the scrap materials are drained of free liquids.

(b) *Mercury requirements.* For scrap containing motor vehicle scrap, you must procure the scrap pursuant to one of the compliance options in paragraphs (b)(1), (2), or (3) of this section for each scrap provider, contract, or shipment. For scrap that does not contain motor vehicle scrap, you must procure the scrap pursuant to the requirements in paragraph (b)(4) of this section for each scrap provider, contract, or shipment. You may have one scrap provider, contract, or shipment subject to one compliance provision and others subject to another compliance provision.

(1) *Site-specific plan for mercury switches.* You must comply with the requirements in paragraphs (b)(1)(i) through (v) of this section.

(i) You must include a requirement in your scrap specifications for removal of mercury switches from vehicle bodies used to make the scrap.

(ii) You must prepare and operate according to a plan demonstrating how your facility will implement the scrap specification in paragraph (b)(1)(i) of this section for removal of mercury switches. You must submit the plan to the Administrator for approval. You must operate according to the plan as submitted during the review and approval process, operate according to the approved plan at all times after approval, and address any deficiency identified by the Administrator or delegated authority within 60 days following disapproval of a plan. You may request approval to revise the plan and may operate according to the revised plan unless and until the revision is disapproved by the Administrator or delegated authority. The Administrator or delegated authority may change the approval status of the plan upon 90-days written notice based upon the semiannual report or other information. The plan must include:

(A) A means of communicating to scrap purchasers and scrap providers the need to obtain or provide motor vehicle scrap from which mercury switches have been removed and the need to ensure the proper management of the mercury switches removed from the scrap as required under the rules implementing subtitle C of the Resource Conservation and Recovery Act (RCRA) (40 CFR parts 261 through 265 and 268). The plan must include documentation of direction to appropriate staff to communicate to suppliers throughout the scrap supply chain the need to promote the removal of mercury switches from end-of-life vehicles. Upon the request of the Administrator or delegated authority, you must provide examples of materials that are used for outreach to suppliers, such as letters, contract language, policies for purchasing agents, and scrap inspection protocols;

(B) Provisions for obtaining assurance from scrap providers motor vehicle scrap provided to the facility meet the scrap specification;

(C) Provisions for periodic inspections or other means of corroboration to ensure that scrap providers and dismantlers are implementing appropriate steps to minimize the presence of mercury switches in motor vehicle scrap and that the mercury switches removed are being properly managed, including the minimum frequency such means of corroboration will be implemented; and

(D) Provisions for taking corrective actions (i.e., actions resulting in scrap providers removing a higher percentage of mercury switches or other mercury-containing components) if needed, based on the results of procedures implemented in paragraph (b)(1)(ii)(C) of this section).

(iii) You must require each motor vehicle scrap provider to provide an estimate of the number of mercury switches removed from motor vehicle scrap sent to the facility during the previous year and the basis for the estimate. The Administrator may request documentation or additional information at any time.

(iv) You must establish a goal for each scrap supplier to remove at least 80 percent of the mercury switches. Although a site-specific plan approved under paragraph (b)(1) of this section may require only the removal of convenience light switch mechanisms, the Administrator will credit all documented and verifiable mercury-containing components removed from motor vehicle scrap (such as sensors in anti-locking brake systems, security systems, active ride control, and other applications) when evaluating progress towards the 80 percent goal.

(v) For each scrap provider, you must submit semiannual progress reports to the Administrator that provide the number of mercury switches removed or the weight of mercury recovered from the switches, the estimated number of vehicles processed, an estimate of the percent of mercury switches removed, and certification that the removed mercury switches were recycled at RCRA-permitted facilities or otherwise properly managed pursuant to RCRA subtitle C regulations referenced in paragraph (b)(1)(ii)(A) of this section. This information can be submitted in aggregate form and does not have to be submitted for each shipment. The Administrator may change the approval status of a site-specific plan following 90-days notice based on the progress reports or other information.

(2) *Option for approved mercury programs.* You must certify in your notification of compliance status that you participate in and purchase motor vehicle scrap only from scrap providers who participate in a program for removal of mercury switches that has been approved by the Administrator based on the criteria in paragraphs (b)(2)(i) through (iii) of this section. If you purchase motor vehicle scrap from a broker, you must certify that all scrap received from that broker was obtained from other scrap providers who participate in a program for the removal of mercury switches that has been approved by the Administrator based on the criteria in paragraphs (b)(2)(i) through (iii) of this section. The National Mercury Switch Recovery Program and the State of Maine Mercury Switch Removal Program are EPA-approved programs under paragraph (b)(2) of this section unless and until the Administrator disapproves the program (in part or in whole) under paragraph (b)(2)(iii) of this section.

(i) The program includes outreach that informs the dismantlers of the need for removal of mercury switches and provides training and guidance for removing mercury switches;

(ii) The program has a goal to remove at least 80 percent of mercury switches from motor vehicle scrap the scrap provider processes. Although a program approved under paragraph (b)(2) of this section may require only the removal of convenience light switch mechanisms, the Administrator will credit all documented and verifiable mercury-containing components removed from motor vehicle scrap (such as sensors in anti-locking brake systems, security systems, active ride control, and other applications) when evaluating progress towards the 80 percent goal; and

(iii) The program sponsor agrees to submit progress reports to the Administrator no less frequently than once every year that provide the number of mercury switches removed or the weight of mercury recovered from the switches, the estimated number of vehicles processed, an estimate of the percent of mercury switches recovered, and certification that the recovered mercury switches were recycled at facilities with permits as required under the rules implementing subtitle C of RCRA (40 CFR parts 261 through 265 and 268). The progress reports must be based on a database that includes data for each program participant; however, data may be aggregated at the State level for progress reports that will be publicly available. The Administrator may change the approval status of a program or portion of a program (e.g., at the State level) following 90-days notice based on the progress reports or on other information.

(iv) You must develop and maintain onsite a plan demonstrating the manner through which your facility is participating in the EPA-approved program.

(A) The plan must include facility-specific implementation elements, corporate-wide policies, and/or efforts coordinated by a trade association as appropriate for each facility.

(B) You must provide in the plan documentation of direction to appropriate staff to communicate to suppliers throughout the scrap supply chain the need to promote the removal of mercury switches from end-of-life vehicles. Upon the request of the Administrator or delegated authority, you must provide examples of materials that are used for outreach to suppliers, such as letters, contract language, policies for purchasing agents, and scrap inspection protocols.

(C) You must conduct periodic inspections or other means of corroboration to ensure that scrap providers are aware of the need for and are implementing appropriate steps to minimize the presence of mercury in scrap from end-of-life vehicles.

(3) *Option for specialty metal scrap.* You must certify in your notification of compliance status and maintain records of documentation that the only materials from motor vehicles in the scrap are materials recovered for their specialty alloy (including, but not limited to, chromium, nickel, molybdenum, or other alloys) content (such as certain exhaust systems) and, based on the nature of the scrap and purchase specifications, that the type of scrap is not reasonably expected to contain mercury switches.

(4) *Scrap that does not contain motor vehicle scrap.* For scrap not subject to the requirements in paragraphs (b)(1) through (3) of this section, you must certify in your notification of compliance status and maintain records of documentation that this scrap does not contain motor vehicle scrap.

**§ 63.10886 What are my management practices for binder formulations?**

For each furfuryl alcohol warm box mold or core making line at a new or existing iron and steel foundry, you must use a binder chemical formulation that does not use methanol as a specific ingredient of the catalyst formulation. This requirement does not apply to the resin portion of the binder system.

**Requirements for New and Existing Affected Sources Classified as Small Foundries**

**§ 63.10890 What are my management practices and compliance requirements?**

(a) You must comply with the pollution prevention management practices for metallic scrap and mercury switches in § 63.10885 and binder formulations in § 63.10886.

(b) You must submit an initial notification of applicability according to § 63.9(b)(2).

(c) You must submit a notification of compliance status according to § 63.9(h)(1)(i). You must send the notification of compliance status before the close of business on the 30th day after the applicable compliance date specified in § 63.10881. The notification must include the following compliance certifications, as applicable:

(1) "This facility has prepared, and will operate by, written material specifications for metallic scrap according to § 63.10885(a)(1)" and/or "This facility has prepared, and will operate by, written material specifications for general iron and steel scrap according to § 63.10885(a)(2)."

(2) "This facility has prepared, and will operate by, written material specifications for the removal of mercury switches and a site-specific plan implementing the material specifications according to § 63.10885(b)(1) and/or "This facility participates in and purchases motor vehicle scrap only from scrap providers who participate in a program for removal of mercury switches that has been approved by the Administrator according to § 63.10885(b)(2) and has prepared a plan for participation in the EPA-approved program according to § 63.10885(b)(2)(iv)" and/or "The only materials from motor vehicles in the scrap charged to a metal melting furnace at this facility are materials recovered for their specialty alloy content in accordance with § 63.10885(b)(3) which are not reasonably expected to contain mercury switches" and/or "This facility complies with the requirements for scrap that does not contain motor vehicle scrap in accordance with § 63.10885(b)(4)."

(3) "This facility complies with the no methanol requirement for the catalyst portion of each binder chemical formulation for a furfuryl alcohol warm box mold or core making line according to § 63.10886."

(d) As required by § 63.10(b)(1), you must maintain files of all information (including all reports and notifications) for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent 2 years of data shall be retained on site. The remaining 3 years of data may be retained off site. Such files may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche.

(e) You must maintain records of the information specified in paragraphs (e)(1) through (7) of this section according to the requirements in § 63.10(b)(1).

(1) Records supporting your initial notification of applicability and your notification of compliance status according to § 63.10(b)(2)(xiv).

(2) Records of your written materials specifications according to § 63.10885(a) and records that demonstrate compliance with the requirements for restricted metallic scrap in § 63.10885(a)(1) and/or for the use of general scrap in § 63.10885(a)(2) and for mercury in § 63.10885(b)(1) through (3), as applicable. You must keep records documenting compliance with § 63.10885(b)(4) for scrap that does not contain motor vehicle scrap.

(3) If you are subject to the requirements for a site-specific plan for mercury switch removal under § 63.10885(b)(1), you must:

(i) Maintain records of the number of mercury switches removed or the weight of mercury recovered from the switches and properly managed, the estimated number of vehicles processed, and an estimate of the percent of mercury switches recovered; and

(ii) Submit semiannual reports of the number of mercury switches removed or the weight of mercury recovered from the switches and properly managed, the estimated number of vehicles processed, an estimate of the percent of mercury switches recovered, and a certification that the recovered mercury switches were recycled at RCRA-permitted facilities. The semiannual reports must include a certification that you have conducted periodic inspections or taken other means of corroboration as required under § 63.10885(b)(1)(ii)(C). You must identify which option in paragraph § 63.10885(b) applies to each scrap provider, contract, or shipment. You may include this information in the semiannual compliance reports required under paragraph (f) of this section.

(4) If you are subject to the option for approved mercury programs under § 63.10885(b)(2), you must maintain records identifying each scrap provider and documenting the scrap provider's participation in an approved mercury switch removal program. If you purchase motor vehicle scrap from a broker, you must maintain records identifying each broker and documentation that all scrap provided by the broker was obtained from other scrap providers who participate in an approved mercury switch removal program.

(5) Records to document use of binder chemical formulation that does not contain methanol as a specific ingredient of the catalyst formulation for each furfuryl alcohol warm box mold or core making line as required by § 63.10886. These records must be the Material Safety Data Sheet (provided that it contains appropriate information), a certified product data sheet, or a manufacturer's hazardous air pollutant data sheet.

(6) Records of the annual quantity and composition of each HAP-containing chemical binder or coating material used to make molds and cores. These records must be copies of purchasing records, Material Safety Data Sheets, or other documentation that provides information on the binder or coating materials used.

(7) Records of metal melt production for each calendar year.

(f) You must submit semiannual compliance reports to the Administrator according to the requirements in § 63.10(e). The report must clearly identify any deviation from the pollution prevention management practices in § 63.10885 or § 63.10886 and the corrective action taken.

(g) You must submit a written notification to the Administrator of the initial classification of your facility as a small foundry as required in § 63.10880(f) and (g), as applicable, and for any subsequent reclassification as required in § 63.10881(d)(1) or (e), as applicable.

(h) Following the initial determination for an existing affected source as a small foundry, if the annual metal melt production exceeds 20,000 tons during the preceding year, you must comply with the requirements for large foundries by the applicable dates in § 63.10881(d)(1)(i) or (d)(1)(ii). Following the initial determination for a new affected source as a small foundry, if you increase the annual metal melt capacity to exceed 10,000 tons, you must comply with the requirements for a large foundry by the applicable dates in § 63.10881(e)(1).

(i) You must comply with the following requirements of the General Provisions (40 CFR part 63, subpart A): §§ 63.1 through 63.5; § 63.6(a), (b), (c), and (e)(1); § 63.9; § 63.10(a), (b)(1), (b)(2)(xiv), (b)(3), (d)(1), (d)(4), and (f); and §§ 63.13 through 63.16. Requirements of the General Provisions not cited in the preceding sentence do not apply to the owner or operator of a new or existing affected source that is classified as a small foundry.

### ***Requirements for New and Existing Affected Sources Classified as Large Iron and Steel Foundries***

#### ***§ 63.10895 What are my standards and management practices?***

(a) If you own or operate an affected source that is a large foundry as defined in § 63.10906, you must comply with the pollution prevention management practices in §§ 63.10885 and 63.10886, the requirements in paragraphs (b) through (e) of this section, and the requirements in §§ 63.10896 through 63.10900.

(b) You must operate a capture and collection system for each metal melting furnace at a new or existing iron and steel foundry unless that furnace is specifically uncontrolled as part of an emissions averaging group. Each capture and collection system must meet accepted engineering standards, such as those published by the American Conference of Governmental Industrial Hygienists.

(c) You must not discharge to the atmosphere emissions from any metal melting furnace or group of all metal melting furnaces that exceed the applicable limit in paragraph (c)(1) or (2) of this section. When an alternative emissions limit is provided for a given emissions source, you are not restricted in the selection of which applicable alternative emissions limit is used to demonstrate compliance.

(1) For an existing iron and steel foundry, 0.8 pounds of particulate matter (PM) per ton of metal charged or 0.06 pounds of total metal HAP per ton of metal charged.

(2) For a new iron and steel foundry, 0.1 pounds of PM per ton of metal charged or 0.008 pounds of total metal HAP per ton of metal charged.

(d) If you own or operate a new affected source, you must comply with each control device parameter operating limit in paragraphs (d)(1) and (2) of this section that applies to you.

(1) For each wet scrubber applied to emissions from a metal melting furnace, you must maintain the 3-hour average pressure drop and scrubber water flow rate at or above the minimum levels established during the initial or subsequent performance test.

(2) For each electrostatic precipitator applied to emissions from a metal melting furnace, you must maintain the voltage and secondary current (or total power input) to the control device at or above the level established during the initial or subsequent performance test.

(e) If you own or operate a new or existing iron and steel foundry, you must not discharge to the atmosphere fugitive emissions from foundry operations that exhibit opacity greater than 20 percent (6-minute average), except for one 6-minute average per hour that does not exceed 30 percent.

**§ 63.10896 What are my operation and maintenance requirements?**

(a) You must prepare and operate at all times according to a written operation and maintenance (O&M) plan for each control device for an emissions source subject to a PM, metal HAP, or opacity emissions limit in § 63.10895. You must maintain a copy of the O&M plan at the facility and make it available for review upon request. At a minimum, each plan must contain the following information:

- (1) General facility and contact information;
  - (2) Positions responsible for inspecting, maintaining, and repairing emissions control devices which are used to comply with this subpart;
  - (3) Description of items, equipment, and conditions that will be inspected, including an inspection schedule for the items, equipment, and conditions. For baghouses that are equipped with bag leak detection systems, the O&M plan must include the site-specific monitoring plan required in § 63.10897(d)(2).
  - (4) Identity and estimated quantity of the replacement parts that will be maintained in inventory; and
  - (5) For a new affected source, procedures for operating and maintaining a CPMS in accordance with manufacturer's specifications.
- (b) You may use any other O&M, preventative maintenance, or similar plan which addresses the requirements in paragraph (a)(1) through (5) of this section to demonstrate compliance with the requirements for an O&M plan.

**§ 63.10897 What are my monitoring requirements?**

(a) You must conduct an initial inspection of each PM control device for a metal melting furnace at an existing affected source. You must conduct each initial inspection no later than 60 days after your applicable compliance date for each installed control device which has been operated within 60 days of the compliance date. For an installed control device which has not operated within 60 days of the compliance date, you must conduct an initial inspection prior to startup of the control device. Following the initial inspections, you must perform periodic inspections and maintenance of each PM control device for a metal melting furnace at an existing affected source. You must perform the initial and periodic inspections according to the requirements in paragraphs (a)(1) through (4) of this section. You must record the results of each initial and periodic inspection and any maintenance action in the logbook required in § 63.10899(b)(13).

(1) For the initial inspection of each baghouse, you must visually inspect the system ductwork and baghouse units for leaks. You must also inspect the inside of each baghouse for structural integrity and fabric filter condition. Following the initial inspections, you must inspect and maintain each baghouse according to the requirements in paragraphs (a)(1)(i) and (ii) of this section.

(i) You must conduct monthly visual inspections of the system ductwork for leaks.

(ii) You must conduct inspections of the interior of the baghouse for structural integrity and to determine the condition of the fabric filter every 6 months.

(2) For the initial inspection of each dry electrostatic precipitator, you must verify the proper functioning of the electronic controls for corona power and rapper operation, that the corona wires are energized, and that adequate air pressure is present on the rapper manifold. You must also visually inspect the system ductwork and electrostatic housing unit and hopper for leaks and inspect the interior of the electrostatic precipitator to determine the condition and integrity of corona wires, collection plates, hopper, and air diffuser plates. Following the initial inspection, you must inspect and maintain each dry electrostatic precipitator according to the requirements in paragraphs (a)(2)(i) through (iii) of this section.

(i) You must conduct a daily inspection to verify the proper functioning of the electronic controls for corona power and rapper operation, that the corona wires are energized, and that adequate air pressure is present on the rapper manifold.

(ii) You must conduct monthly visual inspections of the system ductwork, housing unit, and hopper for leaks.

(iii) You must conduct inspections of the interior of the electrostatic precipitator to determine the condition and integrity of corona wires, collection plates, plate rappers, hopper, and air diffuser plates every 24 months.

(3) For the initial inspection of each wet electrostatic precipitator, you must verify the proper functioning of the electronic controls for corona power, that the corona wires are energized, and that water flow is present. You must also visually inspect the system ductwork and electrostatic precipitator housing unit and hopper for leaks and inspect the interior of the electrostatic precipitator to determine the condition and integrity of corona wires, collection plates, plate wash spray heads, hopper, and air diffuser plates. Following the initial inspection, you must inspect and maintain each wet electrostatic precipitator according to the requirements in paragraphs (a)(3)(i) through (iii) of this section.

(i) You must conduct a daily inspection to verify the proper functioning of the electronic controls for corona power, that the corona wires are energized, and that water flow is present.

(ii) You must conduct monthly visual inspections of the system ductwork, electrostatic precipitator housing unit, and hopper for leaks.

(iii) You must conduct inspections of the interior of the electrostatic precipitator to determine the condition and integrity of corona wires, collection plates, plate wash spray heads, hopper, and air diffuser plates every 24 months.

(4) For the initial inspection of each wet scrubber, you must verify the presence of water flow to the scrubber. You must also visually inspect the system ductwork and scrubber unit for leaks and inspect the interior of the scrubber for structural integrity and the condition of the demister and spray nozzle. Following the initial inspection, you must inspect and maintain each wet scrubber according to the requirements in paragraphs (a)(4)(i) through (iii) of this section.

(i) You must conduct a daily inspection to verify the presence of water flow to the scrubber.

(ii) You must conduct monthly visual inspections of the system ductwork and scrubber unit for leaks.

(iii) You must conduct inspections of the interior of the scrubber to determine the structural integrity and condition of the demister and spray nozzle every 12 months.

(b) For each wet scrubber applied to emissions from a metal melting furnace at a new affected source, you must use a continuous parameter monitoring system (CPMS) to measure and record the 3-hour average pressure drop and scrubber water flow rate.

(c) For each electrostatic precipitator applied to emissions from a metal melting furnace at a new affected source, you must measure and record the hourly average voltage and secondary current (or total power input) using a CPMS.

(d) If you own or operate an existing affected source, you may install, operate, and maintain a bag leak detection system for each negative pressure baghouse or positive pressure baghouse as an alternative to the baghouse inspection requirements in paragraph (a)(1) of this section. If you own or operate a new affected source, you must install, operate, and maintain a bag leak detection system for each negative pressure baghouse or positive pressure baghouse. You must install, operate, and maintain each bag leak detection system according to the requirements in paragraphs (d)(1) through (3) of this section.

(1) Each bag leak detection system must meet the requirements in paragraphs (d)(1)(i) through (vii) of this section.

(i) The system must be certified by the manufacturer to be capable of detecting emissions of particulate matter at concentrations of 10 milligrams 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 particulate matter loadings and the owner or operator shall continuously record the output from the bag leak detection system using a strip chart recorder, data logger, or other means.

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

(iv) The initial adjustment of the system must, at minimum, consist of establishing the baseline output by adjusting the sensitivity (range) and the averaging period of the device, and establishing the alarm set points. If the system is equipped with an alarm delay time feature, you also must adjust the alarm delay time.

(v) Following the initial adjustment, do not adjust the sensitivity or range, averaging period, alarm set point, or alarm delay time. Except, once per quarter, you may adjust the sensitivity of the bag leak detection system to account for seasonal effects including temperature and humidity according to the procedures in the monitoring plan required by paragraph (d)(2) of this section.

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

(vii) 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 to be incorporated in your O&M plan. You must operate and maintain each bag leak detection system according to the plan at all times. Each plan must address all of the items identified in paragraphs (d)(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 will be established.

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

(iv) Maintenance of the bag leak detection system including a routine maintenance schedule and spare parts inventory list.

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

(vi) Procedures for determining what corrective actions are necessary in the event of a bag leak detection alarm as required in paragraph (d)(3) of this section.

(3) In the event that a bag leak detection system alarm is triggered, you must initiate corrective action to determine the cause of the alarm within 1 hour of the alarm, initiate corrective action to correct the cause of the problem within 24 hours of the alarm, and complete corrective action as soon as practicable, but no later than 10 calendar days from the date of the alarm. You must record the date and time of each valid alarm, the time you initiated corrective action, the correction action taken, and the date on which corrective action was completed. Corrective actions may include, but are not limited to:

(i) Inspecting the bag house for air leaks, torn or broken bags or filter media, or any other condition that may cause an increase in 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 baghouse department.

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



(vi) Shutting down the process producing the particulate emissions.

(e) You must make monthly inspections of the equipment that is important to the performance of the total capture system (i.e., pressure sensors, dampers, and damper switches). This inspection must include observations of the physical appearance of the equipment (e.g., presence of holes in the ductwork or hoods, flow constrictions caused by dents or accumulated dust in the ductwork, and fan erosion). You must repair any defect or deficiency in the capture system as soon as practicable, but no later than 90 days. You must record the date and results of each inspection and the date of repair of any defect or deficiency.

(f) You must install, operate, and maintain each CPMS or other measurement device according to your O&M plan. You must record all information needed to document conformance with these requirements.

(g) In the event of an exceedance of an established emissions limitation (including an operating limit), you must restore operation of the emissions source (including the control device and associated capture system) to its normal or usual manner or operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the exceedance. You must record the date and time correction action was initiated, the correction action taken, and the date corrective action was completed.

(h) If you choose to comply with an emissions limit in § 63.10895(c) using emissions averaging, you must calculate and record for each calendar month the pounds of PM or total metal HAP per ton of metal melted from the group of all metal melting furnaces at your foundry. You must calculate and record the weighted average pounds per ton emissions rate for the group of all metal melting furnaces at the foundry determined from the performance test procedures in § 63.10898(d) and (e).

**§ 63.10898 What are my performance test requirements?**

(a) You must conduct a performance test to demonstrate initial compliance with the applicable emissions limits for each metal melting furnace or group of all metal melting furnaces that is subject to an emissions limit in § 63.10895(c) and for each building or structure housing foundry operations that is subject to the opacity limit for fugitive emissions in § 63.10895(e). You must conduct the test within 180 days of your compliance date and report the results in your notification of compliance status.

(1) If you own or operate an existing iron and steel foundry, you may choose to submit the results of a prior performance test for PM or total metal HAP that demonstrates compliance with the applicable emissions limit for a metal melting furnace or group of all metal melting furnaces provided the test was conducted within the last 5 years using the methods and procedures specified in this subpart and either no process changes have been made since the test, or you can demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance with the applicable emissions limit despite such process changes.

(2) If you own or operate an existing iron and steel foundry and you choose to submit the results of a prior performance test according to paragraph (a)(1) of this section, you must submit a written notification to the Administrator of your intent to use the previous test data no later than 60 days after your compliance date. The notification must contain a full copy of the performance test and contain information to demonstrate, if applicable, that either no process changes have been made since the test, or that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite such process changes.

(3) If you have an electric induction furnace equipped with an emissions control device at an existing foundry, you may use the test results from another electric induction furnace to demonstrate compliance with the applicable PM or total metal HAP emissions limit in § 63.10895(c) provided the furnaces are similar with respect to the type of emission control device that is used, the composition of the scrap charged, furnace size, and furnace melting temperature.

(4) If you have an uncontrolled electric induction furnace at an existing foundry, you may use the test results from another electric induction furnace to demonstrate compliance with the applicable PM or total metal HAP emissions limit in § 63.10895(c) provided the test results are prior to any control device and the electric induction furnaces are similar with respect to the composition of the scrap charged, furnace size, and furnace melting temperature.

(5) For electric induction furnaces that do not have emission capture systems, you may install a temporary enclosure for the purpose of representative sampling of emissions. A permanent enclosure and capture system is not required for the purpose of the performance test.

(b) You must conduct subsequent performance tests to demonstrate compliance with all applicable PM or total metal HAP emissions limits in § 63.10895(c) for a metal melting furnace or group of all metal melting furnaces no less frequently than every 5 years and each time you elect to change an operating limit or make a process change likely to increase HAP emissions.

(c) You must conduct each performance test according to the requirements in § 63.7(e)(1), Table 1 to this subpart, and paragraphs (d) through (g) of this section.

(d) To determine compliance with the applicable PM or total metal HAP emissions limit in § 63.10895(c) for a metal melting furnace in a lb/ton of metal charged format, compute the process-weighted mass emissions ( $E_p$ ) for each test run using Equation 1 of this section:

$$E_p = \frac{C \times Q \times T}{P \times K} \quad (\text{Eq. 1})$$

Where:

$E_p$  = Process-weighted mass emissions rate of PM or total metal HAP, pounds of PM or total metal HAP per ton (lb/ton) of metal charged;

$C$  = Concentration of PM or total metal HAP measured during performance test run, grains per dry standard cubic foot (gr/dscf);

$Q$  = Volumetric flow rate of exhaust gas, dry standard cubic feet per hour (dscf/hr);

$T$  = Total time during a test run that a sample is withdrawn from the stack during melt production cycle, hr;

$P$  = Total amount of metal charged during the test run, tons; and

$K$  = Conversion factor, 7,000 grains per pound.

(e) To determine compliance with the applicable emissions limit in § 63.10895(c) for a group of all metal melting furnaces using emissions averaging,

(1) Determine and record the monthly average charge rate for each metal melting furnace at your iron and steel foundry for the previous calendar month; and

(2) Compute the mass-weighted PM or total metal HAP using Equation 2 of this section.

$$E_g = \frac{\sum_{i=1}^n (E_{pi} \times T_{ti})}{\sum_{i=1}^n T_{ti}} \quad (\text{Eq. 2})$$

Where:

$E_g$  = The mass-weighted PM or total metal HAP emissions for the group of all metal melting furnaces at the foundry, pounds of PM or total metal HAP per ton of metal charged;

$E_{pi}$  = Process-weighted mass emissions of PM or total metal HAP for individual emission unit  $i$  as determined from the performance test and calculated using Equation 1 of this section, pounds of PM or total metal HAP per ton of metal charged;

$T_{ii}$  = Total tons of metal charged for individual emission unit  $i$  for the calendar month prior to the performance test, tons; and

$n$  = The total number of metal melting furnaces at the iron and steel foundry.

(3) For an uncontrolled electric induction furnace that is not equipped with a capture system and has not been previously tested for PM or total metal HAP, you may assume an emissions factor of 2 pounds per ton of PM or 0.13 pounds of total metal HAP per ton of metal melted in Equation 2 of this section instead of a measured test value. If the uncontrolled electric induction furnace is equipped with a capture system, you must use a measured test value.

(f) To determine compliance with the applicable PM or total metal HAP emissions limit for a metal melting furnace in § 63.10895(c) when emissions from one or more regulated furnaces are combined with other non-regulated emissions sources, you may demonstrate compliance using the procedures in paragraphs (f)(1) through (3) of this section.

(1) Determine the PM or total metal HAP process-weighted mass emissions for each of the regulated streams prior to the combination with other exhaust streams or control device.

(2) Measure the flow rate and PM or total metal HAP concentration of the combined exhaust stream both before and after the control device and calculate the mass removal efficiency of the control device using Equation 3 of this section.

$$\% \text{ reduction} = \frac{E_i - E_o}{E_i} \times 100\% \quad (\text{Eq. 3})$$

Where:

$E_i$  = Mass emissions rate of PM or total metal HAP at the control device inlet, lb/hr;

$E_o$  = Mass emissions rate of PM or total metal HAP at the control device outlet, lb/hr.

(3) Meet the applicable emissions limit based on the calculated PM or total metal HAP process-weighted mass emissions for the regulated emissions source using Equation 4 of this section:

$$E_{p1} = E_{pi} \times \left( 1 - \frac{\% \text{ reduction}}{100} \right) \quad (\text{Eq. 4})$$

Where:

$E_{p1\text{released}}$  = Calculated process-weighted mass emissions of PM (or total metal HAP) predicted to be released to the atmosphere from the regulated emissions source, pounds of PM or total metal HAP per ton of metal charged; and

$E_{p1i}$  = Process-weighted mass emissions of PM (or total metal HAP) in the uncontrolled regulated exhaust stream, pounds of PM or total metal HAP per ton of metal charged.

(g) To determine compliance with an emissions limit for situations when multiple sources are controlled by a single control device, but only one source operates at a time or other situations that are not expressly considered in paragraphs (d) through (f) of this section, you must submit a site-specific test plan to the Administrator for approval according to the requirements in § 63.7(c)(2) and (3).

(h) You must conduct each opacity test for fugitive emissions according to the requirements in § 63.6(h)(5) and Table 1 to this subpart.

(i) You must conduct subsequent performance tests to demonstrate compliance with the opacity limit in § 63.10895(e) no less frequently than every 6 months and each time you make a process change likely to increase fugitive emissions.

(j) In your performance test report, you must certify that the capture system operated normally during the performance test.

(k) You must establish operating limits for a new affected source during the initial performance test according to the requirements in Table 2 of this subpart.

(l) You may change the operating limits for a wet scrubber, electrostatic precipitator, or baghouse if you meet the requirements in paragraphs (l)(1) through (3) of this section.

(1) Submit a written notification to the Administrator of your plan to conduct a new performance test to revise the operating limit.

(2) Conduct a performance test to demonstrate compliance with the applicable emissions limitation in § 63.10895(c).

(3) Establish revised operating limits according to the applicable procedures in Table 2 to this subpart.

**§ 63.10899 What are my recordkeeping and reporting requirements?**

(a) As required by § 63.10(b)(1), you must maintain files of all information (including all reports and notifications) for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent 2 years of data shall be retained on site. The remaining 3 years of data may be retained off site. Such files may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche.

(b) In addition to the records required by 40 CFR 63.10, you must keep records of the information specified in paragraphs (b)(1) through (13) of this section.

(1) You must keep records of your written materials specifications according to § 63.10885(a) and records that demonstrate compliance with the requirements for restricted metallic scrap in § 63.10885(a)(1) and/or for the use of general scrap in § 63.10885(a)(2) and for mercury in § 63.10885(b)(1) through (3), as applicable. You must keep records documenting compliance with § 63.10885(b)(4) for scrap that does not contain motor vehicle scrap.

(2) If you are subject to the requirements for a site-specific plan for mercury under § 63.10885(b)(1), you must:

(i) Maintain records of the number of mercury switches removed or the weight of mercury recovered from the switches and properly managed, the estimated number of vehicles processed, and an estimate of the percent of mercury switches recovered; and

(ii) Submit semiannual reports of the number of mercury switches removed or the weight of mercury recovered from the switches and properly managed, the estimated number of vehicles processed, an estimate of the percent of mercury switches recovered, and a certification that the recovered mercury switches were recycled at RCRA-permitted facilities. The semiannual reports must include a certification that you have conducted periodic inspections or taken other means of corroboration as required under § 63.10885(b)(1)(ii)(C). You must identify which option in § 63.10885(b) applies to each scrap provider, contract, or shipment. You may include this information in the semiannual compliance reports required under paragraph (c) of this section.

(3) If you are subject to the option for approved mercury programs under § 63.10885(b)(2), you must maintain records identifying each scrap provider and documenting the scrap provider's participation in an approved mercury switch removal program. If your scrap provider is a broker, you must maintain records identifying each of the broker's scrap suppliers and documenting the scrap supplier's participation in an approved mercury switch removal program.

(4) You must keep records to document use of any binder chemical formulation that does not contain methanol as a specific ingredient of the catalyst formulation for each furfuryl alcohol warm box mold or core making line as required

by § 63.10886. These records must be the Material Safety Data Sheet (provided that it contains appropriate information), a certified product data sheet, or a manufacturer's hazardous air pollutant data sheet.

(5) You must keep records of the annual quantity and composition of each HAP-containing chemical binder or coating material used to make molds and cores. These records must be copies of purchasing records, Material Safety Data Sheets, or other documentation that provide information on the binder or coating materials used.

(6) You must keep records of monthly metal melt production for each calendar year.

(7) You must keep a copy of the operation and maintenance plan as required by § 63.10896(a) and records that demonstrate compliance with plan requirements.

(8) If you use emissions averaging, you must keep records of the monthly metal melting rate for each furnace at your iron and steel foundry, and records of the calculated pounds of PM or total metal HAP per ton of metal melted for the group of all metal melting furnaces required by § 63.10897(h).

(9) If applicable, you must keep records for bag leak detection systems as follows:

(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; and

(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.

(10) You must keep records of capture system inspections and repairs as required by § 63.10897(e).

(11) You must keep records demonstrating conformance with your specifications for the operation of CPMS as required by § 63.10897(f).

(12) You must keep records of corrective action(s) for exceedances and excursions as required by § 63.10897(g).

(13) You must record the results of each inspection and maintenance required by § 63.10897(a) for PM control devices in a logbook (written or electronic format). You must keep the logbook onsite and make the logbook available to the Administrator upon request. You must keep records of the information specified in paragraphs (b)(13)(i) through (iii) of this section.

(i) The date and time of each recorded action for a fabric filter, the results of each inspection, and the results of any maintenance performed on the bag filters.

(ii) The date and time of each recorded action for a wet or dry electrostatic precipitator (including ductwork), the results of each inspection, and the results of any maintenance performed for the electrostatic precipitator.

(iii) The date and time of each recorded action for a wet scrubber (including ductwork), the results of each inspection, and the results of any maintenance performed on the wet scrubber.

(c) You must submit semiannual compliance reports to the Administrator according to the requirements in § 63.10(e). The reports must include, at a minimum, the following information as applicable:

(1) Summary information on the number, duration, and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective action taken;

(2) Summary information on the number, duration, and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other calibration checks, if applicable); and

(3) Summary information on any deviation from the pollution prevention management practices in §§ 63.10885 and 63.10886 and the operation and maintenance requirements § 63.10896 and the corrective action taken.

(d) You must submit written notification to the Administrator of the initial classification of your new or existing affected source as a large iron and steel facility as required in § 63.10880(f) and (g), as applicable, and for any subsequent reclassification as required in § 63.10881(d) or (e), as applicable.

**§ 63.10900 What parts of the General Provisions apply to my large foundry?**

(a) If you own or operate a new or existing affected source that is classified as a large foundry, you must comply with the requirements of the General Provisions (40 CFR part 63, subpart A) according to Table 3 of this subpart.

(b) If you own or operator a new or existing affected source that is classified as a large foundry, your notification of compliance status required by § 63.9(h) must include each applicable certification of compliance, signed by a responsible official, in Table 4 of this subpart.

**Other Requirements and Information**

**§ 63.10905 Who implements and enforces this subpart?**

(a) This subpart can be implemented and enforced by EPA or a delegated authority such as your State, local, or tribal agency. If the 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 EPA Regional Office to find out if implementation and enforcement of 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 EPA Administrator and are not transferred to the State, local, or tribal agency.

(c) The authorities that cannot be delegated to State, local, or tribal agencies are specified in paragraphs (c)(1) through (6) of this section.

(1) Approval of an alternative non-opacity emissions standard under 40 CFR 63.6(g).

(2) Approval of an alternative opacity emissions standard under § 63.6(h)(9).

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

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

(5) Approval of a major change to recordkeeping and reporting under § 63.10(f). A "major change to recordkeeping/reporting" is defined in § 63.90.

(6) Approval of a local, State, or national mercury switch removal program under § 63.10885(b)(2).

**§ 63.10906 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.

*Annual metal melt capacity* means the lower of the total metal melting furnace equipment melt rate capacity assuming 8,760 operating hours per year summed for all metal melting furnaces at the foundry or, if applicable, the maximum permitted metal melt production rate for the iron and steel foundry calculated on an annual basis. Unless otherwise specified in the permit, permitted metal melt production 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

furnace(s) or foundry, then the permitted operating hours are used to annualize the maximum permitted metal melt production rate.

*Annual metal melt production* means the quantity of metal melted in a metal melting furnace or group of all metal melting furnaces at the iron and steel foundry in a given calendar year. For the purposes of this subpart, metal melt production is determined on the basis on the quantity of metal charged to each metal melting furnace; the sum of the metal melt production for each furnace in a given calendar year is the annual metal melt production of the foundry.

*Bag leak detection system* means a system that is capable of continuously monitoring relative particulate matter (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, electrodynamic, light scattering, light transmittance, or other effect to continuously monitor relative particulate matter loadings.

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

*Capture system* means the collection of components used to capture gases and fumes released from one or more emissions points and then convey the captured gas stream to a control device or to the atmosphere. A capture system may include, but is not limited to, the following components as applicable to a given capture system design: Duct intake devices, hoods, enclosures, ductwork, dampers, manifolds, plenums, and fans.

*Chlorinated plastics* means solid polymeric materials that contain chlorine in the polymer chain, such as polyvinyl chloride (PVC) and PVC copolymers.

*Control device* means the air pollution control equipment used to remove particulate matter from the effluent gas stream generated by a metal melting furnace.

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

*Deviation* means any instance in which an affected source or an owner or operator of such an affected source:

- (1) Fails to meet any requirement or obligation established by this subpart including, but not limited to, any emissions limitation (including operating limits), management practice, or operation and maintenance requirement;
- (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 iron and steel foundry required to obtain such a permit; or
- (3) Fails to meet any emissions limitation (including operating limits) or management standard in this subpart during startup, shutdown, or malfunction, regardless of whether or not such failure is permitted by this subpart.

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

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

*Exhaust stream* means gases emitted from a process through a conveyance as defined in this subpart.

*Foundry operations* mean all process equipment and practices used to produce metal castings for shipment. *Foundry operations* include: Mold or core making and coating; scrap handling and preheating; metal melting and inoculation; pouring, cooling, and shakeout; shotblasting, grinding, and other metal finishing operations; and sand handling.

*Free liquids* means material that fails the paint filter liquids test by EPA Method 9095B, Revision 2, November 1994 (incorporated by reference—see § 63.14). That is, if any portion of the material passes through and drops from the filter within the 5-minute test period, the material contains *free liquids*.

*Fugitive emissions* means any pollutant released to the atmosphere that is not discharged through a system of equipment that is specifically designed to capture pollutants at the source, convey them through ductwork, and exhaust them using forced ventilation. *Fugitive emissions* include pollutants released to the atmosphere through windows, doors, vents, or other building openings. *Fugitive emissions* also include pollutants released to the atmosphere through other general building ventilation or exhaust systems not specifically designed to capture pollutants at the source.

*Furfuryl alcohol warm box mold or core making line* means a mold or core making line in which the binder chemical system used is that system commonly designated as a furfuryl alcohol warm box system by the foundry industry.

*Iron and steel foundry* means a facility or portion of a facility that melts scrap, ingot, and/or other forms of iron and/or steel and pours the resulting molten metal into molds to produce final or near final shape products for introduction into commerce. Research and development facilities, operations that only produce non-commercial castings, and operations associated with nonferrous metal production are not included in this definition.

*Large foundry* means, for an existing affected source, an iron and steel foundry with an annual metal melt production greater than 20,000 tons. For a new affected source, *large foundry* means an iron and steel foundry with an annual metal melt capacity greater than 10,000 tons.

*Mercury switch* means each mercury-containing capsule or switch assembly that is part of a convenience light switch mechanism installed in a vehicle.

*Metal charged* means the quantity of scrap metal, pig iron, metal returns, alloy materials, and other solid forms of iron and steel placed into a metal melting furnace. Metal charged does not include the quantity of fluxing agents or, in the case of a cupola, the quantity of coke that is placed into the metal melting furnace.

*Metal melting furnace* means a cupola, electric arc furnace, electric induction furnace, or similar device that converts scrap, foundry returns, and/or other solid forms of iron and/or steel to a liquid state. This definition does not include a holding furnace, an argon oxygen decarburization vessel, or ladle that receives molten metal from a metal melting furnace, to which metal ingots or other material may be added to adjust the metal chemistry.

*Mold or core making line* means the collection of equipment that is used to mix an aggregate of sand and binder chemicals, form the aggregate into final shape, and harden the formed aggregate. This definition does not include a line for making greensand molds or cores.

*Motor vehicle* means an automotive vehicle not operated on rails and usually is operated with rubber tires for use on highways.

*Motor vehicle scrap* means vehicle or automobile bodies, including automobile body hulks, that have been processed through a shredder. *Motor vehicle scrap* does not include automobile manufacturing bundles, or miscellaneous vehicle parts, such as wheels, bumpers, or other components that do not contain mercury switches.

*Nonferrous metal* means any pure metal other than iron or any metal alloy for which an element other than iron is its major constituent in percent by weight.

*On blast* means those periods of cupola operation when combustion (blast) air is introduced to the cupola furnace and the furnace is capable of producing molten metal. On blast conditions are characterized by both blast air introduction and molten metal production.

*Responsible official* means responsible official as defined in § 63.2.

*Scrap preheater* means a vessel or other piece of equipment in which metal scrap that is to be used as melting furnace feed is heated to a temperature high enough to eliminate volatile impurities or other tramp materials by direct



flame heating or similar means of heating. Scrap dryers, which solely remove moisture from metal scrap, are not considered to be scrap preheaters for purposes of this subpart.

*Scrap provider* means the person (including a broker) who contracts directly with an iron and steel foundry to provide motor vehicle scrap. Scrap processors such as shredder operators or vehicle dismantlers that do not sell scrap directly to a foundry are not *scrap providers*.

*Scrubber blowdown* means liquor or slurry discharged from a wet scrubber that is either removed as a waste stream or processed to remove impurities or adjust its composition or pH.

*Small foundry* means, for an existing affected source, an iron and steel foundry that has an annual metal melt production of 20,000 tons or less. For a new affected source, *small foundry* means an iron and steel foundry that has an annual metal melt capacity of 10,000 tons or less.

*Total metal HAP* means, for the purposes of this subpart, the sum of the concentrations of compounds of antimony, arsenic, beryllium, cadmium, chromium, cobalt, lead, manganese, mercury, nickel, and selenium as measured by EPA Method 29 (40 CFR part 60, appendix A-8). Only the measured concentration of the listed analytes that are present at concentrations exceeding one-half the quantitation limit of the analytical method are to be used in the sum. If any of the analytes are not detected or are detected at concentrations less than one-half the quantitation limit of the analytical method, the concentration of those analytes will be assumed to be zero for the purposes of calculating the total metal HAP for this subpart.

**Table 1 to Subpart ZZZZZ of Part 63—Performance Test Requirements for New and Existing Affected Sources Classified as Large Foundries**

As required in § 63.10898(c) and (h), you must conduct performance tests according to the test methods and procedures in the following table:

For . . .	You must . . .	According to the following requirements. . .
1. Each metal melting furnace subject to a PM or total metal HAP limit in § 63.10895(c)	a. Select sampling port locations and the number of traverse points in each stack or duct using EPA Method 1 or 1A (40 CFR part 60, appendix A) b. Determine volumetric flow rate of the stack gas using Method 2, 2A, 2C, 2D, 2F, or 2G (40 CFR part 60, appendix A) c. Determine dry molecular weight of the stack gas using EPA Method 3, 3A, or 3B (40 CFR part 60, appendix A). <sup>1</sup> d. Measure moisture content of the stack gas using EPA Method 4 (40 CFR part 60, A) e. Determine PM concentration using EPA Method 5, 5B, 5D, 5F, or 5I, as applicable or total metal HAP concentration using EPA Method 29 (40 CFR part 60, appendix A)	Sampling sites must be located at the outlet of the control device (or at the outlet of the emissions source if no control device is present) prior to any releases to the atmosphere. i. Collect a minimum sample volume of 60 dscf of gas during each PM sampling run. The PM concentration is determined using only the front-half (probe rinse and filter) of the PM catch. ii. For Method 29, only the measured concentration of the listed metal HAP analytes that are present at concentrations exceeding one-half the quantification limit of the analytical method are to be used in the sum. If any of the analytes are not detected or are detected at concentrations less than one-half the quantification limit of the analytical method, the concentration of those analytes is assumed to be zero for the purposes of calculating the total metal HAP.
		iii. A minimum of three valid test runs are needed to comprise a PM or total metal HAP performance test.
		iv. For cupola metal melting furnaces, sample PM or total metal HAP only during times when the cupola is on blast.

For. . .	You must. . .	According to the following requirements. . .
		v. For electric arc and electric induction metal melting furnaces, sample PM or total metal HAP only during normal melt production conditions, which may include, but are not limited to the following operations: Charging, melting, alloying, refining, slagging, and tapping.
		vi. Determine and record the total combined weight of tons of metal charged during the duration of each test run. You must compute the process-weighted mass emissions of PM according to Equation 1 of § 63.10898(d) for an individual furnace or Equation 2 of § 63.10898(e) for the group of all metal melting furnaces at the foundry.
2. Fugitive emissions from buildings or structures housing any iron and steel foundry emissions sources subject to opacity limit in § 63.10895(e)	a. Using a certified observer, conduct each opacity test according to EPA Method 9 (40 CFR part 60, appendix A-4) and 40 CFR 63.6(h)(5)	i. The certified observer may identify a limited number of openings or vents that appear to have the highest opacities and perform opacity observations on the identified openings or vents in lieu of performing observations for each opening or vent from the building or structure. Alternatively, a single opacity observation for the entire building or structure may be performed, if the fugitive release points afford such an observation.
		ii. During testing intervals when PM or total metal HAP performance tests, if applicable, are being conducted, conduct the opacity test such that the opacity observations are recorded during the PM or total metal HAP performance tests.
	b. As alternative to Method 9 performance test, conduct visible emissions test by Method 22 (40 CFR part 60, appendix A-7). The test is successful if no visible emissions are observed for 90 percent of the readings over 1 hour. If VE is observed greater than 10 percent of the time over 1 hour, then the facility must conduct another performance test as soon as possible, but no later than 15 calendar days after the Method 22 test, using Method 9 (40 CFR part 60, appendix A-4)	i. The observer may identify a limited number of openings or vents that appear to have the highest visible emissions and perform observations on the identified openings or vents in lieu of performing observations for each opening or vent from the building or structure. Alternatively, a single observation for the entire building or structure may be performed, if the fugitive release points afford such an observation. ii. During testing intervals when PM or total metal HAP performance tests, if applicable, are being conducted, conduct the visible emissions test such that the observations are recorded during the PM or total metal HAP performance tests.

<sup>1</sup> You may also use as an alternative to EPA Method 3B (40 CFR part 60, appendix A), the manual method for measuring the oxygen, carbon dioxide, and carbon monoxide content of exhaust gas, ANSI/ASME PTC 19.10-1981, "Flue and Exhaust Gas Analyses" (incorporated by reference—see § 63.14).

**Table 2 to Subpart ZZZZZ of Part 63—Procedures for Establishing Operating Limits for New Affected Sources Classified as Large Foundries**

As required in § 63.10898(k), you must establish operating limits using the procedures in the following table:

For . . .	You must . . .
1. Each wet scrubber subject to the operating limits in § 63.10895(d)(1) for pressure drop and scrubber water flow rate.	Using the CPMS required in § 63.10897(b), measure and record the pressure drop and scrubber water flow rate in intervals of no more than 15 minutes during each PM or total metal HAP test run. Compute and record the average pressure drop and average scrubber water flow rate for all the valid sampling runs in which the applicable emissions limit is met.
2. Each electrostatic precipitator subject to operating limits in § 63.10895(d)(2) for voltage and secondary current (or total power input).	Using the CPMS required in § 63.10897(c), measure and record voltage and secondary current (or total power input) in intervals of no more than 15 minutes during each PM or total metal HAP test run. Compute and record the minimum hourly average voltage and secondary current (or total power input) from all the readings for each valid sampling run in which the applicable emissions limit is met.

**Table 3 to Subpart ZZZZZ of Part 63—Applicability of General Provisions to New and Existing Affected Sources Classified as Large Foundries**

As required in § 63.10900(a), you must meet each requirement in the following table that applies to you:

Citation	Subject	Applies to large foundry?	Explanation
63.1	Applicability	Yes.	
63.2	Definitions	Yes.	
63.3	Units and abbreviations	Yes.	
63.4	Prohibited activities	Yes.	
63.5	Construction/reconstruction	Yes.	
63.6(a)-(g)	Compliance with standards and maintenance requirements	Yes.	
63.6(h)	Opacity and visible emissions standards	Yes.	
63.6(i)-(j)	Compliance extension and Presidential compliance exemption	Yes.	
63.7(a)(3), (b)-(h)	Performance testing requirements	Yes.	
63.7(a)(1)-(a)(2)	Applicability and performance test dates	No	Subpart ZZZZZ specifies applicability and performance test dates.
63.8(a)(1)-(a)(3), (b), (c)(1)-(c)(3), (c)(6)-(c)(8), (d), (e), (f)(1)-(f)(6), (g)(1)-(g)(4)	Monitoring requirements	Yes.	
63.8(a)(4)	Additional monitoring requirements for control devices in § 63.11	No.	
63.8(c)(4)	Continuous monitoring system (CMS) requirements	No.	

Citation	Subject	Applies to large foundry?	Explanation
63.8(c)(5)	Continuous opacity monitoring system (COMS) minimum procedures	No.	
63.8(g)(5)	Data reduction	No.	
63.9	Notification requirements	Yes.	
63.10(a), (b)(1)-(b)(2)(xii) -(b)(2)(xiv), (b)(3), (d)(1)-(2), (e)(1)-(2), (f)	Recordkeeping and reporting requirements	Yes.	
63.10(c)(1)-(6), (c)(9)-(15)	Additional records for continuous monitoring systems	No.	
63.10(c)(7)-(8)	Records of excess emissions and parameter monitoring exceedances for CMS	Yes.	
63.10(d)(3)	Reporting opacity or visible emissions observations	Yes.	
63.10(e)(3)	Excess emissions reports	Yes.	
63.10(e)(4)	Reporting COMS data	No.	
63.11	Control device requirements	No.	
63.12	State authority and delegations	Yes.	
63.13-63.16	Addresses of State air pollution control agencies and EPA regional offices. Incorporation by reference. Availability of information and confidentiality. Performance track provisions	Yes.	

**Table 4 to Subpart ZZZZZ of Part 63—Compliance Certifications for New and Existing Affected Sources Classified as Large Iron and Steel Foundries**

As required by § 63.10900(b), your notification of compliance status must include certifications of compliance according to the following table:

For . . .	Your notification of compliance status required by § 63.9(h) must include this certification of compliance, signed by a responsible official:
Each new or existing affected source classified as a large foundry and subject to scrap management requirements in § 63.10885(a)(1) and/or (2)	"This facility has prepared, and will operate by, written material specifications for metallic scrap according to § 63.10885(a)(1)" and/or "This facility has prepared, and will operate by, written material specifications for general iron and steel scrap according to § 63.10885(a)(2)."
Each new or existing affected source classified as a large foundry and subject to mercury switch removal requirements in § 63.10885(b)	"This facility has prepared, and will operate by, written material specifications for the removal of mercury switches and a site-specific plan implementing the material specifications according to § 63.10885(b)(1)" and/or "This facility participates in and purchases motor vehicles scrap only from scrap providers who participate in a program for removal of mercury switches that has been approved by the EPA Administrator according to § 63.10885(b)(2) and have prepared a plan for participation in the EPA approved program according to § 63.10885(b)(2)(iv)" and/or "The only materials from motor vehicles in the scrap charged to a metal melting furnace at this facility are materials recovered for their specialty alloy content in accordance with § 63.10885(b)(3) which are not reasonably expected to contain mercury switches" and/or "This facility complies with the requirements for scrap that does not contain motor vehicle

<b>For. . .</b>	<b>Your notification of compliance status required by § 63.9(h) must include this certification of compliance, signed by a responsible official:</b>
	scrap in accordance with § 63.10885(b)(4)."
Each new or existing affected source classified as a large foundry and subject to § 63.10886	"This facility complies with the no methanol requirement for the catalyst portion of each binder chemical formulation for a furfuryl alcohol warm box mold or core making line according to § 63.10886."
Each new or existing affected source classified as a large foundry and subject to § 63.10895(b)	"This facility operates a capture and collection system for each emissions source subject to this subpart according to § 63.10895(b)."
Each existing affected source classified as a large foundry and subject to § 63.10895(c)(1)	"This facility complies with the PM or total metal HAP emissions limit in § 63.10895(c) for each metal melting furnace or group of all metal melting furnaces based on a previous performance test in accordance with § 63.10898(a)(1)."
Each new or existing affected source classified as a large foundry and subject to § 63.10896(a)	"This facility has prepared and will operate by an operation and maintenance plan according to § 63.10896(a)."
Each new or existing (if applicable) affected source classified as a large foundry and subject to § 63.10897(d)	"This facility has prepared and will operate by a site-specific monitoring plan for each bag leak detection system and submitted the plan to the Administrator for approval according to § 63.10897(d)(2)."

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

**Technical Support Document (TSD) for a Significant Permit Revision to a  
Federally Enforceable State Operating Permit (FESOP)**

<b>Source Description and Location</b>
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<b>Source Name:</b> <b>Source Location:</b> <b>County:</b> <b>SIC Code:</b>  <b>Operation Permit No.:</b> <b>Operation Permit Issuance Date:</b> <b>Significant Permit Revision No.:</b> <b>Permit Reviewer:</b>	<b>Muncie Casting Corporation</b> <b>1406 East 18th Street, Muncie, IN 47302</b> <b>Delaware</b> <b>3365 (Aluminum Foundries), 3321 (Gray and Ductile Iron Foundries)</b>  <b>F035-29148-00061</b> <b>February 8, 2011</b> <b>F035-32941-00061</b> <b>Sarah Street</b>
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On March 12, 2013, the Office of Air Quality (OAQ) received an application from Muncie Casting Corporation related to a modification to an existing stationary aluminum and gray and ductile iron foundry.

<b>Existing Approvals</b>
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The source was issued FESOP Second Renewal No. 035-29148-00061 on February 8, 2011.

<b>County Attainment Status</b>
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The source is located in Delaware County.

Pollutant	Designation
SO <sub>2</sub>	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O <sub>3</sub>	Attainment effective January 3, 2006, for the Muncie area, including Delaware County, for the 8-hour ozone standard. <sup>1</sup>
PM <sub>10</sub>	Unclassifiable effective November 15, 1990.
NO <sub>2</sub>	Cannot be classified or better than national standards.
Pb	Nonattainment effective December 31, 2010, for a portion of the city of Muncie, Indiana bounded to the north by West Street/Hines Road, to the east by Cowan Road, to the south by West Fuson Road, and to the west by a line running south from the eastern edge of Victory Temple's driveway to South Hoyt Avenue and then along South Hoyt Avenue. Unclassifiable or attainment effective December 31, 2011, for the remainder of the county.
<sup>1</sup> Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.	

- (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. Delaware 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<sub>2.5</sub>**  
Delaware County has been classified as attainment for PM<sub>2.5</sub>. On May 8, 2008 U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM<sub>2.5</sub> 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<sub>2.5</sub> significant level at ten (10) tons per year. This rule became effective, June 28, 2011. Therefore, direct PM<sub>2.5</sub> and SO<sub>2</sub> 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**  
Delaware 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.

Note: This source is not located in the designated nonattainment area in Delaware County for Pb.

### Fugitive Emissions

The Permittee owns and operates a stationary aluminum and gray and ductile iron foundry.

Since this source is classified as a secondary metal production plant, it is considered one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7. Therefore, fugitive emissions are counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Note: For the aluminum foundry, 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. However, since this source operates an iron foundry that is classified as a secondary metal production plant, source-wide fugitive emissions are counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

### Status of the Existing Source

In FESOP Second Renewal No. 035-29148-00061 on February 8, 2011, there were several errors in calculating the maximum unlimited potential to emit that have been corrected with this Significant Permit Revision. Further, it was incorrectly noted in this renewal that the potential to emit (as defined in 326 IAC 2-7-1(29)) of all criteria pollutants is less than 100 tons per year, but that the Permittee has chosen to retain FESOP status rather than transition to an MSOP. With this Significant Permit Revision, the errors in maximum capacities of a number of emission units have been corrected. This table reflects the updated unrestricted potential emissions of the source:

Unrestricted Potential Emissions	
Pollutant	Tons/year
PM	1,617.58
PM <sub>10</sub>	421.77
PM <sub>2.5</sub>	421.77
SO <sub>2</sub>	4.42
NO <sub>x</sub>	1.61
VOC	90.52
CO	229.63

Unrestricted Potential Emissions	
Pollutant	Tons/year
GHGs as CO <sub>2</sub> e	1,881.78
Single HAP	7.63
Total HAP	3.95 (Benzene)

- (a) The potential to emit (PTE) (as defined in 326 IAC 2-7-1(29)) of PM<sub>10</sub>, PM<sub>2.5</sub>, and CO are each greater than one hundred (100) tons per year. The PTE of all other regulated criteria pollutants are each less than one hundred (100) tons per year. The source would have been subject to the provisions of 326 IAC 2-7. However, the source has been issued a Federally Enforceable State Operating Permit (FESOP) (326 IAC 2-8), because the source has limited emissions to less than the Title V major source threshold levels.
- (b) The potential to emit (PTE) (as defined in 326 IAC 2-7-1(29)) greenhouse gases (GHGs) is less than the Title V subject to regulation threshold of one hundred thousand (100,000) tons of CO<sub>2</sub> equivalent emissions (CO<sub>2</sub>e) per year.
- (c) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is less than twenty-five (25) tons per year.

The table below summarizes the potential to emit of the entire source, prior to the proposed revision, after consideration of all enforceable limits established in the effective permits:

This PTE table is from the TSD of FESOP Renewal No. F035-29148-00061, issued on February 8, 2011.



Potential To Emit of the Entire Source Prior to Revision (tons/year)									
IRON FOUNDRY									
Process/ Emission Unit	PM	PM10*	PM2.5	SO <sub>2</sub>	NOx	VOC	CO	Total HAPs	Worst Single HAP
Charge Handling (EU1) <sup>(1)</sup>	0.30	0.18	0.18	0	0	0	0	0	0
Two Electric Melting Furnaces (EU2) <sup>(1)</sup>	0.45	0.43	0.43	0	0	0	0	0	0
Magnesium Treatment Operation (iron foundry) (EU3) <sup>(1)</sup>	0.18	0.18	0.18	0	0	0	0	0	0
Pouring/Casting Operation (EU4) Casting/Cooling Operation (EU5) <sup>(1)(2)</sup>	2.1	1.03	1.03	0.01	0.01	0.07	3.50	See EU10, EU11 and EU12 for Emissions	See EU10, EU11 and EU12 for Emissions
Shakeout Operation (EU6) <sup>(1)(2)</sup>	1.6	1.12	1.12	0	0	0.60			
ALUMINUM FOUNDRY									
Process/ Emission Unit	PM	PM10*	PM2.5	SO <sub>2</sub>	NOx	VOC	CO	Total HAPs	Worst Single HAP
Seven (7) electric melting furnaces, and one (1) 700 lb furnace (EU7) <sup>(4)</sup> and One (1) natural gas fired melting furnace (EU8) <sup>(4)(5)</sup>	11.44	10.24	10.24	0	0	1.20	0	0	0
Magnesium Treatment Operation (aluminum) (EU9) <sup>(4)</sup>	9.21	9.21	9.21	0	0	0	0	0	0
Pouring/Casting Operation (EU10) and Casting/Cooling Operation (EU11) <sup>(2)(4)</sup>	25.29	12.40	12.40	0.12	0.06	0.84	42.15	6.59 (includes EU4, EU5, and EU6)	6.59 (includes EU4, EU5, and EU6)
Shakeout Operation (EU12) <sup>(2)(4)</sup>	19.27	13.49	13.49	-	-	7.23			
SAND HANDLING OPERATIONS									
Process/ Emission Unit	PM	PM10*	PM2.5	SO <sub>2</sub>	NOx	VOC	CO	Total HAPs	Worst Single HAP
Mechanical Sand Reclamation Unit (EU13) <sup>(6)</sup>	17.42	2.61	2.61	0	0	0	0	0	0
Thermal Sand Reclamation Unit (EU17) <sup>(5)(6)</sup>	0.48	0.48	0.48	0.01	0.88	0.05	0.74	0.02	0
Strong Scott Sand Mixer (EU 18), Kloster Sand Mixer (EU19), Palmer Core Mixer #1 (EU20), Palmer Core Mixer #2 (EU21) <sup>(10)</sup>	1.74	0.26	0.26	0	0	0	0	0	0
CORE AND MOLD MAKING OPERATIONS									
Process/ Emission Unit	PM	PM10*	PM2.5	SO <sub>2</sub>	NOx	VOC	CO	Total HAPs	Worst Single HAP
CB-22 Core machine (EU22) and Dependable 420 Core Machine (EU23) <sup>(11)</sup>	0	0	0	3.75	0	10.49	0	1.03	0.60 Formaldehyde
Three (3) U-180 Core Machines and two (2) Horizontal Bottom Blow Core Making Operations (EU24) <sup>(3)</sup>	0	0	0	0	0	27.50	0	0	0
CLEANING AND FINISHING OPERATIONS									
Process/ Emission Unit	PM	PM10*	PM2.5	SO <sub>2</sub>	NOx	VOC	CO	Total HAPs	Worst Single HAP
GOFF Steel Shot Blast Machine (EU14) <sup>(7)</sup>	3.33	0.33	0.33	0	0	0	0	0	0
Small Aluminum Shot Blast Machine (EU15) <sup>(8)</sup>	0.50	0.05	0.05	0	0	0	0	0	0

Potential To Emit of the Entire Source Prior to Revision (tons/year)									
Sand Blaster Machine (EU16) <sup>(9)</sup>	0.50	0.05	0.05	0	0	0	0	0	0
MISCELLANEOUS ACTIVITIES									
Process/ Emission Unit	PM	PM10*	PM2.5	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	Total HAPs	Worst Single HAP
One (1) Surface Coating Spray Application Process (EU26)	0.51	0.51	0.51	-	-	2.64	-	0.07	0
Fugitive Outdoor Waste Sand Storage and Handling (EUF1)	0	0	0	0	0	0	0	0	0
<b>Total PTE of Entire Source</b>	<b>94.31</b>	<b>52.57</b>	<b>52.57</b>	<b>3.90</b>	<b>0.95</b>	<b>50.62</b>	<b>45.62</b>	<b>7.71</b>	<b>0.60</b>
Title V Major Source Thresholds	NA	100	100	100	100	100	100	25	10
PSD Major Source Thresholds	100	100	100	100	100	100	100	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 (PM <sub>10</sub> ), not particulate matter (PM), is considered as a "regulated air pollutant".									

Notes:

- (1) Emissions from the iron melting and casting process are based on a limited iron throughput of 1,000 tons per twelve (12) consecutive month period.
  - (2) HAP emissions from pouring, cooling and shakeout are based on the total source-wide binder usage and, therefore, represent combined emissions from pouring, cooling and shakeout at both the iron and aluminum foundries.
  - (3) Emissions from the three U-180 core machines and the two Horizontal Bottom Blow core machines are based on a maximum resin bonded sand throughput of 1,000,000 pounds per twelve (12) consecutive month period.
  - (4) Emissions from the aluminum melting and casting process are based on a limited aluminum throughput of 12,042 tons per twelve (12) consecutive month period.
  - (5) Emissions from the one (1) 300 pound melt furnace and the thermal sand reclamation include emissions from natural gas combustion.
  - (6) Emissions from mechanical sand reclamation and thermal sand reclamation are each based on a maximum sand throughput of 9,675 tons per twelve (12) consecutive month period.
  - (7) Emissions from the GOFF shotblast machine are based on a maximum metal (aluminum and iron) throughput of 7,825 tons per twelve (12) consecutive month period.
  - (8) Emissions from the small aluminum shotblast machine are based on a maximum metal (aluminum and iron) throughput of 1,174 tons per twelve (12) consecutive month period.
  - (9) Emissions from the sand blaster machine are based on a maximum metal (aluminum and iron) throughput of 1,174 tons per twelve (12) consecutive month period.
  - (10) Emissions from sand and core mixers are based on a maximum sand throughput of 9,675 tons per twelve (12) consecutive month period.
  - (11) As stated in the original FESOP, SO<sub>2</sub> gas emissions from these core machines are from the Iso-set activator component.
- (a) This existing source is not a major stationary source, under PSD (326 IAC 2-2), because no attainment regulated pollutant is emitted at a rate of 100 tons per year or more, and it is one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1).
- (b) This existing source is not a major source of HAPs, as defined in 40 CFR 63.41, because the unlimited potential to emit HAPs are less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA).

<b>Description of Proposed Revision</b>
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The Office of Air Quality (OAQ) has reviewed an application, submitted by Muncie Casting Corporation on March 12, 2013 relating to the following:

- (1) Muncie Casting Corporation is requesting approval to construct and operate one (1) new GOFF shotblast machine for cleaning metal castings, to be located in a new expansion onto the existing Iron Foundry building. The new shotblast machine will be identical to the existing GOFF shotblast machine using steel media, but an annual shotblasting throughput limit is required for this source to retain its minor source status under PSD. As a result, the existing throughput limitation for the existing shotblast machine will need to be revised to accommodate the new unit. This change is a Title I change. Note that the addition of this new shotblast machine does not affect the source's compliance status with the Iron and Steel Foundry Area Source NESHAP (Subpart ZZZZZ).
- (2) Muncie Casting Corporation has indicated that the maximum throughput capacities for the existing cleaning and finishing operations are incorrect as listed in FESOP Renewal No. F035-29148-00061, issued on February 8, 2011. The maximum metal melted in both the iron and aluminum foundries combined is 7.79 tons/hr (EU2 = 0.45 tons/hr, EU7 = 7.25 tons/hr, and EU8 = 0.09 tons/hr). The maximum metal melted at the iron and aluminum foundries was revised in Minor Permit Revision No. F035-24428-00061 issued on May 25, 2007, but this revision was not carried over in the FESOP Renewal No. F035-29148-00061.

Therefore, the maximum process capacities for the shot blasting operations should be as follows:

EU14 = 7.79 tons/hr x 100% Allocation to this Unit x 60% Yield Rate = 4.67 tons/hr

EU15 = 7.79 tons/hr x 15% Allocation to this Unit x 60% Yield Rate = 0.70 tons/hr

EU16 = 7.79 tons/hr x 15% Allocation to this Unit x 60% Yield Rate = 0.70 tons/hr

New EU27 = 7.79 tons/hr x 100% Allocation to this Unit x 60% Yield Rate = 4.67 tons/hr

Note: Unit EU27 is being added as described in (a) above.

As noted in the "Status of the Existing Source" section above in this TSD, the unlimited potential to emit (PTE) calculations need to be revised based on this updated information. Further, the allowable PM emissions as required under 326 IAC 6-3-2 will be re-evaluated based on this updated information.

- (3) Muncie Casting Corporation has noted that the following emission units and control devices will be relocated from the Aluminum foundry into the new expansion on the Iron Foundry Building:

Cleaning/Finishing Operations

- (a) One (1) GOFF steel shot blast machine, identified as EU14, installed in 1993, with a throughput capacity of 4.67 tons of aluminum or iron castings per hour and equipped with a baghouse, exhausting through Stack 4.
- (b) One (1) small aluminum shot blast machine, identified as EU15, installed in 1993, with a throughput capacity of 0.70 tons of aluminum or iron castings per hour and equipped with a Viking baghouse exhausting inside the building.
- (c) One (1) sand blaster machine, identified as EU16, installed in 1980, with a throughput capacity of 0.70 tons of aluminum or iron castings per hour and equipped with a Blast-It-All baghouse exhausting inside the building.

Note: The maximum capacities of these units are corrected as noted in (2) above. The new GOFF steel shot blast machine, identified as EU27 will also be located in the new expansion on the Iron Foundry Building, as noted in (1) above. This change in located does not affect the throughput capacities of any existing operations.

- (4) The baghouse controlling the existing GOFF shotblast machine currently vents to the atmosphere; however, with the relocation of the existing unit (noted in (3) above) and the construction of the new unit (noted in (1) above) in the new expansion area of the Iron Foundry, the baghouses controlling these units will have the ability to exhaust either inside the building or outdoors. Therefore, the permit language in the Visible Emissions Notations section for these units will state that the visible emissions notations are only required when these units are exhausting outside the building. Note that the other two existing shotblast units, EU15 and EU16 will continue to exhaust inside the building only.
- (5) Muncie Casting Corporation is requesting that the insignificant activity unit description for the existing heat treat furnace be updated. Currently, the unit description states: "One (1) electric heat treat furnace with no emissions." In fact, all of the electric heat treat furnaces include: one (1) large heat treat furnace, one (1) medium heat treat furnace, and one (1) small heat treat furnace. The emissions resulting from the operation of these emission units is still considered to be negligible. These units will be relocated to the Iron Foundry expansion area. This change does not affect the potential to emit of the source or any State or Federal rule applicability.
- (6) The magnesium treatment operation in the aluminum foundry identified as EU9 is currently listed with a maximum capacity of 1.17 tons/hour; however the correct maximum capacity of this unit is 6.24 tons/hr. This change in process throughput was approved in Minor Permit Revision No. F035-24428-00061 issued on May 25, 2007, but was not carried over to the FESOP Second Renewal No. F035-29148-00061, issued on February 8, 2011.

Note: This maximum capacity is based on 85% of the total aluminum furnace throughput, which is 7.34 tons/hr (based upon both EU7 and EU8). Magnesium treatment is only performed on a maximum of 85% of the total aluminum melted. This change affects the unlimited potential to emit calculations for the source - see Appendix A for detailed emissions calculations. This change does not affect the PTE After Issuance, considering all FESOP limits. This change does not affect the allowable PM emissions under 326 IAC 6-3-2, which is determined on the process weight rate of the magnesium usage.

- (7) The maximum capacities for the other units in the Aluminum Foundry also need to be updated to be based on the total metal throughput to the aluminum furnaces (7.34 tons/hr based upon EU7 and EU8, as approved in Minor Permit Revision No. F035-24428-00061 issued on May 25, 2007):
  - (a) The pouring/casting operation identified as EU10 has a maximum capacity of 7.34 tons/hr, not 1.99 tons/hr.
  - (b) The casting cooling operation identified as EU11 has a maximum capacity of 7.34 tons/hr, not 1.99 tons/hr.
  - (c) The shakeout operation identified as EU12 has a maximum capacity of 7.34 tons/hr, not 1.99 tons/hr.

Note: This change affects the unlimited potential to emit calculations - see Appendix A for details. This change does not affect the PTE After Issuance, considering all FESOP limits. The allowable PM emissions under 326 IAC 6-3-2 will be re-evaluated based on this information.

- (8) The maximum capacity for the mechanical sand reclamation unit (EU13) should be 6.0 tons of sand per hour, not 1.5 tons per hour as listed in the current permit. This change in process throughput was approved in Minor Permit Revision No. F035-24428-00061 issued on May 25, 2007, but was inadvertently not carried over to the FESOP Renewal No. F035-29148-00061, issued on February 8, 2011.

Note: This change does not affect the potential to emit calculations. The process weight rate for applicability under 326 IAC 6-3-2 was determined correctly.

- (9) The source installed four (4) new core shooters in the Iron Foundry to make very small cores for certain parts manufactured on an infrequent basis, which were approved for construction in 2007 with Minor Permit Revision No. F035-24428-00061 issued on May 25, 2007. Each of the four core shooters has a maximum capacity of 100 pounds of shell sand per day; emissions calculations conducted with Minor Permit Revision No. F035-24428-00061 show the emissions from these units is insignificant. While these units were approved for construction in Minor Permit Revision No. F035-24428-00061, the change was not carried over in FESOP Renewal No. F035-29148-00061, issued on February 8, 2011.
- (10) Muncie Casting Corporation is requesting the emission unit description for the sand silos and sand mixers be revised for clarity, to be described as one sand handling system. The emissions calculations already reflect the operation as one system; the potential to emit (PTE) for the sand mixers includes the sand handling through the three storage silos and the four sand mixers (see Appendix A).
- (11) The outdoor sand handling and storage operation was approved for removal from the permit in Minor Permit Revision No. F035-24428-00061 issued on May 25, 2007, but this change was not carried over in the FESOP Renewal No. F035-29148-00061, issued on February 8, 2011. The following justification was provided in Technical Support Document to Minor Permit Revision No. F035-24428-00061: "Muncie Casting is phasing out the outdoor sand handling and storage operation because the facility has installed mechanical and thermal sand reclamation units to internally reclaim the sand. As a result trivial amounts of used sand are removed from the sand handling system and stored outside in covered roll-off boxes while waiting for disposal. It should also be noted that the source is under an IDEM Agreed Order to remove all waste foundry sand currently stored outside the facility on the ground. This sand was generated before the reclamation units were installed, and the deadline for removal of this sand is October 2007."

The following is a list of the new emission unit and pollution control device:

#### Cleaning/Finishing Operations

- (a) One (1) GOFF steel shot blast machine, identified as EU27, approved for construction in 2013, with a maximum throughput capacity of 4.67 tons of aluminum or iron casting per hour, equipped with a baghouse for control, and exhausting to either Stack 13 or inside the building;

The following is a list of the additional equipment changes with this Significant Permit Revision. These units are not considered new or modified emission units, nor are any units considered unpermitted. Deleted language appears as ~~strike through~~ text and new language appears as **bold** text:

#### Aluminum Foundry

- (a) One (1) magnesium treatment in the aluminum foundry, identified as EU9, installed in 1992, with a throughput capacity of 1.45 tons of magnesium per hour, ~~4.47~~ **6.24** tons of aluminum per hour. Magnesium treatment is only performed on a maximum of 85% of the total aluminum melted.

- (b) One (1) pouring/casting operation identified as EU10, installed in 1980, with a throughput capacity of ~~4.99~~ **7.34** tons of aluminum per hour.
- (c) One (1) casting cooling operation identified as EU11, installed in 1980, with a throughput capacity of ~~4.99~~ **7.34** tons of aluminum per hour.
- (d) One (1) shakeout operation identified as EU12, installed in 1980, with a throughput capacity of ~~4.99~~ **7.34** tons of aluminum per hour.

#### Sand Handling Operations

- (e) **Enclosed Sand System, pneumatically conveyed, with a maximum throughput capacity of 236,520 tons/year of sand (using the combined maximum process capacity of the four sand mixers) and maximum throughput capacity of 61,320 tons/year (using the combined maximum process capacity of the mechanical and thermal sand reclamation units) for the sand reclamation process, consisting of the following units:**
  - (1) Three (3) sand storage silos, one silo with a capacity of 10 tons and two silos with capacities of 40 tons each, equipped with bin-top filter banks and exhausting through Stacks #9, #10 and #11 ~~with a throughput of 1,462.25 tons of sand per year total.~~
  - (2) One (1) Strong Scott sand mixer, identified as EU18, utilizing a phenolic urethane nobake binder system, installed in 1980, with a throughput capacity of 6.0 tons of sand per hour.
  - (3) One (1) Kloster sand mixer, identified as EU19, utilizing a phenolic urethane nobake binder system, installed in 1994, with a throughput capacity of 9.0 tons of sand per hour.
  - (4) One (1) Palmer core mixer #1, identified as EU20, utilizing a phenolic urethane nobake binder system, installed in 1994, with a throughput capacity of 6.0 tons of sand per hour.
  - (5) One (1) Palmer core mixer #2, identified as EU21, utilizing an acrylic-epoxy cold box binder system, installed in 1998, with a throughput capacity of 6.0 tons of sand per hour.
  - (6) One (1) mechanical sand reclamation unit, identified as EU13, installed in 1991, with a throughput capacity of ~~4.5~~ **6.0** tons of sand per hour.
  - (7) One (1) thermal sand reclamation unit, identified as EU17, equipped with two (2) natural gas-fired burners, rated at 1.0 million British thermal units per hour each, equipped with a baghouse, installed in 1998, exhausted through Stack 12, with a throughput capacity of 1 ton of sand per hour.

#### Cleaning/Finishing Operations

- (f) One (1) GOFF steel shot blast machine, identified as EU14, equipped with a baghouse, installed in 1993, exhausted through Stack 4 **or inside the building**, with a throughput capacity of ~~4.096~~ **4.67** tons of aluminum or iron casting per hour.
- (g) One (1) small aluminum shot blast machine identified as EU15, equipped with a Viking baghouse, installed in 1993, exhausted inside the building, with a throughput capacity of

~~0.46~~ **0.70** tons of aluminum or iron castings per hour.

- (h) One (1) sand blaster machine, identified as EU16, equipped with a Blast-It-All baghouse, installed in 1980, exhausted inside the building, with a throughput capacity of ~~0.46~~ **0.70** tons of aluminum or iron castings per hour.

#### Insignificant Activities

- (i) One (1) **large** electric heat treat furnace, **one (1) medium electric heat treat furnace, and one (1) small electric heat treat furnace, each** with ~~no~~ negligible emissions.
- (j) **Four (4) core shooters, constructed in 2007, each with a maximum capacity of 100 pounds of shell sand per day, each with negligible emissions.**

<b>Enforcement Issues</b>
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There are no pending enforcement actions related to this revision.

<b>Emission Calculations</b>
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See Appendix A of this TSD for detailed emission calculations.

- (1) The unlimited PTE has been updated to be based on the maximum throughput capacity for each emission unit, not based on the limited throughput, as previously calculated in FESOP Second Renewal No. F035-29148-00061, issued on February 8, 2011. The Technical Support Document to Renewal No. F035-29148-00061 noted that the potential to emit (as defined in 326 IAC 2-7-1(29)) of all criteria pollutants is less than 100 tons per year, but that the Permittee has chosen to retain FESOP status rather than transition to an MSOP; however, the unlimited emissions were incorrectly calculated based on limited throughputs. Note that this source is correctly permitted as a FESOP.
- (2) Pursuant to 326 IAC 2-7-1(39), starting July 1, 2011, greenhouse gases (GHGs) emissions are subject to regulation at a source with a potential to emit (PTE) 100,000 tons per year or more of CO2 equivalent emissions (CO2e). Therefore, CO2e emissions have been calculated for this source. Based on the calculations, the unlimited PTE GHGs from the entire source is less than 100,000 tons of CO2e per year (see TSD Appendix A for detailed calculations). This did not require any changes to the permit.
- (3) In the FESOP Second Renewal No. F035-29148-00061, emissions from the natural gas combustion for the natural gas-fired melting furnace, identified as EU8, and the natural gas-fired thermal sand reclamation unit, identified as EU17, were omitted. These emissions will be included in this Significant Permit Revision.
- (4) The emissions from fugitive unpaved roads were also omitted from the FESOP Second Renewal No. F035-29148-00061, and are included with this Significant Permit Revision. Fugitive emissions are counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.
- (5) In FESOP First Renewal No. 035-20291-00061 issued on January 20, 2006, the following note was included for justification to use 90% control efficiency for the sand mixers. This explanation is included in this TSD for clarity, since the source is revising the descriptive information for these emission units to provide clarity for the sand handling operations.

The sand mixers and the core making machines do not have PM control devices. Even though there is not a PM control device physically attached to each of the four sand mixers, a 90% control efficiency is included for each mixer in the emission calculations. The source's rationale for using this control efficiency as included in the original FESOP is as follows:

- (a) The thermal reclamation unit is used to remove the fines from 100% of the new virgin sand coming into the facility, and so there are very little fines left by the time this new sand reaches the sand mixers.
- (b) The spent sand that is recycled from shakeout back into the sand mixing / handling process must first pass through a sand storage silo that contains a dry filter bank. Therefore, any fines generated from this spent sand is removed prior to being fed into the mixers. In addition, this spent sand would still contain some of the resin material that was not completely burned off during pouring, cooling and shakeout. Although the spent sand is dry, it is contained within completely enclosed systems all the way from the mechanical sand reclamation unit to the point at the mixer heads where the binders and catalyst are added.
- (c) The sand mixers themselves are completely enclosed, thereby eliminating the opportunity for PM to escape into the plant.
- (d) The sand being processed through the mixers is already moist because it has been treated with liquid resin or binder materials. Since this sand is already wet, there is little opportunity for fines to be generated within this process operation.
- (e) If there was as much PM being generated at these sand mixers as indicated by AP-42, the facility would quickly become overcome by airborne dust and the visibility in the plant would be too poor to continue operations. This is not the case based upon actual conditions within this facility.
- (f) The AP-42 emission factor for sand handling assumes a dry, fine grained material is being handled and processed, which is not the case in these mixers.

Because of these factors, the applicant believes that it is appropriate to use a 90% control efficiency. IDEM concurs with the applicant's rationale, and therefore the 90% control efficiency has been used for these mixers, EU18 through EU21.

<b>Permit Level Determination – FESOP Revision</b>
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The following table is used to determine the appropriate permit level under 326 IAC 2-8.11.1. This table reflects the PTE before controls of the proposed revision. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Process/ Emission Unit	PTE of Proposed Revision (tons/year)									
	PM	PM10	PM2.5	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	GHGs as CO <sub>2</sub> e	Total HAPs	Worst Single HAP
GOFF Shotblast Machine EU27	348.03	34.80	34.80	0	0	0	0	0	0	0
<b>Total PTE of Proposed Revision</b>	<b>348.03</b>	<b>34.80</b>	<b>34.80</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

- (1) Pursuant to 326 IAC 2-8-11.1(f)(1)(E), this FESOP is being revised through a FESOP Significant Permit Revision because the proposed revision is not an Administrative Amendment or Minor Permit revision and the proposed revision involves the construction of new emission units with potential to emit greater than or equal to twenty-five (25) tons per year of the following pollutants: PM, PM10, or direct PM2.5.



- (2) In addition, pursuant to 326 IAC 2-8-11.1(g), this FESOP is being revised through a FESOP Significant Permit Revision because the proposed revision requires adjustment of the FESOP emission limitations.

**PTE of the Entire Source After Issuance of the FESOP Revision**

The table below summarizes the potential to emit of the entire source (reflecting adjustment of existing limits), with updated emissions shown as **bold** values and previous emissions shown as ~~strike through~~ values.

Potential To Emit of the Entire Source to Accommodate the Proposed Revision (tons/year)										
IRON FOUNDRY										
Process/ Emission Unit	PM	PM10*	PM2.5	SO <sub>2</sub>	NOx	VOC	CO	GHGs as CO2e**	Total HAPs	Worst Single HAP
Charge Handling (EU1) <sup>(1)</sup>	0.30	0.18	0.18	0	0	0	0	0	0	0
Two Electric Melting Furnaces (EU2) <sup>(1)</sup>	0.45	0.43	0.43	0	0	0	0	0	0	0
Magnesium Treatment Operation (iron foundry) (EU3) <sup>(1)</sup>	0.18	0.18	0.18	0	0	0	0	0	0	0
Pouring/Casting Operation (EU4) Casting/Cooling Operation (EU5) <sup>(1)(2)</sup>	2.1	1.03	1.03	0.01	0.01	0.07	3.50	5.00	See EU10, EU11 and EU12 for Emissions	See EU10, EU11 and EU12 for Emissions
Shakeout Operation (EU6) <sup>(1)(2)</sup>	1.6	1.12	1.12	0	0	0.60				
ALUMINUM FOUNDRY										
Process/ Emission Unit	PM	PM10*	PM2.5	SO <sub>2</sub>	NOx	VOC	CO	GHGs as CO2e	Total HAPs	Worst Single HAP
Seven (7) electric melting furnaces, and one (1) 700 lb furnace (EU7) <sup>(4)</sup> and One (1) natural gas fired melting furnace (EU8) <sup>(4)(5)</sup>	11.44	10.24	10.24	0	0	1.20	0	0	0	0
Magnesium Treatment Operation (aluminum) (EU9) <sup>(4)</sup>	9.21	9.21	9.21	0	0	0	0	0	0	0
Pouring/Casting Operation (EU10) and Casting/Cooling Operation (EU11) <sup>(2)(4)</sup>	25.29	12.40	12.40	0.12	0.06	0.84	42.15	60.21	6.59 (includes EU4, EU5, and EU6)	3.95 Benzene (includes EU4, EU5, and EU6)
Shakeout Operation (EU12) <sup>(2)(4)</sup>	19.27	13.49	13.49	-	-	7.23				
SAND HANDLING OPERATIONS										
Process/ Emission Unit	PM	PM10*	PM2.5	SO <sub>2</sub>	NOx	VOC	CO	GHGs as CO2e	Total HAPs	Worst Single HAP
Mechanical Sand Reclamation Unit (EU13) <sup>(6)</sup>	17.42	2.61	2.61	0	0	0	0	0	0	0
Thermal Sand Reclamation Unit (EU17) <sup>(5)(6)</sup>	0.48 0.01	0.48	0.48	0.01 0	0.88 0	0.05 0	0.74 0	0	0.02 0	0
Strong Scott Sand Mixer (EU 18), Kloster Sand Mixer (EU19), Palmer Core Mixer #1 (EU20), Palmer Core Mixer #2 (EU21), and Sand Storage Silos <sup>(10)</sup>	1.74	0.26	0.26	0	0	0	0	0	0	0
CORE AND MOLD MAKING OPERATIONS										
Process/ Emission Unit	PM	PM10*	PM2.5	SO <sub>2</sub>	NOx	VOC	CO	GHGs as CO2e	Total HAPs	Worst Single HAP

Potential To Emit of the Entire Source to Accommodate the Proposed Revision (tons/year)										
CB-22 Core machine (EU22) <sup>(11)</sup>	0	0	0	1.88	0	5.25	0	0	1.03	0.60 Formaldehyde
CB-22 Core machine (EU22) and Dependable 420 Core Machine (EU23) <sup>(11)</sup>	0	0	0	<del>3.75</del> 1.88	0	<del>10.49</del> 5.25	0	0		
Three (3) U-180 Core Machines and two (2) Horizontal Bottom Blow Core Making Operations (EU24) <sup>(3)</sup>	0	0	0	0	0	27.50	0	0	0	0
CLEANING AND FINISHING OPERATIONS										
Process/ Emission Unit	PM	PM10*	PM2.5	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	GHGs as CO <sub>2</sub> e	Total HAPs	Worst Single HAP
GOFF Steel Shot Blast Machine (EU14) <sup>(7)</sup>	<del>3.33</del> 1.66	<del>0.33</del> 3.33	<del>0.33</del> 3.33	0	0	0	0	0	0	0
GOFF Steel Shot Blast Machine (EU27) <sup>(7)</sup>	1.66	3.33	3.33	0	0	0	0	0	0	0
Small Aluminum Shot Blast Machine (EU15) <sup>(8)</sup>	0.50	<del>0.05</del> 1.00	<del>0.05</del> 1.00	0	0	0	0	0	0	0
Sand Blaster Machine (EU16) <sup>(9)</sup>	0.50	<del>0.05</del> 1.00	<del>0.05</del> 1.00	0	0	0	0	0	0	0
MISCELLANEOUS ACTIVITIES										
Process/ Emission Unit	PM	PM10*	PM2.5	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	GHGs as CO <sub>2</sub> e	Total HAPs	Worst Single HAP
One (1) Surface Coating Spray Application Process (EU26)	0.51	0.51	0.51	0	0	<del>2.64</del> 2.28	0	0	<del>0.07</del> 0	0
Natural Gas Combustion	0.02	0.10	0.10	0.01	1.29	0.07	1.08	1,555.29	0.02	0.02 Hexane
Fugitive - Unpaved Roads Outdoor Waste Sand Storage and Handling (EU4)	0 1.32	0 0.34	0 0.03	0	0	0	0	0	0	0
<b>Total PTE of Entire Source</b>	<del>94.34</del> 95.18	<del>52.57</del> 61.22	<del>52.57</del> 60.92	3.90	<del>0.95</del> 1.35	<del>50.62</del> 50.28	<del>45.62</del> 46.73	1,620.50	<del>7.74</del> 7.63	<del>0.60</del> 3.95 Benzene
Title V Major Source Thresholds**	NA	100	100	100	100	100	100	NA	25	10
PSD Major Source Thresholds**	100	100	100	100	100	100	100	100,000	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 (PM <sub>10</sub> ), not particulate matter (PM), is considered as a "regulated air pollutant". **The 100,000 CO <sub>2</sub> e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.										

Notes:

- (1) Emissions from the iron melting and casting process are based on a limited iron throughput of 1,000 tons per twelve (12) consecutive month period.
- (2) HAP emissions from pouring, cooling and shakeout are based on the total source-wide binder usage and, therefore, represent combined emissions from pouring, cooling and shakeout at both the iron and aluminum foundries.
- (3) Emissions from the three U-180 core machines and the two Horizontal Bottom Blow core machines are based on a maximum resin bonded sand throughput of 1,000,000 pounds per twelve (12) consecutive month period.
- (4) Emissions from the aluminum melting and casting process are based on a limited aluminum throughput of 12,042 tons per twelve (12) consecutive month period.
- (5) Emissions from the one (1) 300 pound melt furnace and the thermal sand reclamation include emissions from natural gas combustion in the "Natural Gas Combustion" section.
- (6) Emissions from mechanical sand reclamation and thermal sand reclamation are each based on a maximum sand throughput of 9,675 tons per twelve (12) consecutive month period.
- (7) Emissions from each of the the GOFF shotblast machines are based on a maximum metal (aluminum and iron) throughput of ~~7,825~~ 3,912.60 tons per twelve (12) consecutive month period, each.
- (8) Emissions from the small aluminum shotblast machine are based on a maximum metal (aluminum and

- The table below summarizes the potential to emit of the entire source after issuance of this revision, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this FESOP permit revision, and only to the extent that the effect of the control equipment is made practically enforceable in the permit. (Note: the table below was generated from the above table, with bold text un-bolded and strikethrough text deleted)

Potential To Emit of the Entire Source After the Proposed Revision (tons/year)										
IRON FOUNDRY										
Process/ Emission Unit	PM	PM10*	PM2.5	SO <sub>2</sub>	NOx	VOC	CO	GHGs as CO2e**	Total HAPs	Worst Single HAP
Charge Handling (EU1) <sup>(1)</sup>	0.30	0.18	0.18	0	0	0	0	0	0	0
Two Electric Melting Furnaces (EU2) <sup>(1)</sup>	0.45	0.43	0.43	0	0	0	0	0	0	0
Magnesium Treatment Operation (iron foundry) (EU3) <sup>(1)</sup>	0.18	0.18	0.18	0	0	0	0	0	0	0
Pouring/Casting Operation (EU4) Casting/Cooling Operation (EU5) <sup>(1)(2)</sup>	2.1	1.03	1.03	0.01	0.01	0.07	3.50	5.00	See EU10, EU11 and EU12 for Emissions	See EU10, EU11 and EU12 for Emissions
Shakeout Operation (EU6) <sup>(1)(2)</sup>	1.6	1.12	1.12	0	0	0.60				
ALUMINUM FOUNDRY										
Process/ Emission Unit	PM	PM10*	PM2.5	SO <sub>2</sub>	NOx	VOC	CO	GHGs as CO2e	Total HAPs	Worst Single HAP
Seven (7) electric melting furnaces, and one (1) 700 lb furnace (EU7) <sup>(4)</sup> and One (1) natural gas fired melting furnace (EU8) <sup>(4)(5)</sup>	11.44	10.24	10.24	0	0	1.20	0	0	0	0
Magnesium Treatment Operation (aluminum) (EU9) <sup>(4)</sup>	9.21	9.21	9.21	0	0	0	0	0	0	0
Pouring/Casting Operation (EU10) and Casting/Cooling Operation (EU11) <sup>(2)(4)</sup>	25.29	12.40	12.40	0.12	0.06	0.84	42.15	60.21	6.59 (includes EU4, EU5, and EU6)	3.95 Benzene (includes EU4, EU5, and EU6)
Shakeout Operation (EU12) <sup>(2)(4)</sup>	19.27	13.49	13.49	-	-	7.23				
SAND HANDLING OPERATIONS										
Process/ Emission Unit	PM	PM10*	PM2.5	SO <sub>2</sub>	NOx	VOC	CO	GHGs as CO2e	Total HAPs	Worst Single HAP
Mechanical Sand Reclamation Unit (EU13) <sup>(6)</sup>	17.42	2.61	2.61	0	0	0	0	0	0	0
Thermal Sand Reclamation Unit (EU17) <sup>(5)(6)</sup>	0.01	0.48	0.48	0	0	0	0	0	0	0
Strong Scott Sand Mixer (EU 18), Kloster Sand Mixer (EU19), Palmer Core Mixer #1 (EU20), Palmer Core Mixer #2 (EU21), and Sand Storage Silos <sup>(10)</sup>	1.74	0.26	0.26	0	0	0	0	0	0	0
CORE AND MOLD MAKING OPERATIONS										

<b>Potential To Emit of the Entire Source After the Proposed Revision (tons/year)</b>										
<b>Process/ Emission Unit</b>	<b>PM</b>	<b>PM10*</b>	<b>PM2.5</b>	<b>SO<sub>2</sub></b>	<b>NOx</b>	<b>VOC</b>	<b>CO</b>	<b>GHGs as CO<sub>2</sub>e</b>	<b>Total HAPs</b>	<b>Worst Single HAP</b>
CB-22 Core machine (EU22) <sup>(11)</sup>	0	0	0	1.88	0	5.25	0	0	1.03	0.60 Formaldehyde
Dependable 420 Core Machine (EU23) <sup>(11)</sup>	0	0	0	1.88	0	5.25	0	0		
Three (3) U-180 Core Machines and two (2) Horizontal Bottom Blow Core Making Operations (EU24) <sup>(3)</sup>	0	0	0	0	0	27.50	0	0	0	0
<b>CLEANING AND FINISHING OPERATIONS</b>										
<b>Process/ Emission Unit</b>	<b>PM</b>	<b>PM10*</b>	<b>PM2.5</b>	<b>SO<sub>2</sub></b>	<b>NOx</b>	<b>VOC</b>	<b>CO</b>	<b>GHGs as CO<sub>2</sub>e</b>	<b>Total HAPs</b>	<b>Worst Single HAP</b>
GOFF Steel Shot Blast Machine (EU14) <sup>(7)</sup>	1.66	3.33	3.33	0	0	0	0	0	0	0
GOFF Steel Shot Blast Machine (EU27) <sup>(7)</sup>	1.66	3.33	3.33	0	0	0	0	0	0	0
Small Aluminum Shot Blast Machine (EU15) <sup>(8)</sup>	0.50	1.00	1.00	0	0	0	0	0	0	0
Sand Blaster Machine (EU16) <sup>(9)</sup>	0.50	1.00	1.00	0	0	0	0	0	0	0
<b>MISCELLANEOUS ACTIVITIES</b>										
<b>Process/ Emission Unit</b>	<b>PM</b>	<b>PM10*</b>	<b>PM2.5</b>	<b>SO<sub>2</sub></b>	<b>NOx</b>	<b>VOC</b>	<b>CO</b>	<b>GHGs as CO<sub>2</sub>e</b>	<b>Total HAPs</b>	<b>Worst Single HAP</b>
One (1) Surface Coating Spray Application Process (EU26)	0.51	0.51	0.51	0	0	2.28	0	0	0	0
Natural Gas Combustion	0.02	0.10	0.10	0.01	1.29	0.07	1.08	1,555.29	0.02	0.02 Hexane
Fugitive - Unpaved Roads	1.32	0.34	0.03	0	0	0	0	0	0	0
<b>Total PTE of Entire Source</b>	<b>95.18</b>	<b>61.22</b>	<b>60.92</b>	<b>3.90</b>	<b>1.35</b>	<b>50.28</b>	<b>46.73</b>	<b>1,620.50</b>	<b>7.63</b>	<b>3.95 Benzene</b>
Title V Major Source Thresholds**	NA	100	100	100	100	100	100	NA	25	10
PSD Major Source Thresholds**	100	100	100	100	100	100	100	100,000	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 (PM <sub>10</sub> ), not particulate matter (PM), is considered as a "regulated air pollutant". **The 100,000 CO <sub>2</sub> e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.										

Notes:

- (1) Emissions from the iron melting and casting process are based on a limited iron throughput of 1,000 tons per twelve (12) consecutive month period.
- (2) HAP emissions from pouring, cooling and shakeout are based on the total source-wide binder usage and, therefore, represent combined emissions from pouring, cooling and shakeout at both the iron and aluminum foundries.
- (3) Emissions from the three U-180 core machines and the two Horizontal Bottom Blow core machines are based on a maximum resin bonded sand throughput of 1,000,000 pounds per twelve (12) consecutive month period.
- (4) Emissions from the aluminum melting and casting process are based on a limited aluminum throughput of 12,042 tons per twelve (12) consecutive month period.
- (5) Emissions from the one (1) 300 pound melt furnace and the thermal sand reclamation include emissions from natural gas combustion in the "Natural Gas Combustion" section.
- (6) Emissions from mechanical sand reclamation and thermal sand reclamation are each based on a maximum sand throughput of 9,675 tons per twelve (12) consecutive month period.
- (7) Emissions from each of the the GOFF shotblast machines are based on a maximum metal (aluminum and iron) throughput of 3,912.60 tons per twelve (12) consecutive month period, each.
- (8) Emissions from the small aluminum shotblast machine are based on a maximum metal (aluminum and

- iron) throughput of 1,174 tons per twelve (12) consecutive month period.
- (9) Emissions from the sand blaster machine are based on a maximum metal (aluminum and iron) throughput of 1,174 tons per twelve (12) consecutive month period.
- (10) Emissions from sand and core mixers are based on a maximum sand throughput of 9,675 tons per twelve (12) consecutive month period.
- (11) As stated in the original FESOP, SO<sub>2</sub> gas emissions from these core machines are from the Iso-set activator component.

(a) **FESOP Status**

This revision to an existing Title V minor stationary source will not change the minor status, because the potential to emit criteria pollutants from the entire source will still be limited to less than the Title V major source threshold levels. Therefore, the source will still be subject to the provisions of 326 IAC 2-8 (FESOP).

In order to comply with the requirements of 326 IAC 2-8-4 (FESOP), the source shall comply with the following:

- (1) The throughput of metal castings to the GOFF shot blast machine (EU14) shall not exceed 3,912.60 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.  
  
Note: This is a revised limit. This change is a Title I change.
- (2) The throughput of metal castings to the GOFF shot blast machine (EU27) shall not exceed 3,912.60 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.  
  
Note: This is a new limit.
- (3) The PM<sub>10</sub> emissions from the baghouse controlling the GOFF shot blast machine (EU14) shall not exceed 1.7 pounds per ton of metal castings throughput.
- (4) The PM<sub>2.5</sub> emissions from the baghouse controlling the GOFF shot blast machine (EU14) shall not exceed 1.7 pounds per ton of metal castings throughput.  
  
Note: (3) and (4) are existing limits.
- (5) The PM<sub>10</sub> emissions from the baghouse controlling the GOFF shot blast machine (EU27) shall not exceed 1.7 pounds per ton of metal castings throughput.
- (6) The PM<sub>2.5</sub> emissions from the baghouse controlling the GOFF shot blast machine (EU27) shall not exceed 1.7 pounds per ton of metal castings throughput.

Note: (5) and (6) are new limits.

Compliance with these limits, combined with the potential to emit PM<sub>10</sub> and PM<sub>2.5</sub> from all other emission units at this source, shall limit the source-wide total potential to emit of PM<sub>10</sub> and PM<sub>2.5</sub> to less than 100 tons per 12 consecutive month period, each, and shall render 326 IAC 2-7 (Part 70 Permits) not applicable.

(b) **PSD Minor Source**

This modification to an existing PSD minor stationary source will not change the PSD minor status, because the potential to emit of all attainment regulated pollutants from the entire source will continue to be less than the PSD major source threshold levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, the source shall comply with the following:

- (1) The throughput of metal castings to the GOFF shot blast machine (EU14) shall not exceed 3,912.60 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Note: This is a revised limit. This change is a Title I change.

- (2) The throughput of metal castings to the GOFF shot blast machine (EU27) shall not exceed 3,912.60 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Note: This is a new limit.

- (3) The PM emissions from the baghouse controlling the GOFF shot blast machine (EU14) shall not exceed 0.85 pound per ton of metal castings throughput.

Note: This is an existing limit.

- (4) The PM emissions from the baghouse controlling the GOFF shot blast machine (EU27) shall not exceed 0.85 pound per ton of metal castings throughput.

Note: This is a new limit.

Compliance with these limits, combined with the potential to emit PM from all other emission units at this source, shall limit the source-wide total potential to emit of PM to less than 250 tons per 12 consecutive month period and shall render 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

<b>Federal Rule Applicability Determination</b>
---

New Source Performance Standards (NSPS)

- (a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included for this proposed revision.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included for this proposed revision.

Compliance Assurance Monitoring (CAM)

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

<b>State Rule Applicability Determination</b>
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The following state rules are applicable to the proposed revision:

- (a) 326 IAC 2-8-4 (FESOP)  
This revision to an existing Title V minor stationary source will not change the minor status, because the potential to emit criteria pollutants from the entire source will still be limited to less than the Title V major source threshold levels. Therefore, the source will still be subject to the

provisions of 326 IAC 2-8 (FESOP). See PTE of the Entire Source After Issuance of the FESOP Revision Section above.

- (b) 326 IAC 2-2 (Prevention of Significant Deterioration(PSD))  
This modification to an existing PSD minor stationary source will not change the PSD minor status, because the potential to emit of all attainment regulated pollutants from the entire source will continue to be less than the PSD major source threshold levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply. See PTE of the Entire Source After Issuance of the FESOP Revision Section above.
- (c) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))  
The proposed revision is not subject to the requirements of 326 IAC 2-4.1, since the unlimited potential to emit of HAPs from the new unit is less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs.
- (d) 326 IAC 2-6 (Emission Reporting)  
Pursuant to 326 IAC 2-6-1, this source is not subject to this rule, because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not located in Lake, Porter, or LaPorte County, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, 326 IAC 2-6 does not apply.
- (e) 326 IAC 5-1 (Opacity Limitations)  
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:
  - (1) 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.
  - (2) 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.
- (f) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)  
Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4.

### **Aluminum Foundry**

- (g) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)  
The particulate limitations established under 326 IAC 6-3-2 have been updated based upon the updated process weight rate information supplied by Muncie Casting Corporation with this Significant Permit Revision.

<b>Aluminum Foundry Emission Unit</b>	<b>Process Weight Rate (tons per hour)</b>	<b>Allowable Particulate Emission Rate (pounds per hour)</b>
Pouring/Casting (EU10)	7.34	15.59
Casting Cooling (EU11)	7.34	15.59
Shakeout (EU12)	7.34	15.59

The allowable particulate matter (PM) emission rates from the above facilities were calculated by the following:

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

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

### **Cleaning and Finishing Operations**

- (h) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)  
The particulate from the facilities at this source shall be limited as specified in the following table:

Emission Unit	Process Weight Rate (tons per hour)	Allowable PM Emission Rate (pounds per hour)	Potential PM Emission Rate After Controls (pounds per hour)
GOFF Shot Blaster (EU14)	4.67	11.51	0.38 (controlled)
GOFF Shot Blaster (EU27)	4.67	11.51	0.38 (controlled)
Small Aluminum Shot Blaster (EU15)	0.7	3.10	0.11 (controlled)
Sand Blaster (EU16)	0.7	3.10	0.11 (controlled)

The allowable particulate matter (PM) emission rates from the above facilities were calculated by the following:

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

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

The baghouses for EU14, EU15, EU16, and EU27 shall be in operation at all times when each of the blasters are in operation in order to comply with this limit.

### **Compliance Determination, Monitoring and Testing Requirements**

- (a) The compliance determination and monitoring requirements applicable to this proposed revision are as follows:

Control	Parameter	Frequency	Range	Excursions and Exceedances
GOFF blaster (EU27)	Inspection	Daily	Normal-Abnormal	Response Steps

These monitoring conditions are necessary because the GOFF blaster unit and its control device must operate properly to ensure compliance with 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes), and 326 IAC 2-8 (FESOP).

- (b) There are no testing requirements applicable to this proposed revision.



<b>Proposed Changes</b>
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- (a) The following changes listed below are due to the proposed revision.
- (1) The equipment list in Sections A.2 and A.3 has been updated, as well as in any D Section where equipment descriptions need to be updated.
  - (2) Section D.4 has been updated with the permit limits and compliance monitoring requirements based on the additional shot blast unit.
- (b) Upon further review, IDEM, OAQ has decided to make the following changes to the permit.
- (1) The General Information section has been updated to include the SIC Code descriptions.
  - (2) IDEM has revised Section C - Overall Source Limit to reflect that in order to remain a FESOP, the potential to emit greenhouse gases shall be limited to less than 100,000 tons per year of CO2 equivalent emissions (CO2e).
  - (3) The Organic Solvent Degreasing Operations (326 IAC 8-3) rules have been revised recently. Therefore, the requirements in the permit have been updated in Section D.7 for the degreasing operations to reflect the current rule requirements.
  - (4) On October 27, 2010, the Indiana Air Pollution Control Board issued revisions to 326 IAC 2. These revisions resulted in changes to the rule sites listed in the permit. These changes are not changes to the underlining provisions. The change is only to site of these rules in Section B - Operational Flexibility. IDEM, OAQ has clarified the rule sites for the Preventive Maintenance Plan.
  - (5) IDEM, OAQ has clarified the Permittee's responsibility with regards to record keeping.
  - (6) IDEM, OAQ has clarified the interaction of the Quarterly Deviation and Compliance Monitoring Report and the Emergency Provisions.

Deleted language appears as ~~strike through~~ text and new language appears as **bold** text:

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

The Permittee owns and operates a stationary aluminum and gray and ductile iron foundry.

Source Address:	1406 East 18 <sup>th</sup> Street, Muncie, Indiana 47302
General Source Phone:	765-288-2611
SIC Code:	3365 ( <b>Aluminum Foundries</b> ), 3321 ( <b>Gray and Ductile Iron Foundries</b> )

...

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:

Iron Foundry

- (a) One (1) charge handling operation, identified as EU1, installed in 1992, with a throughput capacity of 0.45 tons of iron per hour.

~~(b) Two (2) electric melting furnaces, one labeled as the 1,000 pound furnace and one labeled as the 500 pound furnace and collectively identified as EU2, installed in 1992,~~

~~\_\_\_\_\_ and having a throughput capacity of 0.45 tons of iron per hour total limited by a single \_\_\_\_\_  
\_\_\_\_\_ power supply.~~

- (a)(b) Two (2) electric melting furnaces, one labeled as the 1,000 pound furnace and one labeled as the 500 pound furnace and collectively identified as EU2, installed in 1992, and having a throughput capacity of 0.45 tons of iron per hour total limited by a single power supply.

Under NESHAP ZZZZZ, the two (2) electric melt furnaces identified as EU2 is considered and affected facility.

...

#### Aluminum Foundry

...

- (i) One (1) magnesium treatment in the aluminum foundry, identified as EU9, installed in 1992, with a throughput capacity of 1.45 tons of magnesium per hour, ~~4.17~~ **6.24** tons of aluminum per hour. Magnesium treatment is only performed on a maximum of 85% of the total aluminum melted.
- (j) One (1) pouring and casting operation, identified as EU10, installed in 1980, with a throughput capacity of ~~4.99~~ **7.34** tons of aluminum per hour.
- (k) One (1) casting and cooling operation, identified as EU11, installed in 1980, with a throughput capacity of ~~4.99~~ **7.34** tons of aluminum per hour.
- (l) One (1) shakeout operation, identified as EU12, installed in 1980, with a throughput capacity of ~~4.99~~ **7.34** tons of aluminum per hour.

Exhaust fans #5 through #8 are located above or near the cooling lines and the 700 pound and two (2) 2,300 pound furnaces in the Aluminum Foundry.

...

#### Sand Handling Operations

...

- ~~(m) One (1) mechanical sand reclamation unit, identified as EU13, installed in 1991, with a throughput capacity of 6.0 tons of sand per hour.~~
- ~~(n) One (1) thermal sand reclamation unit, identified as EU17, equipped with two (2) natural gas-fired burners, rated at 1.0 million British thermal units per hour each, equipped with a baghouse, installed in 1998, exhausted through Stack 12, with a throughput capacity of 1 ton of sand per hour.~~
- ~~(o) One (1) Strong Scott sand mixer, identified as EU18, utilizing a phenolic urethane nobake binder system, installed in 1980, with a throughput capacity of 6.0 tons of sand per hour.~~
- ~~(p) One (1) Kloster sand mixer, identified as EU19, utilizing a phenolic urethane nobake binder system, installed in 1994, with a throughput capacity of 9.0 tons of sand per hour.~~
- ~~(q) One (1) Palmer core mixer #1, identified as EU20, utilizing a phenolic urethane nobake binder system, installed in 1994, with a throughput capacity of 6.0 tons of sand per hour.~~

- ~~(r)~~ One (1) Palmer core mixer #2, identified as EU21, utilizing an acrylic-epoxy cold box binder system, installed in 1998, with a throughput capacity of 6.0 tons of sand per hour.
- ~~(s)~~ Three (3) sand storage silos, one silo with a capacity of 10 tons and two silos with capacities of 40 tons each, equipped with bin top filler banks and exhausting through Stacks #9, #10 and #11 with a throughput of 1,462.25 tons of sand per year total.
- (m) Enclosed Sand System, pneumatically conveyed, with a maximum throughput capacity of 236,520 tons/year of sand (using the combined maximum process capacity of the four sand mixers) and maximum throughput capacity of 61,320 tons/year (using the combined maximum process capacity of the mechanical and thermal sand reclamation units) for the sand reclamation process, consisting of the following units:**
- (1) Three (3) sand storage silos, one silo with a capacity of 10 tons and two silos with capacities of 40 tons each, equipped with bin-top filter banks and exhausting through Stacks #9, #10 and #11.**
  - (2) One (1) Strong Scott sand mixer, identified as EU18, utilizing a phenolic urethane nobake binder system, installed in 1980, with a throughput capacity of 6.0 tons of sand per hour.**
  - (3) One (1) Kloster sand mixer, identified as EU19, utilizing a phenolic urethane nobake binder system, installed in 1994, with a throughput capacity of 9.0 tons of sand per hour.**
  - (4) One (1) Palmer core mixer #1, identified as EU20, utilizing a phenolic urethane nobake binder system, installed in 1994, with a throughput capacity of 6.0 tons of sand per hour.**
  - (5) One (1) Palmer core mixer #2, identified as EU21, utilizing an acrylic-epoxy cold box binder system, installed in 1998, with a throughput capacity of 6.0 tons of sand per hour.**
  - (6) One (1) mechanical sand reclamation unit, identified as EU13, installed in 1991, with a throughput capacity of 6.0 tons of sand per hour.**
  - (7) One (1) thermal sand reclamation unit, identified as EU17, equipped with two (2) natural gas-fired burners, rated at 1.0 million British thermal units per hour each, equipped with a baghouse, installed in 1998, exhausted through Stack 12, with a throughput capacity of 1 ton of sand per hour.**

Core and Mold Making Operations

- ~~(n)~~ One (1) CB-22 core machine, identified as EU22, installed in 1998, with a throughput capacity of 0.5 tons of cores per hour using a phenolic urethane no-bake binder system. This unit is also equipped with a caustic soda scrubber which does not have to be operated at all times.
- ~~(o)~~ One (1) Dependable 420 core machine, identified as EU23, installed in 1998, with a throughput capacity of 0.5 tons of cores per hour using a phenolic urethane no-bake binder system. This unit is also equipped with a caustic soda scrubber which does not have to be operated at all times.

- ~~(v)~~(p) U-180 and Horizontal Bottom Blow core making operations collectively identified as EU24 include the following:

...

#### Cleaning/Finishing Operations

NOTE: Emission units identified as EU14 through EU16 **and EU27** are physically located in the ~~aluminum iron~~ foundry but the units are used for both the aluminum foundry and the iron foundry.

- ~~(w)~~(q) One (1) GOFF steel shot blast machine, identified as EU14, equipped with a baghouse, installed in 1993, exhausted through Stack 4 **or inside the building**, with a throughput capacity of ~~1.096~~ **4.67** tons of aluminum or iron casting per hour.
- (r) **One (1) GOFF steel shot blast machine, identified as EU27, approved for construction in 2013, with a maximum throughput capacity of 4.67 tons of aluminum or iron casting per hour, equipped with a baghouse for control, and exhausting to either Stack 13 or inside the building;**
- ~~(x)~~(s) One (1) small aluminum shot blast machine identified as EU15, equipped with a Viking baghouse, installed in 1993, exhausted inside the building, with a throughput capacity of ~~0.16~~ **0.70** tons of aluminum or iron castings per hour.
- ~~(y)~~(t) One (1) sand blaster machine, identified as EU16, equipped with a Blast-It-All baghouse, installed in 1980, exhausted inside the building, with a throughput capacity of ~~0.16~~ **0.70** tons of aluminum or iron castings per hour.

#### Miscellaneous Operations

- ~~(z)~~(u) One (1) surface coating spray application process (in the mold and core making areas), identified as EU26, installed in 1980, with a throughput capacity of 8,637 pounds of coating materials per year.
- ~~(aa)~~ ~~Fugitive outdoor waste sand storage and handling, identified as EUF1, capacity 20 tons of waste foundry sand.~~

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#### 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, as defined in 326 IAC 2-7-1(21):

...

- (u) One (1) **large** electric heat treat furnace, **one (1) medium electric heat treat furnace, and one (1) small electric heat treat furnace, each** with ~~no~~ **negligible** emissions.
- (v) **Four (4) core shooters, constructed in 2007, each with a maximum capacity of 100 pounds of shell sand per day, each with negligible emissions.**

...

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#### B.11 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)][~~326 IAC 2-8-5(a)(1)~~]

...

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

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- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-8-15(b) **and (c)** ~~through (d)~~ 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)(2), (c)(1), and (d) **(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)(2), (c)(1), and (d) **(b)(1) and (c)**.
- (b) **Emission Trades [326 IAC 2-8-15 ~~(e)~~ (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(c).
- (c) **Alternative Operating Scenarios [326 IAC 2-8-15 ~~(d)~~ (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.

...

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

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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), 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.~~
- (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 CO<sub>2</sub> equivalent emissions (CO<sub>2</sub>e) per twelve (12) consecutive month period.

...

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.

...

SECTION D.2

FACILITY OPERATION CONDITIONS

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

Aluminum Foundry

...

- (i) One (1) magnesium treatment operation in the aluminum foundry, identified as EU9, installed in 1992, with a throughput capacity of 1.45 tons of magnesium per hour, ~~4.69~~ **6.24** tons of aluminum per hour. Magnesium treatment is only performed on a maximum of 85% of the total aluminum melted.
- (j) One (1) pouring/casting operation identified as EU10, installed in 1980, with a throughput capacity of ~~4.99~~ **7.34** tons of aluminum per hour.
- (k) One (1) casting cooling operation identified as EU11, installed in 1980, with a throughput capacity of ~~4.99~~ **7.34** tons of aluminum per hour.
- (l) One (1) shakeout operation identified as EU12, installed in 1980, with a throughput capacity of ~~4.99~~ **7.34** tons of aluminum per hour.

Note exhaust fans #5 through #8 are located above or near the cooling lines and the 700 Lb and two (2) 2,300 Lb furnaces in the Aluminum Foundry.

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

...

#### D.2.3 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rates from the facilities listed in this section shall not exceed the stated particulate emission rates listed in the following table:

Aluminum Foundry Emission Unit	Process Weight Rate (tons per hour)	Allowable Particulate Emission Rate (pounds per hour)
Six (6) 2,300lb Melting Furnace (EU7)	1.15 each	1.02 each
700 lb Melting Furnace (EU7)	0.23	1.53
300 lb Melting Furnace (EU8)	0.09	0.82
Magnesium Treatment (EU9)	1.45	5.26
Pouring/Casting (EU10)	<del>4.99</del> <b>7.34</b>	<del>6.50</del> <b>15.59</b>
Casting Cooling (EU11)*	<del>4.99</del> <b>7.34</b>	<del>6.50</del> <b>15.59</b>
Shakeout (EU12)*	<del>4.99</del> <b>7.34</b>	<del>6.50</del> <b>15.59</b>

\*The process weight rates for the pouring/casting, casting cooling, and shakeout operations in both the iron and aluminum foundry include maximum metal and sand throughputs.

The pounds per hour limitations were calculated using 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

...

### SECTION D.3

### FACILITY OPERATION CONDITIONS

#### Facility Description [326 IAC 2-8-4(10)]:

##### Sand Handling Operations

NOTE: the following emissions units are located in the aluminum foundry but are used for both the aluminum and the iron foundry.

(m) ~~One (1) mechanical sand reclamation unit, identified as EU13, installed in 1991, with a throughput capacity of 6.0 tons of sand per hour.~~



- ~~(n) One (1) thermal sand reclamation unit, identified as EU17, installed in 1998 with a throughput capacity of 1 ton of sand per hour, equipped with two (2) natural gas-fired burners, rated at 1.0 million British thermal units per hour each and equipped with a baghouse, exhausting through Stack 12.~~
- ~~(o) One (1) Strong Scott sand mixer, identified as EU18, installed in 1980, with a throughput capacity of 6.0 tons of sand per hour using a phenolic urethane nobake binder system~~
- ~~(p) One (1) Kloster sand mixer, identified as EU19, installed in 1994, with a throughput capacity of 9.0 tons of sand per hour using a phenolic urethane nobake binder system.~~
- ~~(q) One (1) Palmer core mixer #1, identified as EU20, installed in 1994, with a throughput capacity of 6.0 tons of sand per hour using a phenolic urethane nobake binder system.~~
- ~~(r) One (1) Palmer core mixer #2, identified as EU21, installed in 1998, with a throughput capacity of 6.0 tons of sand per hour using an acrylic-epoxy cold box binder system.~~
- ~~(s) Three (3) sand storage silos, equipped with bin-top filler banks exhausted through Stacks #9, #10 and #11, with a throughput capacity of 10, 40 and 40 tons, respectively, throughput 1,462.25 tons of sand per year total;~~
- (m) Enclosed Sand System, pneumatically conveyed, with a maximum throughput capacity of 236,520 tons/year of sand (using the combined maximum process capacity of the four sand mixers) and maximum throughput capacity of 61,320 tons/year (using the combined maximum process capacity of the mechanical and thermal sand reclamation units) for the sand reclamation process, consisting of the following units:**
  - (1) Three (3) sand storage silos, one silo with a capacity of 10 tons and two silos with capacities of 40 tons each, equipped with bin-top filter banks and exhausting through Stacks #9, #10 and #11.**
  - (2) One (1) Strong Scott sand mixer, identified as EU18, utilizing a phenolic urethane nobake binder system, installed in 1980, with a throughput capacity of 6.0 tons of sand per hour.**
  - (3) One (1) Kloster sand mixer, identified as EU19, utilizing a phenolic urethane nobake binder system, installed in 1994, with a throughput capacity of 9.0 tons of sand per hour.**
  - (4) One (1) Palmer core mixer #1, identified as EU20, utilizing a phenolic urethane nobake binder system, installed in 1994, with a throughput capacity of 6.0 tons of sand per hour.**
  - (5) One (1) Palmer core mixer #2, identified as EU21, utilizing an acrylic-epoxy cold box binder system, installed in 1998, with a throughput capacity of 6.0 tons of sand per hour.**
  - (6) One (1) mechanical sand reclamation unit, identified as EU13, installed in 1991, with a throughput capacity of 6.0 tons of sand per hour.**
  - (7) One (1) thermal sand reclamation unit, identified as EU17, equipped with two (2) natural gas-fired burners, rated at 1.0 million British thermal units per hour each, equipped with a baghouse, installed in 1998, exhausted through Stack 12, with a throughput capacity of 1 ton of sand per hour.**

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

...

#### D.3.3 Particulate Matter (PM) [326 IAC 6-3-2]

...

The pounds per hour limitations were calculated using 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

...

### SECTION D.4 FACILITY OPERATION CONDITIONS

#### Facility Description [326 IAC 2-8-4(10)]:

##### Cleaning/Finishing Operations

NOTE: Emission units identified as EU14 through EU16 and **EU27** are physically located in the ~~aluminum~~ **iron** foundry but the units are used for both the aluminum foundry and the iron foundry.

- ~~(w)~~**(q)** One (1) GOFF steel shot blast machine, identified as EU14, equipped with a baghouse, installed in 1993, exhausted through Stack 4 **or inside the building**, with a throughput capacity of ~~4.096~~ **4.67** tons of aluminum or iron casting per hour.
- (r)** One (1) GOFF steel shot blast machine, identified as EU27, approved for construction in 2013, with a maximum throughput capacity of 4.67 tons of aluminum or iron casting per hour, equipped with a baghouse for control, and exhausting to either Stack 13 or inside the building;
- ~~(s)~~**(s)** One (1) small aluminum shot blast machine identified as EU15, equipped with a Viking baghouse, installed in 1993, exhausted inside the building, with a throughput capacity of ~~0.46~~ **0.70** tons of aluminum or iron castings per hour.
- ~~(t)~~**(t)** One (1) sand blaster machine, identified as EU16, equipped with a Blast-It-All baghouse, installed in 1980, exhausted inside the building, with a throughput capacity of ~~0.46~~ **0.70** tons of aluminum or iron castings per hour.

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

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

##### D.4.1 PM [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 not applicable, the throughput for the cleaning/finishing operations shall be limited as follows:

- (a) The throughput of metal castings to the GOFF shot blast machine (EU14) shall not

exceed ~~7,825~~ **3,912.60** tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

**(b) The throughput of metal castings to the GOFF shot blast machine (EU27) shall not exceed 3,912.60 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.**

~~(b)(c)~~ The throughput of metal castings to the small shot blast machine (EU15) shall not exceed 1,174 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

~~(c)(d)~~ The throughput of metal castings to the sand blaster machine (EU16) shall not exceed 1,174 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

~~(d)(e)~~ The PM emissions from the baghouse controlling the GOFF shot blast machine (EU14) shall not exceed 0.85 pound per ton of metal castings throughput.

**(f) The PM emissions from the baghouse controlling the GOFF shot blast machine (EU27) shall not exceed 0.85 pound per ton of metal castings throughput.**

~~(e)(g)~~ The PM emissions from the baghouse controlling the small shot blast machine (EU15) shall not exceed 0.85 pound per ton of metal castings throughput.

~~(f)(h)~~ The PM emissions from the baghouse controlling the sand blaster machine (EU16) shall not exceed 0.85 pound per ton of metal castings throughput.

Compliance with these limits, combined with the limited PTE from all other emission units at this source, shall limit the source-wide total potential to emit of PM to less than 100 tons per 12 consecutive month period and shall render 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (PSD) not applicable.

#### D.4.2 PM<sub>10</sub> and PM<sub>2.5</sub> [326 IAC 2-8-4][326 IAC 2-2]

Pursuant to 326 IAC 2-8-4 and in order to render 326 IAC 2-2 not applicable, the PM<sub>10</sub> and PM<sub>2.5</sub> emissions for the cleaning/finishing operations shall be limited as follows:

(a) The throughput of metal castings to the GOFF shot blast machine (EU14) shall not exceed ~~7,825~~ **3,912.60** tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

**(b) The throughput of metal castings to the GOFF shot blast machine (EU27) shall not exceed 3,912.60 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.**

~~(b)(c)~~ The throughput of metal castings to the small shot blast machine (EU15) shall not exceed 1,174 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

~~(c)(d)~~ The PM<sub>10</sub> emissions from the baghouse controlling the GOFF shot blast machine (EU14) shall not exceed 1.7 pounds per ton of metal castings throughput.

~~(d)(e)~~ The PM<sub>2.5</sub> emissions from the baghouse controlling the GOFF shot blast machine (EU14) shall not exceed 1.7 pounds per ton of metal castings throughput.

**(f) The PM<sub>10</sub> emissions from the baghouse controlling the GOFF shot blast machine (EU27) shall not exceed 1.7 pounds per ton of metal castings throughput.**

- (g) **The PM<sub>2.5</sub> emissions from the baghouse controlling the GOFF shot blast machine (EU27) shall not exceed 1.7 pounds per ton of metal castings throughput.**
- ~~(e)~~(h) The PM<sub>10</sub> emissions from the baghouse controlling the small shot blast machine (EU15) shall not exceed 1.7 pounds per ton of metal castings throughput.
- ~~(f)~~(i) The PM<sub>2.5</sub> emissions from the baghouse controlling the small shot blast machine (EU15) shall not exceed 1.7 pounds per ton of metal castings throughput.
- ~~(g)~~(j) The PM<sub>10</sub> emissions from the baghouse controlling the sand blaster machine (EU16) shall not exceed 1.7 pounds per ton of metal castings throughput.
- ~~(h)~~(k) The PM<sub>2.5</sub> emissions from the baghouse controlling the sand blaster machine (EU16) shall not exceed 1.7 pounds per ton of metal castings throughput.

Compliance with these limits, combined with the limited PTE from all other emission units at this source, shall limit the source-wide total potential to emit of PM<sub>10</sub> and PM<sub>2.5</sub> to less than 100 tons per 12 consecutive month period and shall render 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (PSD) not applicable.

#### D.4.3 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rates from the facilities listed in this section shall not exceed the stated particulate emission rates listed in the following table:

Emission Unit	Process Weight Rate (tons per hour)	Allowable Particulate Emission Rate (pounds per hour)
GOFF Shot Blaster (EU14)	<del>1.096</del> <b>4.67</b>	<del>4.36</del> <b>11.51</b>
<b>GOFF Shot Blaster (EU27)</b>	<b>4.67</b>	<b>11.51</b>
Small Aluminum Shot Blaster (EU15)	<del>0.16</del> <b>0.7</b>	<del>1.2</del> <b>3.10</b>
Sand Blaster (EU16)	<del>0.16</del> <b>0.7</b>	<del>1.2</del> <b>3.10</b>

The pounds per hour limitations were calculated using 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

#### D.4.4 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

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 Determination Requirements

### D.4.5 Particulate Control

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In order to comply with conditions D.4.1 and D.4.2, the baghouses for particulate control shall be in operation and control emissions from the ~~two (2)~~ **three (3)** shot blaster machines (EU14, **EU27**, and EU15) and the one (1) sand blaster machine (EU16) at all times that the ~~two (2)~~ **three (3)** shot blaster machines (EU14, **EU27**, and EU15) and the one (1) sand blaster machine (EU16) are in operation.

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

### D.4.6 Visible Emissions Notations

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- (a) Visible emission notations of the stack exhausts 4 and 123 for the GOFF shot blasters (EU14 **and EU27**) shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

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### D.4.7 Parametric Monitoring

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The Permittee shall record the total static pressure drop across the baghouses used in conjunction with the GOFF blasters (EU14 **and EU27**) at least daily when the process is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 2.0 to 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps. Section C – Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated or replaced at least once every six (6) months.

### D.4.8 Broken or Failed Bag Detection

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## Record Keeping and Reporting Requirement [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

### D.4.9 Record Keeping Requirements

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- (a) To document the compliance status with Conditions D.4.1 and D.4.2, the Permittee shall maintain records of the throughput of metal castings to each of the GOFF shot blast machines (EU14 **and EU27**), the small shot blast machine (EU15) and the sand blaster machine (EU16) on a monthly basis.
- (b) To document the compliance status with Condition D.4.6, the Permittee shall maintain records of daily visible emission notations of the stack exhausts 4 and 123 for the GOFF shot blasters (EU14 **and EU27**). The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g., the process did not operate that day).
- (c) To document the compliance status with Condition D.4.7, the Permittee shall maintain the following:

Daily records of the pressure drop during normal operation. The Permittee shall include in

its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading, (e.g., the process did not operate that day).

- (d) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

#### D.4.10 Reporting Requirements

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### SECTION D.5 FACILITY OPERATION CONDITIONS

#### Facility Description [326 IAC 2-8-4(10)]:

##### Core and Mold Making Operations

NOTE: Emission units identified as EU22 through EU24 are physically located in the aluminum foundry but the units are used for both the aluminum foundry and the iron foundry.

- ~~(x)~~(n) One (1) CB-22 core machine, identified as EU22, equipped with a caustic soda scrubber (does not have to be operated at all times), installed in 1998, with a throughput capacity of 0.5 tons of cores per hour.
- ~~(y)~~(o) One (1) Dependable 420 core machine, identified as EU23, equipped with a caustic soda scrubber (does not have to be operated at all times), installed in 1998, with a throughput capacity of 0.5 tons of cores per hour.
- ~~(w)~~(p) U-180 core making operations used for both foundries, identified as EU24, including the following:
- (1) One (1) U-180 core machine, utilizing a shell binder system, installed in 1998, with a throughput capacity of 0.045 tons of cores per hour.
  - (2) One (1) U-180 core machine, utilizing a shell binder system, installed in January 2004, with a throughput capacity of 0.045 tons of cores per hour.
  - (3) Two (2) U-180 core machines, each utilizing a shell binder system, installed in 2005, and each with maximum capacity of 0.045 tons of cores per hour.

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

...

### SECTION D.6 FACILITY OPERATION CONDITIONS

#### Facility Description [326 IAC 2-8-4(10)]:

##### Additional Operations

- ~~(z)~~(u) One (1) surface coating spray application process (in the mold and core making areas), identified as EU26, installed in 1980, with a throughput capacity of 8,637 pounds of coating materials per year.

~~(aa) Fugitive outdoor waste sand storage and handling, identified as EUF1, capacity 20 tons of waste foundry sand.~~

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

...

## SECTION D.7 FACILITY OPERATION CONDITIONS

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

#### ~~D.7.1 Volatile Organic Compounds (VOC)~~

~~Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), the owner or operator shall:~~

- ~~(a) Equip the cleaner with a cover;~~
- ~~(b) Equip the cleaner with a facility for draining cleaned parts;~~
- ~~(c) Close the degreaser cover whenever parts are not being handled in the cleaner;~~
- ~~(d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;~~
- ~~(e) Provide a permanent, conspicuous label summarizing the operation requirements;~~
- ~~(f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.~~

#### D.7.1 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2,

- (a) The owner or operator of a cold cleaner degreaser shall ensure the following control equipment and operating requirements are met:
  - (1) Equip the degreaser with a cover.
  - (2) Equip the degreaser with a device for draining cleaned parts.
  - (3) Close the degreaser cover whenever parts are not being handled in the degreaser.
  - (4) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases.
  - (5) Provide a permanent, conspicuous label that lists the operating requirements in subdivisions (3), (4), (6), and (7).
  - (6) Store waste solvent only in closed containers.
  - (7) Prohibit the disposal or transfer of waste solvent in such a manner that could allow greater than twenty percent (20%) of the waste solvent (by

weight) to evaporate into the atmosphere.

- (b) The owner or operator of a cold cleaner degreaser subject to this subsection shall ensure the following additional control equipment and operating requirements are met:
- (1) Equip the degreaser with one (1) of the following control devices if the solvent is heated to a temperature of greater than forty-eight and nine-tenths (48.9) degrees Celsius (one hundred twenty (120) degrees Fahrenheit):
- (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
  - (B) A water cover when solvent used is insoluble in, and heavier than, water.
  - (C) A refrigerated chiller.
  - (D) Carbon adsorption.
  - (E) An alternative system of demonstrated equivalent or better control as those outlined in clauses (A) through (D) that is approved by the department. An alternative system shall be submitted to the U.S. EPA as a SIP revision.
- (2) Ensure the degreaser cover is designed so that it can be easily operated with one (1) hand if the solvent is agitated or heated.
- (3) If used, solvent spray:
- (A) must be a solid, fluid stream; and
  - (B) shall be applied at a pressure that does not cause excessive splashing.

D.7.2 Volatile Organic Compounds (VOC)

- ~~(a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaner degreaser facility shall ensure that the following control equipment requirements are met:~~
- ~~(1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:~~
- ~~(A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF));~~
  - ~~(B) The solvent is agitated; or~~
  - ~~(C) The solvent is heated.~~
- ~~(2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at~~



~~thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.~~

~~(3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).~~

~~(4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.~~

~~(5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF)), or if the solvent is heated to a temperature greater than forty-eight and nine tenths degrees Celsius (48.9EC) (one hundred twenty degrees Fahrenheit (120EF)):~~

~~(A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.~~

~~(B) A water cover when solvent is used is insoluble in, and heavier than, water.~~

~~(C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.~~

~~(b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility shall ensure that the following operating requirements are met:~~

~~(1) Close the cover whenever articles are not being handled in the degreaser.~~

~~(2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.~~

~~(3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.~~

D.7.32 Particulate Matter (PM) [326 IAC 6-3-2]

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D.7.43 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

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**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION**

**FESOP Quarterly Report**

Source Name: Muncie Casting Corporation  
Source Address: 1406 East 18<sup>th</sup> Street, Muncie, Indiana 47302  
FESOP No.: F035-29148-00061  
Facility: GOFF shot blast machine (EU14), **GOFF shot blast machine (EU27)**, small shot blast machine (EU15), sand blaster machine (EU16)  
Parameter: Metal casting throughput to limit PM and PM10 emissions  
Limit: **(1)** The throughput of metal castings to the GOFF shot blast machine (EU14) shall not exceed ~~7,825~~ **3,912.60** tons per twelve (12) consecutive month period, with compliance determined at the end of each month;  
**(2) The throughput of metal castings to the GOFF shot blast machine (EU27) shall not exceed 3,912.60 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;**  
**(3)** The throughput of metal castings to the small shot blast machine (EU15) shall not exceed 1,174 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;  
**(4)** The throughput of metal castings to the sand blaster machine (EU16) shall not exceed 1,174 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

YEAR: \_\_\_\_\_

Month	Unit ID	Column 1	Column 2	Column 1 + Column 2
		Metal Casting Throughput This Month (tons)	Metal Casting Throughput Previous 11 Months (tons)	12 Month Total Metal Casting Throughput (tons)
Month 1	EU14			
	EU15			
	EU16			
	<b>EU27</b>			
Month 2	EU14			
	EU15			
	EU16			
	<b>EU27</b>			
Month 3	EU14			
	EU15			
	EU16			
	<b>EU27</b>			

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.

Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

...

## COMPLIANCE DATA SECTION

### FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: Muncie Casting Corporation  
Source Address: 1406 East 18<sup>th</sup> Street, Muncie, Indiana 47302  
FESOP No.: F035-29148-00061

Months: \_\_\_\_\_ to \_\_\_\_\_ Year: \_\_\_\_\_

Page 1 of 2

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, 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.

...

#### Conclusion and Recommendation

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 March 12, 2013. Additional information was received on March 18, 2013.

The construction and operation of this proposed revision shall be subject to the conditions of the attached proposed FESOP Significant Permit Revision No. F035-32941-00061. The staff recommends to the Commissioner that this FESOP Significant Permit Revision be approved.

#### IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Sarah Street 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) 232-8427 or toll free at 1-800-451-6027 extension 2-8427.
- (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.in.gov/idem](http://www.in.gov/idem)

**Appendix A: Emission Calculations**  
**Summary of Emission Calculations**

**Company Name:** Muncie Casting Corporation  
**Address City IN Zip:** 1406 East 18th Street, Muncie, Indiana 47302  
**Permit Number:** F035-32941-00061  
**Reviewer:** Sarah Street

<b>POTENTIAL TO EMIT IN TONS PER YEAR - Criteria Pollutants</b>								
<b>Emission Units</b>	<b>PM</b>	<b>PM10</b>	<b>PM2.5</b>	<b>SO<sub>2</sub></b>	<b>NOx</b>	<b>VOC</b>	<b>CO</b>	<b>GHGs as CO<sub>2</sub>e</b>
<b>IRON FOUNDRY</b>								
Charge Handling (EU1)	1.18	0.71	0.71	0	0	0	0	0
Two (2) Electric Melting Furnaces (EU2)	1.77	1.70	1.70	0	0	0	0	0
Magnesium Treatment Operation (EU3)	0.71	0.71	0.71	0	0	0	0	0
Pouring/Casting Operation (EU4) and Casting/Cooling Operation (EU5)	2.10	1.03	1.03	0.01	0.01	0.07	0	0
Shakeout Operation (EU6)	1.60	1.12	1.12	0	0	0.60	3.50	5.00
<b>ALUMINUM FOUNDRY</b>								
Seven (7) electric melting furnaces and one (1) 700 lb furnace (EU7); one natural gas fired melting furnace (300 pound furnace) (EU8)	61.08	54.65	54.65	0	0	6.43	0	0
Magnesium Treatment Operation (EU9)	49.19	49.19	49.19	0	0	0	0	0
Pouring/Casting Operation (EU10) and Casting and Cooling Operation (EU11)	135.03	66.23	66.23	0.64	0.32	4.50	0	0
Shakeout Operation (EU12)	102.88	72.01	72.01	0	0	38.58	225.04	321.49
<b>SAND HANDLING OPERATIONS</b>								
Mechanical Sand Reclamation Unit (EU 13)	94.61	14.19	14.19	0	0	0	0	0
Thermal Sand Reclamation Unit (EU17)	23.83	23.83	23.83	0	0	0	0	0
Strong Scott Sand Mixer (EU18), Kloster Sand Mixer (EU19), Palmer Core Mixer #1 (EU20) and Palmer Core Mixer #2 (EU21), and Sand Storage Silos	425.74	63.86	63.86	0	0	0	0	0
<b>CORE MAKING AND MOLD MAKING OPERATIONS</b>								
Cb-22 Core Machine (EU22)	0	0	0	1.88	0	5.25	0	0
Dependable 420 Core Machine (EU23)	0	0	0	1.88	0	5.25	0	0
Three (3) U-180 Core Machines and Two (2) Horizontal Bottom Blow Core Machines (EU24)	0	0	0	0	0	27.50	0	0
<b>CLEANING AND FINISHING OPERATIONS</b>								
GOFF Steel Shot Blast Machine (EU14)	348.03	34.80	34.80	0	0	0	0	0
GOFF Steel Shot Blast Machine (EU27)	348.03	34.80	34.80	0	0	0	0	0
Small Aluminum Shot Blast Machine (EU15)	9.98	1.00	1.00	0	0	0	0	0
Sand Blaster machine (EU16)	9.98	1.00	1.00	0	0	0	0	0
<b>MISCELLANEOUS ACTIVITIES</b>								
One (1) Surface Coating Spray Application Process (EU26)	0.51	0.51	0.51	0	0	2.28		
Natural Gas Combustion	0.02	0.10	0.10	0.01	1.29	0.07	1.08	1,555.29
Fugitive - Unpaved Roads	1.32	0.34	0.03	0	0	0	0	0
<b>TOTALS</b>	<b>1,617.58</b>	<b>421.77</b>	<b>421.47</b>	<b>4.42</b>	<b>1.61</b>	<b>90.52</b>	<b>229.63</b>	<b>1,881.78</b>

**Appendix A: Emission Calculations**  
**Summary of Emission Calculations**

**Company Name:** Muncie Casting Corporation  
**Address City IN Zip:** 1406 East 18th Street, Muncie, Indiana 47302  
**Permit Number:** F035-32941-00061  
**Reviewer:** Sarah Street

LIMITED POTENTIAL TO EMIT IN TONS PER YEAR - Criteria Pollutants								
Emission Units	PM	PM10	PM2.5	SO <sub>2</sub>	NOx	VOC	CO	GHGs as CO2e
IRON FOUNDRY								
Charge Handling (EU1)	0.30	0.18	0.18	0	0	0	0	0
Two (2) Electric Melting Furnaces (EU2)	0.45	0.43	0.43	0	0	0	0	0
Magnesium Treatment Operation (EU3)	0.18	0.18	0.18	0	0	0	0	0
Pouring/Casting Operation (EU4) and Casting/Cooling Operation (EU5)	2.10	1.03	1.03	0.01	0.01	0.07	3.50	5.00
Shakeout Operation (EU6)	1.60	1.12	1.12	0	0	0.60		
ALUMINUM FOUNDRY								
Seven (7) electric melting furnaces and one (1) 700 lb furnace (EU7); one natural gas fired melting furnace (300 pound furnace) (EU8)	11.44	10.24	10.24	0	0	1.20	0	0
Magnesium Treatment Operation (EU9)	9.21	9.21	9.21	0	0	0	0	0
Pouring/Casting Operation (EU10) and Casting and Cooling Operation (EU11)	25.29	12.40	12.40	0.12	0.06	0.84	0	0
Shakeout Operation (EU12)	19.27	13.49	13.49	0	0	7.23	42.15	60.21
SAND HANDLING OPERATIONS								
Mechanical Sand Reclamation Unit (EU 13)	17.42	2.61	2.61	0	0	0	0	0
Thermal Sand Reclamation Unit (EU17)	0.01	0.48	0.48	0	0	0	0	0
Strong Scott Sand Mixer (EU18), Kloster Sand Mixer (EU19), Palmer Core Mixer #1 (EU20) and Palmer Core Mixer #2 (EU21), and Sand Storage Silos	1.74	0.26	0.26	0	0	0	0	0
CORE MAKING AND MOLD MAKING OPERATIONS								
Cb-22 Core Machine (EU22)	0	0	0	1.88	0	5.25	0	0
Dependable 420 Core Machine (EU23)	0	0	0	1.88	0	5.25	0	0
Three (3) U-180 Core Machines and Two (2) Horizontal Bottom Blow Core Machines (EU24)	0	0	0	0	0	27.50	0	0
CLEANING AND FINISHING OPERATIONS								
GOFF Steel Shot Blast Machine (EU14)	1.66	3.33	3.33	0	0	0	0	0
GOFF Steel Shot Blast Machine (EU27)	1.66	3.33	3.33	0	0	0	0	0
Small Aluminum Shot Blast Machine (EU15)	0.50	1.00	1.00	0	0	0	0	0
Sand Blaster machine (EU16)	0.50	1.00	1.00	0	0	0	0	0
MISCELLANEOUS ACTIVITIES								
One (1) Surface Coating Spray Application Process (EU26)	0.51	0.51	0.51	0	0	2.28	0	0
Natural Gas Combustion	0.02	0.10	0.10	0.01	1.29	0.07	1.08	1,555.29
Fugitive - Unpaved Roads	1.32	0.34	0.03	0	0	0	0	0
TOTALS	95.18	61.22	60.92	3.90	1.35	50.28	46.73	1,620.50

<b>POTENTIAL TO EMIT IN TONS PER YEAR - Hazardous Air Pollutants</b>										
<b>EMISSION UNITS</b>	<b>Formaldehyde</b>	<b>Phenol</b>	<b>Benzene</b>	<b>Toluene</b>	<b>M-xylene</b>	<b>O-xylene</b>	<b>Napthalene</b>	<b>Hexane</b>	<b>Single Worst HAP</b>	<b>Total HAPs</b>
<b>CORE MAKING</b>										
Phenolic Urethane No-bake Core Making Operations	0.60	0.00	0.00	0.00	0.00	0.00	0.42	0.00	0.60 Formaldehyde	1.03
<b>IRON AND ALUMINUM FOUNDRIES</b>										
Pouring, Cooling and Shakeout Operations for both the Iron and Aluminum Foundries ( EU4, EU5, EU6 and EU10, EU11 and EU12)	0.02	1.09	3.95	1.20	0.25	0.05	0.03	0.00	3.95 Benzene	6.59
<b>COMBUSTION</b>										
Natural Gas Combustion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.02 Hexane	0.02
<b>TOTALS</b>	<b>0.62</b>	<b>1.09</b>	<b>3.95</b>	<b>1.20</b>	<b>0.25</b>	<b>0.05</b>	<b>0.45</b>	<b>0.02</b>	<b>3.95 Benzene</b>	<b>7.63</b>

**Appendix A: Emission Calculations**  
**IRON MELTING & CASTING PROCESS**

Company Name: Muncie Casting Corporation  
Address City IN Zip: 1406 East 18th Street, Muncie, Indiana 47302  
Permit Number: F035-32941-00061  
Reviewer: Sarah Street

	tons/hr	tons/year
Maximum Throughput for Metal	0.45	3942
Maximum Throughput for Magnesium treatment	0.09	788.4

		Unlimited Potential to Emit													
Process	SCC #	PM emission factor (lbs/ton)	PTE of PM tons/year	PM10 Emission Factor (lbs/ton)	PTE of PM 10 tons/year	VOC emission factor (lbs/ton)	PTE of VOC tons/year	SO <sub>2</sub> Emission factor (lbs/ton)	PTE of SO <sub>2</sub> tons/year	NOx Emission Factor (lbs/ton)	PTE of NOx tons/year	CO Emission Factor <sup>4</sup> (lbs/ton)	PTE of CO tons/year	CO <sub>2</sub> e Emission Factor <sup>5</sup> (lbs/ton)	PTE of CO <sub>2</sub> e tons/year
Charge Handling (EU1)	3-04-003-15	0.60	1.18	0.36	0.71	-	-	-	-	-	-	-	-	-	-
One (1) 1000 Lb. and One (1) 500 Lb. Furnace (electric) <sup>1</sup> (EU2)	3-04-003-03	0.90	1.77	0.86	1.70	-	-	-	-	-	-	-	-	-	-
Magnesium Treatment <sup>2</sup> (EU3)	3-04-003-21	1.80	0.71	1.80	0.71	-	-	-	-	-	-	-	-	-	-
Pouring/Casting Operation (EU4) and Casting/Cooling Operation (EU5)	3-04-003-20 & 3-04-003-25	4.20	8.28	2.06	4.06	0.14	0.28	0.02	0.04	0.01	0.02	-	-	-	-
Shakeout (EU6)	3-04-003-31	3.20	6.31	2.24	4.42	1.20	2.37	-	-	-	-	7.00	13.80	10.00	19.71
<b>TOTALS</b>			<b>18.25</b>		<b>11.59</b>		<b>2.64</b>		<b>0.04</b>		<b>0.02</b>		<b>13.80</b>		<b>19.71</b>

	tons/year
Annual Throughput Limit for Metal	1000
Annual Throughput Limit for Magnesium treatment	200

		Limited Potential to Emit													
Process	SCC #	PM emission factor (lbs/ton)	PTE of PM tons/year	PM10 Emission Factor (lbs/ton)	PTE of PM 10 tons/year	VOC emission factor (lbs/ton)	PTE of VOC tons/year	SO <sub>2</sub> Emission factor (lbs/ton)	PTE of SO <sub>2</sub> tons/year	NOx Emission Factor (lbs/ton)	PTE of NOx tons/year	CO Emission Factor <sup>4</sup> (lbs/ton)	PTE of CO tons/year	CO <sub>2</sub> e Emission Factor <sup>5</sup> (lbs/ton)	PTE of CO <sub>2</sub> e tons/year
Charge Handling (EU1)	3-04-003-15	0.60	0.30	0.36	0.18	-	-	-	-	-	-	-	-	-	-
One (1) 1000 Lb. and One (1) 500 Lb. Furnace (electric) <sup>1</sup> (EU2)	3-04-003-03	0.90	0.45	0.86	0.43	-	-	-	-	-	-	-	-	-	-
Magnesium Treatment <sup>2</sup> (EU3)	3-04-003-21	1.80	0.18	1.80	0.18	-	-	-	-	-	-	-	-	-	-
Pouring/Casting Operation (EU4) and Casting/Cooling Operation (EU5)	3-04-003-20 & 3-04-003-25	4.20	2.1	2.06	1.03	0.14	0.07	0.02	0.01	0.01	0.01	-	-	-	-
Shakeout (EU6)	3-04-003-31	3.20	1.6	2.24	1.12	1.20	0.6	-	-	-	-	7.00	3.5	10.00	5.00
<b>TOTALS</b>			<b>4.63</b>		<b>2.94</b>		<b>0.67</b>		<b>0.01</b>		<b>0.005</b>		<b>3.5</b>		<b>5.00</b>

**Notes:**

<sup>1</sup> There is also a second gray iron electric furnace (identified in the FESOP as the 500 Lb. Furnace) which has the same maximum capacity of the 1000 Lb. Furnace. However, the emission calculations are based upon the use of only one furnace because both furnaces share the same power supply and thus cannot be operated simultaneously.

<sup>2</sup> Magnesium treatment is only performed on ductile iron, which is a maximum of 20% of the total gray iron melted.

<sup>3</sup> Additional VOC emissions from pouring, cooling, and shakeout being emitted from the binder materials used in the cores and molds are included in the emission calculations for core/mold making (pages 7, 8 & 9 of App. A) and for binder usage (page 6 of App. A)

<sup>4</sup> The CO Emission Factors are based on initial IDEM data and the emission factor of 7lb/ton for CO has been established for all three operations (pouring, cooling and shakeout combined). Hence, CO emissions are calculated only once.

<sup>5</sup> GHGs as CO<sub>2</sub>e emissions is equal to CO<sub>2</sub> emissions. CO<sub>2</sub> emission factor from American Foundry Society (AFS) Data, "Pouring, Cooling, and Shakeout CO/CO<sub>2</sub> Emission Sources and Variability" (AFS 08-031) Emission factors for PM, PM10, VOC, SO<sub>2</sub> and NOx were obtained from FIRE 6.25.

**Methodology:**

PTE in tons/year = throughput (tons/hour) \* emission factor (lb/ton) \* 1ton/2000 lbs

**Appendix A: Emission Calculations  
ALUMINUM MELTING & CASTING PROCESS**

Company Name: Muncie Casting Corporation  
Address City IN Zip: 1406 East 18th Street, Muncie, Indiana 47302  
Permit Number: F035-32941-00061  
Reviewer: Sarah Street

	tons/hr	tons/year
Maximum Throughput for Metal	7.34	64,298.40
Maximum Throughput for Magnesium treatment	6.24	54,653.64

EU7 = 7.25 tons/hr; EU8 = 0.09 tons/hr

		Unlimited Potential to Emit													
Process	SCC #	PM emission factor (lbs/ton)	PTE of PM tons/year	PM10 Emission Factor (lbs/ton)	PTE of PM 10 tons/year	VOC emission factor (lbs/ton)	PTE of VOC <sup>2</sup> tons/year	SO <sub>2</sub> Emission factor (lbs/ton)	PTE of SO <sub>2</sub> tons/year	NOx Emission Factor (lbs/ton)	PTE of NOx tons/year	CO Emission Factor <sup>3</sup> (lbs/ton)	PTE of CO tons/year	CO <sub>2</sub> e Emission Factor <sup>4</sup> (lbs/ton)	PTE of CO <sub>2</sub> e tons/year
Six (6) 2300 lb furnaces (EU7); One (1) 700 lb furnace; One (1) 300 lb Natural Gas Furnace (EU8)	3-04-001-02	1.90	61.08	1.70	54.65	0.20	6.43	-	-	-	-	-	-	-	-
Magnesium Treatment <sup>1</sup> (EU9)	3-04-003-21	1.80	49.19	1.80	49.19	-	-	-	-	-	-	-	-	-	-
Pouring and Casting (EU10) & Casting and Cooling (EU11)	003-25	4.20	135.03	2.06	66.23	0.14	4.50	0.02	0.64	0.01	0.32				
Shakeout Operation (EU12)	3-04-003-31	3.20	102.88	2.24	72.01	1.20	38.58					7.00	225.04	10.00	321.49
<b>TOTALS</b>			<b>348.18</b>		<b>242.08</b>		<b>49.51</b>		<b>0.64</b>		<b>0.32</b>		<b>225.04</b>		<b>321.49</b>

	tons/year
Annual Throughput Limit for Metal	12,042
Annual Throughput Limit for Magnesium treatment	10,236

		Limited Potential to Emit													
Process	SCC #	PM emission factor (lbs/ton)	PTE of PM tons/year	PM10 Emission Factor (lbs/ton)	PTE of PM 10 tons/year	VOC emission factor (lbs/ton)	PTE of VOC <sup>2</sup> tons/year	SO <sub>2</sub> Emission factor (lbs/ton)	PTE of SO <sub>2</sub> tons/year	NOx Emission Factor (lbs/ton)	PTE of NOx tons/year	CO Emission Factor <sup>3</sup> (lbs/ton)	PTE of CO tons/year	CO <sub>2</sub> e Emission Factor <sup>4</sup> (lbs/ton)	PTE of CO <sub>2</sub> e tons/year
Six (6) 2300 lb furnaces (EU7); One (1) 700 lb furnace; One (1) 300 lb Natural Gas Furnace (EU8)	3-04-001-02	1.90	11.44	1.70	10.24	0.20	1.20	-	-	-	-	-	-	-	-
Magnesium Treatment <sup>1</sup> (EU9)	3-04-003-21	1.80	9.21	1.80	9.21	-	-	-	-	-	-	-	-	-	-
Pouring and Casting (EU10) & Casting and Cooling (EU11)	3-04-001-14 & 3-04-003-25	4.20	25.29	2.06	12.40	0.14	0.84	0.02	0.12	0.01	0.06				
Shakeout Operation (EU12)	3-04-003-31	3.20	19.27	2.24	13.49	1.20	7.23					7.00	42.15	10.00	60.21
<b>TOTALS</b>			<b>65.21</b>		<b>45.34</b>		<b>9.27</b>		<b>0.12</b>		<b>0.06</b>		<b>42.15</b>		<b>60.21</b>

**Notes:**

<sup>1</sup> Magnesium treatment is only performed on a maximum of 85% of the total aluminum melted.

<sup>2</sup> Additional VOC/HAP emissions from pouring, cooling, and shakeout being emitted from the binder materials used in the cores and molds are included in the emission calculations for core/mold making (pages 7, 8 & 9 of App. A) and for binder usage (page 6 of App. A)

11.51399845

<sup>3</sup> The CO Emission Factors are based on initial IDEM data and the emission factor of 7lb/ton for CO has been established for all three operations (pouring, cooling and shakeout combined). Hence, CO emissions are calculated only once.

<sup>4</sup> GHGs as CO<sub>2</sub>e emissions is equal to CO<sub>2</sub> emissions. CO<sub>2</sub> emission factor from American Foundry Society (AFS) Data, "Pouring, Cooling, and Shakeout CO/CO<sub>2</sub> Emission Sources and Variability" (AFS 08-031)

Emission factors for PM, PM<sub>10</sub>, VOC, SO<sub>2</sub> and NO<sub>x</sub> were obtained from FIRE 6.25.

Since there are no valid emission factors for aluminum melting, the EF's for iron melting and casting are used.

There are no control devices on these emission units.

**Methodology:**

Throughput is limited by permit.

PTE = Throughput (ton/year) \* Emission factor (lb/ton) \* 1 ton/2000

**Appendix A: Emission Calculations**  
**SAND HANDLING OPERATIONS**

Company Name: Muncie Casting Corporation  
Address City IN Zip: 1406 East 18th Street, Muncie, Indiana 47302  
Permit Number: F035-32941-00061  
Reviewer: Sarah Street

Process	Maximum Throughput of Sand		Unlimited Potential to Emit			
	tons/hr	tons/year	PM emission factor (lb/ton) <sup>2</sup>	PTE of PM	PM10 Emission Factor (lb/ton) <sup>2</sup>	PTE of PM 10
(EU13) <sup>5</sup>	6.00	52,560	3.60	94.61	0.54	14.19
Thermal Sand Reclamation Unit (EU17)	1.00	8,760	N/A	23.83	N/A	23.83
Strong Scott Mixer (EU18), Kloster Sand Mixer (EU19), Palmer Core Mixer #1(EU20), Palmer Core Mixer #2 (EU21), and Sand Storage Silos**	27.00	236,520	3.60	425.74	0.54	63.86
<b>TOTALS</b>				<b>544.17</b>		<b>101.88</b>

**Notes**

\*\* The PM emission calculations for the four mixers showing a PTE of 425.74 tons/year includes the sand handling through the three storage silos and the four sand mixers.

	tons/year
Limited Throughput of Sand <sup>1</sup>	9,675

Process	PM emission factor (lb/ton) <sup>2</sup>	PTE of PM (tons/yr)	PM10 Emission Factor (lb/ton) <sup>2</sup>	PTE of PM 10 (tons/yr)	PM2.5 Emission Factor (lb/ton) <sup>2</sup>	PTE of PM2.5 (tons/yr)	Limited Potential to Emit							
							VOC emission factor	PTE of VOC (tons/yr) <sup>4</sup>	SO2 Emission factor	PTE of SO2 (tons/yr)	Type of Control	Control Efficiency (%) <sup>3</sup>	PM Emissions after Controls (tons/yr)	PM10 Emissions after Controls (tons/yr)
Mechanical Sand Reclamation Unit (EU13) <sup>5</sup>	3.60	17.42	0.54	2.61	0.54	2.61	See Below	-	-	-	See below	-	17.42	2.61
Thermal Sand Reclamation Unit (EU17) <sup>6,7</sup>	0.10	0.48	4.926	23.83	4.926	23.83	-	-	-	-	-	98.00	0.01	0.48
Strong Scott Mixer (EU18), Kloster Sand Mixer (EU19, Palmer Core Mixer #1(EU20), Palmer Core Mixer #2 (EU21), and Sand Storage Silos	3.60	17.42	0.54	2.61	0.54	2.61	-	-	-	-	-	90.00	1.74	0.26
CB-22 Core Machine (EU 22)	-	-	-	-	-	-	See below	See below	See below	See below	-	-	-	-
Dependable Core Machine (EU23)	-	-	-	-	-	-	See below	See below	See below	See below	-	-	-	-
Three (3) U-180 Core Machines and two (2) Horizontal Bottom Blow Core machines (EU24 collectively)	-	-	-	-	-	-	See below	See below	-	-	-	-	-	-
<b>TOTALS</b>		<b>35.31</b>		<b>29.05</b>		<b>29.05</b>							<b>19.17</b>	<b>3.35</b>

**Notes:**

<sup>1</sup> The Annual Throughput Sand Handled number represents the total annual amount of virgin sand that is purchased and added into the sand system each year for the mixers.

This total does not include the core (resin bonded) sand purchased in bags that is manually fed into the U-180 core machines. The maximum annual usage of this resin bonded sand is 800,000 lbs/yr. It is assumed that the sand grains pass through the entire sand system approximately 3 times on average with the exception of the Palmer Core Mixer #2 (EU21) which is manually fed only new virgin silica sand.

<sup>2</sup> All sand handling PM and PM-10 emission factors have the following units: lbs/tons of sand handled.

<sup>3</sup> A control efficiency is included for the sand mixers

<sup>4</sup> The VOC emissions from the sand mixing and mold/core making operations are dependent upon the type of binders being utilized in each particular machine. These emissions are not included in this spreadsheet. See VOC/HAP emission calculations for the mold/core making operations on pages 5, 6 and 7 of Appendix A.

<sup>5</sup> The mechanical sand reclamation process is used to "recondition" the spent sand from the Iron and Aluminum Foundry shakeout processes for reuse in the core and mold making process. It is assumed that the sand grains pass through the entire sand system approximately 3 times on average. Therefore, the total sand throughput is based upon the total annual virgin silica sand and resin bonded core sand throughput multiplied by a factor of 3. To be conservative, it is assumed that all virgin silica sand and core resin bonded sand will pass through this process.

<sup>6</sup> The thermal sand reclamation process is used to initially condition all of the virgin sand received on-site. It is also used to "recondition" the spent sand from the Iron and Aluminum Foundry shakeout processes for reuse in the core and mold making process. To be conservative, it is assumed that all virgin sand and core resin bonded sand will pass through this process.

<sup>7</sup> The PM/PM10 emissions for the thermal sand reclaimer are based upon stack testing data supplied by the manufacturer.



**Appendix A: Emission Calculations  
Core Making Operations Emissions Calculations**

**Company Name: Muncie Casting Corporation  
Address City IN Zip: 1406 East 18th Street, Muncie, Indiana 47302  
Permit Number: F035-32941-00061  
Reviewer: Sarah Street**

<b>Three (3) U-180 Core Making Machines and Two (2) Horizontal Bottom Blow Core Machines:</b>			
Binder System Used: <b>Shell Binder (Resin-Bonded Sand)<sup>1</sup></b>			
Maximum Resin-Bonded Sand Usage Rate (Lbs. of Resin/Year) <sup>2</sup> : <b>1,000,000</b>			
<b>Volatile Components</b>	<b>% in Product <sup>2</sup></b>	<b>% Evaporated <sup>3</sup></b>	<b>VOC Emissions (Tons/Yr)</b>
P/F Novolac Resin	3.5	100.0	<b>17.50</b>
Hexamethylenetetramine	2.0	100.0	<b>10.00</b>
<b>Total VOC (tons/year):</b>			<b>27.50</b>

**Notes:**

- <sup>1</sup> The U-180 core machines and the horizontal bottom blow core machines all use a shell binder system.
- <sup>2</sup> The Maximum Binder Usage Rate for the three (3) U-180 machines and the two (2) horizontal blow machines is 200,000 lbs/yr each. Therefore, the combined total Binder Usage for all five (5) core machines is 1,000,000 lbs/yr.
- <sup>3</sup> The % in product value is derived from the vendor's MSDS
- <sup>4</sup> The % evaporated value is assumed to be 100% since no data on this type of binder system appears in the "Form R" Gold Book (1998).

**Appendix A: Emission Calculations**  
**Phenolic No-Bake Binder Coremaking VOC Emissions Calculations**

**Company Name: Muncie Casting Corporation**  
**Address City IN Zip: 1406 East 18th Street, Muncie, Indiana 47302**  
**Permit Number: F035-32941-00061**  
**Reviewer: Sarah Street**

Phenolic No-bake Core Making Process								
Machine	Date of Construction	Capacity (tons cores/hr)	Maximum Resin Content (%)	VOC Emission Factor from Resin Evaporation (lb/ton cores)	Max. Catalyst Usage (lb/ton cores)	Potential VOC Emissions from resin evap (tons/yr)	Potential VOC Emissions from Catalyst usage (tons/yr)	Total Potential VOC Emissions (tons/yr)
CB-22 Core Machine	1998	0.5	1.80%	1.8	0.595	3.94	1.30	5.25
Dependable 420 Core Machine	1998	0.5	1.80%	1.8	0.595	3.94	1.30	5.25
<b>Total</b>								<b>10.49</b>

SO<sub>2</sub> gas emissions from these core machines are from the Isoet activator component. PTE of SO<sub>2</sub> is 1.88 tons/yr, each. From FESOP Renewal No. 035-29148-00061

**Appendix A: Emission Calculations**  
**HAP Emission Calculations - Phenolic Urethane No-bake Core Making**

**Company Name:** Muncie Casting Corporation  
**Address City IN Zip:** 1406 East 18th Street, Muncie, Indiana 47302  
**Permit Number:** F035-32941-00061  
**Reviewer:** Sarah Street

Material	Maximum Usage (lbs/hr)	Weight % Phenol	Weight % MDI	Weight % Formaldehyde	Weight % Naphthalene	Phenol Emissions (ton/yr)	MDI Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Naphthalene Emissions (ton/yr)
<b>Phenolic No-bake Core Making</b>									
Phenolic No-bake Part I Binder	14.47	7.50%	0.00%	47.50%	3.00%	0.00	0.00	0.60	0.11
Phenolic No-bake Part II Binder	11.62	0.00%	20.00%	0.00%	3.00%	0.00	0.00	0.00	0.09
Phenolic No-bake Catalyst	0.59	0.00%	0.00%	0.00%	8.55%	0.00	0.00	0.00	0.22
<b>TOTALS</b>						<b>0.00</b>	<b>0.00</b>	<b>0.60</b>	<b>0.42</b>

<b>TOTAL HAPS</b>	<b>1.03</b>
-------------------	-------------

**Reduction Factors for Core Making**

Pollutant	Phenolic Urethane No-Bake Part I Reduction Factors	Phenolic Urethane No-Bake Part II Reduction Factors
Phenol	0.00%	N/A
MDI	N/A	0.00%
Formaldehyde	2.00%	N/A
Xylene	5.85%	5.85%
Naphthalene	5.85%	5.85%
Sulfuric Acid	N/A	N/A

**METHODOLOGY**

Max. Hourly Resin Usage Rate = Max. Annual Resin Usage rate (lbs/yr) / 8,760 (hrs/yr)

HAP Emissions from Resins = Max. Hourly Usage Rate \* % HAP \* Reduction Factor \* 8760 hrs/yr \* 1 ton/2000 lbs

Reduction factors obtained from the American Foundrymen's Society Publication entitled "Form R Reporting of Binder Chemicals used in Foundries", and refers to the weight percent of HAP that is emitted to the atmosphere.

**Appendix A: Emission Calculations**  
**HAP Emission Calculations for Pouring, Cooling and Shakeout Operations**  
**Aluminum and Iron Foundries**

**Company Name:** Muncie Casting Corporation  
**Address City IN Zip:** 1406 East 18th Street, Muncie, Indiana 47302  
**Permit Number:** F035-32941-00061  
**Reviewer:** Sarah Street

<b>MIXER</b>		
Binder System Used: Phenolic Nobake Binder (Pepset Process)		
2003 Part I Binder Used:	63,360	
2003 Part II Binder Used:	50,880	
Maximum Total Resin Usage Rate (Lbs. of Resin/Year): <sup>1</sup>	228,480	
<b>Pollutant Name</b>	<b>Emission Factor<sup>2</sup> (Lbs. Pollutant/Lbs. Resin)</b>	<b>HAP Emissions<sup>3</sup> (Tons/Yr)</b>
Formaldehyde	0.000010	0.001142
Phenol	0.000975	0.111384
Benzene	0.011209	1.280516
Toluene	0.000634	0.072428
M-xylene	0.000097	0.011081
O-xylene	0.000049	0.005598
Naphthalene	0.000049	0.005598
<b>Total HAPs<sup>4</sup></b>		<b>1.487748</b>

<b>MIXER</b>		
Binder System Used: Acrylic-Epoxy Cold Box Binder (Isoaset) <sup>5</sup>		
2003 Part I Binder Used:	5,000	
2003 Part II Binder Used:	4,000	
Maximum Total Resin Usage Rate (Lbs. of Resin/Year):	18,000	
<b>Pollutant Name</b>	<b>Emission Factor<sup>2</sup> (Lbs. Pollutant/Lbs. Resin)</b>	<b>HAP Emissions<sup>3</sup> (Tons/Yr)</b>
Formaldehyde	0.000004	0.000457
Phenol	0.000131	0.001179
Benzene	0.000611	0.005499
Toluene	0.000063	0.000567
M-xylene	0.000021	0.000189
O-xylene	0.000021	0.000189
Naphthalene	0.000021	0.000189
<b>Total HAPs<sup>4</sup></b>		<b>0.008269</b>

<b>Core and Mold Making</b>		
Binder System Used: Shell Binder (Resin-Bonded Sand)		
2003 Part I Binder Used: <sup>6</sup>	200,000	
Maximum Total Resin Usage Rate (Lbs. of Resin/Year):	800,000	
<b>Pollutant Name</b>	<b>Emission Factor<sup>2</sup> (Lbs. Pollutant/Lbs. Resin)</b>	<b>HAP Emissions<sup>3</sup> (Tons/Yr)</b>
Formaldehyde	0.000035	0.014000
Phenol	0.002456	0.982400
Benzene	0.006667	2.666800
Toluene	0.002807	1.122800
M-xylene	0.000585	0.234000
O-xylene	0.000117	0.046800
Naphthalene	0.000058	0.023200
<b>Total HAPs<sup>4</sup></b>		<b>5.090000</b>

<b>HAPs</b>						
<b>Formaldehyde</b>	<b>Phenol</b>	<b>Benzene</b>	<b>Toluene</b>	<b>M-xylene</b>	<b>O-xylene</b>	<b>Naphthalene</b>
0.001142	0.111384	1.280516	0.072428	0.011081	0.005598	0.005598
0.000036	0.001179	0.005499	0.000567	0.000189	0.000189	0.000189
0.01400	0.982400	2.6668	1.1228	0.234	0.0468	0.0232
<b>TOTALS</b>	<b>0.015178</b>	<b>1.094963</b>	<b>3.952815</b>	<b>1.195795</b>	<b>0.052587</b>	<b>0.028987</b>

**Notes:**

<sup>1</sup> Maximum total resin usage rate is estimated to be twice the actual 2003 total resin usage.

<sup>2</sup> Emission factors are based upon the American Foundrymen's Society (Mosher) research paper.

<sup>3</sup> HAP Emissions = Maximum Total Resin Usage Rate x Emission Factor x (1 ton/2000 lbs)

<sup>4</sup> Total HAPs is the sum of all pollutants listed.

<sup>5</sup> This system was not identified in Mosher research paper, so Green Sand Binder factors used.

<sup>6</sup> The total amount of shell binder used is based upon the 2003 total usage increased by a safety factor assuming all four U-180 core machines are operable.

**Appendix A: Emission Calculations  
CLEANING/FINISHING PROCESS**

App. A to TSD Page 10 of 13

**Company Name:** Muncie Casting Corporation  
**Address City IN Zip:** 1406 East 18th Street, Muncie, Indiana 47302  
**Permit Number:** F035-32941-00061  
**Reviewer:** Sarah Street

	Tons/Hr	Tons/Year
Maximum Throughput Metal Melted	7.79	68,240

EU2 = 0.45 tons/hr; EU7 = 7.25 tons/hr; EU8 = 0.09 tons/hr

Annual Throughput Limit Metal Melted GOFF Machine EU14	3,912.60	Tons/Year
Annual Throughput Limit Metal Melted GOFF Machine EU27	3,912.60	Tons/Year
Annual Throughput Limit Metal Melted to Small Shotblast Machine and Sand Blaster (EACH)	1,174	Tons/Year

Process Description	SCC #	Process Use Allocation (%) <sup>1</sup>	% Processed (Yield) <sup>2</sup>	Pollutant	Emission Factor (lb/ton produced)	Unlimited Emissions Before Controls (tons/yr)	Limited Emissions Before Controls (tons/yr)	Type of Control Device	Control Efficiency (%)	Emissions After Controls (tons/yr)
GOFF Shotblast Machine (EU14)	3-04-003-40	100.00%	60.00%	PM	17.00	348.03	33.26	Baghouse	95%	1.66
		100.00%	60.00%	PM-10	1.70	34.80	3.33	Baghouse	95%	0.17
		100.00%	60.00%	PM2.5	1.70	34.80	3.33	Baghouse	95%	0.17
GOFF Shotblast Machine (EU27)	3-04-003-40	100.00%	60.00%	PM	17.00	348.03	33.26	Baghouse	95%	1.66
		100.00%	60.00%	PM-10	1.70	34.80	3.33	Baghouse	95%	0.17
		100.00%	60.00%	PM2.5	1.70	34.80	3.33	Baghouse	95%	0.17
Small Shotblast Machine (EU15)	3-04-003-40	15.00%	60.00%	PM	17.00	52.20	9.98	Baghouse	95%	0.50
		15.00%	60.00%	PM-10	1.70	5.22	1.00	Baghouse	95%	0.05
		15.00%	60.00%	PM 2.5	1.70	5.22	1.00	Baghouse	95%	0.05
Sand Blaster Machine (EU16)	3-04-003-40	15.00%	60.00%	PM	17.00	52.20	9.98	Baghouse	95%	0.50
		15.00%	60.00%	PM-10	1.70	5.22	1.00	Baghouse	95%	0.05
		15.00%	60.00%	PM 2.5	1.70	5.22	1.00	Baghouse	95%	0.05
<b>PM EMISSIONS</b>						<b>800.46</b>	<b>86.47</b>			<b>4.32</b>
<b>PM 10 EMISSIONS</b>						<b>80.05</b>	<b>8.65</b>			<b>0.43</b>
<b>PM2.5 EMISSIONS</b>						<b>80.05</b>	<b>8.65</b>			<b>0.43</b>

PM e.f after control (lb/ton)
0.85

**Notes:**

1 The Process Use Allocation column is used to estimate the percentage of the total amount of metal melted that passes through each individual process.  
The Process Use Allocation is 100% for each of the two (2) GOFF Shotblast Machines because 100% of the parts requiring cleaning are processed in each of these machines.  
The Process Use Allocation is only 15% for the Small Shotblast Machine and the Sand Blaster Machine because only a maximum of 15% of the parts that require cleaning go through the extra step of being processed in these two machines.  
2 The % Processed rate for the shotblasting operation is based upon the fact that only 60% of the total metal (aluminum and gray iron) melted actually reaches this process operation (this is the current and expected future yield)

**Methodology:**

PTE of PM/PM10 Uncontrolled (tons/yr) = Throughput/tons per year x Emission Factor (lbs/ton) x 1 ton/2,000 lbs  
PTE of PM/PM10 Controlled (tons/yr) =Throughput/tons per year x Emission Factor (lbs/ton) x 1 ton/2,000 lbs x (1 - Control Efficiency %)  
EPA WebFIRE PM and PM10 emission factors for Grey Iron Foundries - Grinding/Cleaning (Table 12.10-7, SCC#30400340)  
PM2.5 = PM10

**Appendix A - Emissions Calculations  
SURFACE COATING POTENTIAL EMISSIONS**

**Company Name:** Muncie Casting Corporation  
**Address City IN Zip:** 1406 East 18th Street, Muncie, Indiana 47302  
**Permit Number:** F035-32941-00061  
**Reviewer:** Sarah Street

<u>Product Name</u>	<u>MSDS #</u>	<u>Actual Annual Usage (Lbs/Yr)</u>	<u>Annual Operating Schedule (Hrs/Yr)</u>	<u>Actual Usage Rate (Lbs/Hr)</u>	<u>Maximum Usage Rate (Lbs/Hr)</u>	<u>Weight % Organics</u>	<u>Spray Gun Transfer Efficiency (%)</u>	<u>Potential VOC (Ton/Yr)</u>	<u>Potential PM (Ton/Yr)</u>
Air Set 913	68	1000	4000	0.25	0.548	95.0	75.0	2.28	0.03
Zip-Slip 125H	4	800	4000	0.20	0.438	0.0	75.0	0.00	0.48

**2.28      0.51**

**Emission Calculation Methodology:**

Actual Usage Rate (Lbs/Hr) = 1998 Actual Usage (Lbs/Yr) / 1998 Operating Schedule (Hrs/Yr)

Maximum Usage Rate (Lbs/Hr) = Actual Usage Rate (Lbs/Hr) / (8760/4000) (Hrs/Yr)

Potential VOC (Ton/Yr) = Maximum Usage Rate (Lbs/Hr) x (Weight % Organics / 100) x (1 Ton / 2000Lb) x (8760 Hrs/Yr)

Potential PM (Ton/Yr) = Maximum Usage Rate (Lbs/Hr) x (1 - Weight % Volatiles) x (1 - Transfer Efficiency %) x (8760 hr/yr) x (1 ton/2000 lb)]

## App. A to TSD Page 12 of 13

MM BTU/HR <100

MM BTU/HR  $\leq 100$ 

**Company Name:** Muncie Casting Corporation  
**Address City IN Zip:** 1406 East 18th Street, Muncie, Indiana 47302  
**Permit Number:** F035-32941-00061  
**Reviewer:** Sarah Street

Heat Input Capacity MMBtu/hr	HHV mmBtu mmscf	Potential Throughput MMCF/yr	Combustion for thermal sand reclamation unit EU17 (2 at 1.00 MMBtu/hr)	Combustion for melting furnace EU08	MMBtu/hr
3.0	1020	25.8			1.00
					2.00

	Pollutant						
Emission Factor in lb/MMCF	PM* 1.9	PM10* 7.6	direct PM2.5* 7.6	SO2 0.6	NOx 100 **see below	VOC 5.5	CO 84
Potential Emission in tons/yr	0.02	0.10	0.10	0.01	1.29	0.07	1.08

PM2.5 emission factor is filterable and condensable PM2.5 combined.

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

All emission factors are based on normal firing.

$$\text{MMBtu} = 1,000,000 \text{ Btu}$$

MMCF = 1,000,000 Cubic Feet of Gas

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

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1.020 MMBtu

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

	HAPs - Organics					
Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03	Total - Organics
Potential Emission in tons/yr	2.705E-05	1.546E-05	9.662E-04	2.319E-02	4.380E-05	<b>2.424E-02</b>

		HAPs - Metals				
Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03	Total - Metals
Potential Emission in tons/yr	6.441E-06	1.417E-05	1.804E-05	4.895E-06	2.705E-05	7.060E-05
Methodology is the same as above					Total HAPs	2.431E-02
					Worst HAP	2.319E-02

Methodology is the same as above.

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

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

	Greenhouse Gas		
Emission Factor in lb/MMcf	CO2 120,000	CH4 2.3	N2O 2.2
Potential Emission in tons/yr	1,546	0.0	0.0
Summed Potential Emissions in tons/yr	1,546		
CO2e Total in tons/yr	1,555		

The N<sub>2</sub>O Emission Factor for uncontrolled is 2.2. The N<sub>2</sub>O 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.

Global 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

$$\text{CO2e (tons/yr)} = \text{CO2 Potential Emission ton/yr} \times \text{CO2 GWP (1)} + \text{CH4 Potential Emission ton/yr} \times \text{CH4 GWP (21)} + \text{N2O Potential Emission ton/yr} \times \text{N2O GWP (310)}.$$

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

**Company Name:** Muncie Casting Corporation  
**Address City IN Zip:** 1406 East 18th Street, Muncie, Indiana 47302  
**Permit Number:** F035-32941-00061  
**Reviewer:** Sarah Street

**Unpaved Roads at Industrial Site**

The following calculations determine the amount of emissions created by unpaved roads, based on 8,760 hours of use and AP-42, Ch 13.2.2 (11/2006).

**Vehicle Information (provided by source)**

Type	Maximum number of vehicles	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 Vehicle (entering plant) (one-way trip)	48.0	1.0	48.0	1.0	48.0	150	0.028	1.4	497.7
Employee Vehicle (leaving plant) (one-way trip)	48.0	1.0	48.0	1.0	48.0	150	0.028	1.4	497.7
Bulk Delivery Truck (entering plant) (one-way trip)	4.0	1.0	4.0	20.0	80.0	300	0.057	0.2	83.0
Bulk Delivery Truck (leaving plant) (one-way trip)	4.0	1.0	4.0	15.0	60.0	300	0.057	0.2	83.0
<b>Totals</b>			<b>104.0</b>		<b>236.0</b>			<b>3.2</b>	<b>1161.4</b>

Average Vehicle Weight Per Trip = 2.3 tons/trip  
 Average Miles Per Trip = 0.03 miles/trip

Unmitigated Emission Factor, Ef =  $k \cdot [(s/12)^a] \cdot [(W/3)^b]$  (Equation 1a from AP-42 13.2.2)

	PM	PM10	PM2.5	
where k =	4.9	1.5	0.15	lb/mi = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads)
s =	4.8	4.8	4.8	% = mean % silt content of unpaved roads (AP-42 Table 13.2.2-1 Sand/Gravel Processing Plant)
a =	0.7	0.9	0.9	= constant (AP-42 Table 13.2.2-2 for Industrial Roads)
W =	2.3	2.3	2.3	tons = average vehicle weight (provided by source)
b =	0.45	0.45	0.45	= constant (AP-42 Table 13.2.2-2 for Industrial Roads)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext =  $E \cdot [(365 - P)/365]$  (Equation 2 from AP-42 13.2.2)

Mitigated Emission Factor, Eext =  $E \cdot [(365 - P)/365]$   
 where P = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.2-1)

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	2.28	0.58	0.06	lb/mile
Mitigated Emission Factor, Eext =	1.50	0.38	0.04	lb/mile
Dust Control Efficiency =	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

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)
Employee Vehicle (entering plant) (one-way trip)	0.57	0.14	0.01	0.37	0.09	0.01	0.19	0.05	0.00
Employee Vehicle (leaving plant) (one-way trip)	0.57	0.14	0.01	0.37	0.09	0.01	0.19	0.05	0.00
Bulk Delivery Truck (entering plant) (one-way trip)	0.09	0.02	0.00	0.06	0.02	0.00	0.03	0.01	0.00
Bulk Delivery Truck (leaving plant) (one-way trip)	0.09	0.02	0.00	0.06	0.02	0.00	0.03	0.01	0.00
<b>Totals</b>	<b>1.32</b>	<b>0.34</b>	<b>0.03</b>	<b>0.87</b>	<b>0.22</b>	<b>0.02</b>	<b>0.43</b>	<b>0.11</b>	<b>0.01</b>

**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 = Particulate Matter (<2.5 um)  
 PTE = Potential to Emit





## INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

*Michael R. Pence*  
**Governor**

*Thomas W. Easterly*  
**Commissioner**

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

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

TO: Aaron Vest  
Muncie Casting Corporation  
1406 E 18th St, PO Box 2328  
Muncie, IN 47302

DATE: June 4, 2013

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

SUBJECT: Final Decision  
FESOP - Significant Permit Revision  
035 - 32941 - 00061

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:  
Joseph VanCamp Cornerstone Environmental  
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](mailto:jbrush@idem.IN.gov).

Final Applicant Cover letter.dot 11/30/07



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

*Michael R. Pence*  
**Governor**

*Thomas W. Easterly*  
**Commissioner**

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

June 4, 2013

TO: Muncie Public Library 2005 South High Street Muncie IN

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

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


**Applicant Name: Muncie Casting Corporation**  
**Permit Number: 035 - 32941 - 00061**

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	LPOGOST 6/4/2013 Muncie Casting Corp 035 - 32941 - 00061 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:  <b>CERTIFICATE OF MAILING ONLY</b>	

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		Aaron Vest Muncie Casting Corp 1406 E 18th St, PO Box 2328 Muncie IN 47302 (Source CAATS) Via confirmed delivery									
2		Muncie City Council and Mayors Office 300 N. High St Muncie IN 47305 (Local Official)									
3		President, City Council 300 N High St Muncie IN 47305 (Affected Party)									
4		Delaware County Health Department 200 W Main St, County Bldg Room 207-309 Muncie IN 47305-2874 (Health Department)									
5		Mr. Joseph VanCamp Cornerstone Environmental 312 E Diamond St. Kendallville IN 46755 (Consultant)									
6		Muncie Public Library 2005 South High Street Muncie IN 47302 (Library)									
7		Delaware County Commissioners 100 West Main Street Muncie IN 47305 (Local Official)									
8											
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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 <b>Domestic Mail Manual R900, S913, and S921</b> for limitations of coverage on inured and COD mail. See <b>International Mail Manual</b> for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.
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