



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

To: Interested Parties

Date: August 10, 2015

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

Source Name: ID Castings LLC

Permit Level: Title V SSM

Permit Number: 057-35618-00002

Source Location: 1600 S 8th St PO Box 1146 Noblesville, Indiana

Type of Action Taken: Modification at an existing source
Revisions to permit requirements

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 matter referenced above.

The final decision is available on the IDEM website at: <http://www.in.gov/apps/idem/caats/>
To view the document, select Search option 3, then enter permit 35618.

If you would like to request a paper copy of the permit document, please contact IDEM's central file room:

Indiana Government Center North, Room 1201
100 North Senate Avenue, MC 50-07
Indianapolis, IN 46204
Phone: 1-800-451-6027 (ext. 4-0965)
Fax (317) 232-8659

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.

(continues on next page)

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.



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Commissioner

Tony Stein
ID Castings, LLC
1600 South 8th Street
Noblesville, IN 46060

August 10, 2015

Re: 057-35618-00002
Significant Source Modification

Dear Mr. Stein:

ID Castings, LLC was issued Part 70 Operating Permit Renewal No. 057-33889-00002 on July 21, 2014 for a stationary ductile iron foundry located at 1600 South 8th Street, Noblesville, Indiana 46060. An application to modify the source was received on March 24, 2015. Pursuant to the provisions of 326 IAC 2-7-10.5, a Significant Source Modification is hereby approved as described in the attached Technical Support Document.

Pursuant to 326 IAC 2-7-10.5, the following emission units are approved for construction at the source:

- (a) One (1) electric induction furnace, identified as EU-3B, approved in 2015 for construction, with a maximum capacity of 10.2 tons of iron per hour, with emissions controlled by dust collector DC-2, and exhausting to stack 009;

The electric induction furnace is considered part of the affected source under 40 CFR Part 63, Subpart ZZZZZ.

- (b) One (1) scrap and charge handling operation, identified as EU-2B, approved in 2015 for construction, with a maximum capacity of 10.2 tons of iron per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;

The scrap and charge handling system is considered part of the affected source under 40 CFR Part 63, Subpart ZZZZZ.

- (c) One (1) magnesium treatment operation, identified as EU-6B, approved in 2015 for construction, with a maximum capacity of 10.2 tons of iron per hour, with emissions controlled by a sealed reaction chamber and by dust collector DC-2, and exhausting to stack 009.

- (d) One (1) natural gas-fired scrap preheater, identified as EU-1A, approved in 2015 for construction, with a maximum capacity of 20.4 tons of iron per hour and a heat input capacity of 14.0 MMBtu/hr, controlled by dust collector DC-1, and exhausting to stack 003;

- (e) One (1) cooling tower, approved in 2015 for construction, with a total circulating flow rate of 3,800 gallons per day, no control, and exhausting outdoors.

The following construction conditions are applicable to the proposed modification:

General Construction Conditions

1. 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.

Effective Date of the Permit

3. Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

Commenced Construction

4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(j), 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.

Approval to Construct

6. Pursuant to 326 IAC 2-7-10.5(h)(2), this Significant Source Modification authorizes the construction of the new emission unit(s), when the Significant Source Modification has been issued.

Pursuant to 326 IAC 2-7-10.5(m), the emission units constructed under this approval shall not be placed into operation prior to revision of the source's Part 70 Operating Permit to incorporate the required operation conditions.

Pursuant to 326 IAC 2-7-12, operation of the new emission unit(s) is not approved until the Significant Permit Modification has been issued. Operating conditions shall be incorporated into the Part 70 Operating Permit as a Significant Permit Modification in accordance with 326 IAC 2-7-10.5(m)(2) and 326 IAC 2-7-12 (Permit Modification).

A copy of the permit is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>. For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Permit Guide on the Internet at: <http://www.in.gov/idem/5881.htm>; and the Citizens' Guide to IDEM on the Internet at: <http://www.in.gov/idem/6900.htm>.

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 Brian Williams of my staff, OAQ, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana, 46204-2251, or call at (800) 451-6027, and ask for Brian Williams or extension 4-5375 or dial (317) 234-5375.

Sincerely,



Iryn Calilung, Section Chief
Permits Branch
Office of Air Quality

Attachments: Significant Source Modification and Technical Support Document

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



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**Significant Source Modification
to a Part 70 Source**

OFFICE OF AIR QUALITY

**ID Castings, LLC
1600 South 8th Street
Noblesville, Indiana 46060**

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

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 2-7 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. This permit also addresses certain new source review requirements for existing equipment and is intended to fulfill the new source review procedures pursuant to 326 IAC 2-7-10.5, applicable to those conditions.

Significant Source Modification No.: 057-35618-00002	
Issued by:  Iryn Calilung, Section Chief, Permits Branch Office of Air Quality	Issuance Date: August 10, 2015



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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 2-7-4(c)] [326 IAC 2-7-5(14)] [326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary ductile iron foundry.

Source Address:	1600 South 8th Street, Noblesville, Indiana 46060
General Source Phone Number:	(317) 773-3313
SIC Code:	3321 (Gray and Ductile Iron Foundries)
County Location:	Hamilton
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Operating Permit Program 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 2-7-4(c)(3)] [326 IAC 2-7-5(14)]

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

Metal Melting

- (a) One (1) electric induction furnace, identified as EU-3A, constructed in 1998, approved in 2015 to exhaust to a dust collector, with a maximum capacity of 10.2 tons of iron per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;

The electric induction furnace is considered part of the affected source under 40 CFR Part 63, Subpart ZZZZZ.

- (b) One (1) electric induction furnace, identified as EU-3B, approved in 2015 for construction, with a maximum capacity of 10.2 tons of iron per hour, with emissions controlled by dust collector DC-2, and exhausting to stack 009;

The electric induction furnace is considered part of the affected source under 40 CFR Part 63, Subpart ZZZZZ.

Raw Material Handling and Preparation

- (c) One (1) scrap and charge handling operation, identified as EU-2A, constructed in 1998, approved in 2015 to exhaust to a dust collector, with a maximum capacity of 10.2 tons of iron per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;

The scrap and charge handling system is considered part of the affected source under 40 CFR Part 63, Subpart ZZZZZ.

- (d) One (1) scrap and charge handling operation, identified as EU-2B, approved in 2015 for construction, with a maximum capacity of 10.2 tons of iron per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;

The scrap and charge handling system is considered part of the affected source under 40 CFR Part 63, Subpart ZZZZZ.

- (e) One (1) magnesium treatment/inoculation operation, identified as EU-6A, constructed in 1971, approved in 2015 to exhaust to a dust collector , with a maximum capacity of 10.2 tons of iron per hour, with emissions controlled by a sealed reaction chamber and by dust collector DC-1, and exhausting to stack 003;
- (f) One (1) magnesium treatment operation, identified as EU-6B, approved in 2015 for construction, with a maximum capacity of 10.2 tons of iron per hour, with emissions controlled by a sealed reaction chamber and by dust collector DC-2, and exhausting to stack 009.

- (g) Sand handling operations, with a maximum capacity of 100 tons per hour of sand and 10.2 tons of iron per hour of castings, consisting of the following equipment:

- (1) One (1) muller, identified as EU-17, constructed in 1971 and approved in 2014 for reconstruction, with emissions controlled by dust collector DC-1, and exhausting to stack 003;
- (2) One (1) overhead shaker screen, identified as EU-18, constructed in 1971 and approved in 2014 for reconstruction, with emissions controlled by dust collector DC-1, and exhausting to stack 003;
- (3) One (1) Mag belt/bin top belt, identified as EU-27, constructed in 1971 and approved in 2014 for reconstruction, with emissions controlled by dust collector DC-1, and exhausting to stack 003;
- (4) One (1) vibratory conveyor, identified as EU-37, approved in 2014 for construction, with emissions controlled by dust collector DC-1, and exhausting to stack 003;

And the following storage bins:

- (5) Two (2) return sand storage silos (East and West), identified as EU-19 and EU-20, both constructed in 1971, with capacities of 80 and 100 tons, respectively, with emissions controlled by dust collector DC-1, and exhausting to stack 003;
- (6) One (1) outdoor bond silo, identified as EU-22, constructed in 1978, with a capacity of 80 tons of premixed casting sand binder, with emissions controlled by a sock filter system;
- (7) One (1) indoor bond storage silo, identified as EU-23, constructed in 1971, with a capacity of 1 ton of premixed casting sand binder, with emissions controlled dust collector DC-1, and exhausting to stack 003;
- (8) One (1) West outdoor sand storage bin, identified as EU-24, constructed in 1971, with a capacity of 150 tons, with emissions uncontrolled;
- (9) One (1) indoor new sand storage bin, identified as EU-26, constructed in 1971, with a capacity of 1 ton, emissions controlled by dust collector DC-1, and exhausting to stack 003;

- (h) One (1) natural gas-fired scrap preheater, identified as EU-1A, approved in 2015 for construction, with a maximum capacity of 20.4 tons of iron per hour and a heat input capacity of 14.0 MMBtu/hr, controlled by dust collector DC-1, and exhausting to stack 003;

Pouring, Cooling, and Shakeout

- (i) One (1) Disa pouring/casting machine, identified as EU-8, constructed in 1997, with a maximum capacity of 3.4 tons of iron and 39 tons of sand per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;
- (j) One (1) Disa cooling line, identified as EU-8A, constructed in 1997, approved in 2015 to exhaust to a dust collector, with a maximum capacity of 3.4 tons of iron and 39 tons of sand per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;
- (k) "A", "B", and "C" shakers, identified as EU-16, constructed in 1996, approved in 2015 to exhaust to a dust collector, with a maximum capacity of 3.4 tons of iron and 39 tons of sand per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;
- (l) One (1) Didion shake-out unit, identified as EU-11, constructed in 2007, with a maximum capacity of 3.4 tons of iron and 39 tons of sand per hour, with emissions controlled by dust collector DC-1, and exhausting through stack 003;
- (m) One (1) Hunter 1 pouring/casting line, identified as EU-35, approved in 2014 for construction, with a maximum capacity of 4.0 tons of iron and 42 tons of sand per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;
- (n) One (1) Hunter 1 cooling line and shake-out unit, collectively identified as EU-35A, consisting of the following:
 - (1) One (1) Hunter 1 cooling line, approved in 2014 for construction, with a maximum capacity of 4.0 tons of iron and 42 tons of sand per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;
 - (2) One (1) Hunter 1 shake-out unit, approved in 2014 for construction, with a maximum capacity of 4.0 tons of iron and 42 tons of sand per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;
- (o) One (1) Hunter 2 pouring/casting line, identified as EU-36, approved in 2014 for construction, with a maximum capacity of 4.0 tons of iron and 42 tons of sand per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;
- (p) One (1) Hunter 2 cooling line and shake-out unit, collectively identified as EU-36A, consisting of the following:
 - (1) One (1) Hunter 2 cooling line, approved in 2014 for construction, with a maximum capacity of 4.0 tons of iron and 42 tons of sand per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;
 - (2) One (1) Hunter 2 shake-out unit, approved in 2014 for construction, with a maximum capacity of 4.0 tons of iron and 42 tons of sand per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;

Dust collector DC-1 is also approved in 2014 to increase its air flow to accommodate Hunter 1 and Hunter 2 lines.

Finishing Operations

- (q) One (1) No. 3 cleaning machine, identified as EU-34, constructed in 2001, with a maximum capacity of 5.6 tons per hour of castings and 15 tons per hour of steel shot, with emissions controlled by baghouse BH-2, and exhausting to stack 007;
- (r) Casting, grinding and finishing operations with a maximum throughput of 5.6 tons per hour of finished castings, consisting of the following equipment:
 - (1) Nine (9) stand grinders, identified as EU-32, constructed in 1965, with emissions controlled by baghouse BH-1, and exhausting to stack 006;
 - (2) Ten (10) finishing (Burr Stations) units, identified as EU-33, all constructed in 1992, with emissions uncontrolled, and exhausting to the general ventilation area.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(14)]

This stationary source does not currently have any insignificant activities, as defined in 326 IAC 2-7-1(21) that have applicable requirements.

- (a) Paved and unpaved roads and parking lots with public access. [326 IAC 6-4]
- (b) Propane-fired combustion sources with heat input equal to or less than six million (6,000,000) Btu per hour:
 - (1) Two (2) 0.5 MMBtu/hr heating ladle torches;
 - (2) Two (2) 0.5 MMBtu/hr auto pour torches.
- (c) One (1) cooling tower, approved in 2015 for construction, with a total circulating flow rate of 3,800 gallons per day, no control, and exhausting outdoors.

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22);
- (b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-7-1]

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

B.2 Permit Term [326 IAC 2-7-5(2)] [326 IAC 2-1.1-9.5] [326 IAC 2-7-4(a)(1)(D)] [IC 13-15-3-6(a)]

- (a) This permit, T057-33889-00002, is issued for a fixed term of five (5) 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, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.

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

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

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

B.4 Enforceability [326 IAC 2-7-7] [IC 13-17-12]

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

B.5 Severability [326 IAC 2-7-5(5)]

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 2-7-5(6)(D)]

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

B.7 Duty to Provide Information [326 IAC 2-7-5(6)(E)]

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

B.8 Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)(C)]

- (a) A certification required by this permit meets the requirements of 326 IAC 2-7-6(1) if:

- (1) it contains a certification by a "responsible official" as defined by 326 IAC 2-7-1(35), 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) A "responsible official" is defined at 326 IAC 2-7-1(35).

B.9 Annual Compliance Certification [326 IAC 2-7-6(5)]

- (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

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

- (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 2-7-5(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 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

B.10 Preventive Maintenance Plan [326 IAC 2-7-5(12)] [326 IAC 1-6-3]

(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 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

- (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.11 Emergency Provisions [326 IAC 2-7-16]

- (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.

- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a 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 2-7-5(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 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

- (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 2-7-4(c)(8) 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 2-7 and any other applicable rules.
- (g) 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.

B.12 Permit Shield [326 IAC 2-7-15] [326 IAC 2-7-20] [326 IAC 2-7-12]

- (a) Pursuant to 326 IAC 2-7-15, the Permittee has been granted a permit shield. The permit shield provides that compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that either the applicable requirements are included and specifically identified in this permit or the permit contains an explicit determination or concise summary of a determination that other specifically identified requirements are not applicable. The Indiana statutes from IC 13 and rules from 326 IAC, referenced in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a Part 70 permit under 326 IAC 2-7 or for applicable requirements for which a permit shield has been granted.

This permit shield does not extend to applicable requirements which are promulgated after the date of issuance of this permit unless this permit has been modified to reflect such new requirements.

- (b) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, IDEM, OAQ shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued. The permit shield shall continue in effect so long as the Permittee is in compliance with the compliance order.

- (c) No permit shield shall apply to any permit term or condition that is determined after issuance of this permit to have been based on erroneous information supplied in the permit application. Erroneous information means information that the Permittee knew to be false, or in the exercise of reasonable care should have been known to be false, at the time the information was submitted.
- (d) Nothing in 326 IAC 2-7-15 or in this permit shall alter or affect the following:
 - (1) The provisions of Section 303 of the Clean Air Act (emergency orders), including the authority of the U.S. EPA under Section 303 of the Clean Air Act;
 - (2) The liability of the Permittee for any violation of applicable requirements prior to or at the time of this permit's issuance;
 - (3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; and
 - (4) The ability of U.S. EPA to obtain information from the Permittee under Section 114 of the Clean Air Act.
- (e) This permit shield is not applicable to any change made under 326 IAC 2-7-20(b)(2) (Sections 502(b)(10) of the Clean Air Act changes) and 326 IAC 2-7-20(c)(2) (trading based on State Implementation Plan (SIP) provisions).
- (f) This permit shield is not applicable to modifications eligible for group processing until after IDEM, OAQ, has issued the modifications. [326 IAC 2-7-12(c)(7)]
- (g) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM, OAQ, has issued the modification. [326 IAC 2-7-12(b)(8)]

B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5] [326 IAC 2-7-10.5]

- (a) All terms and conditions of permits established prior to T057-33889-00002 and issued pursuant to permitting programs approved into the state implementation plan have been either:
 - (1) incorporated as originally stated,
 - (2) revised under 326 IAC 2-7-10.5, or
 - (3) deleted under 326 IAC 2-7-10.5.
- (b) Provided that all terms and conditions are accurately reflected in this permit, all previous registrations and permits are superseded by this Part 70 operating permit.

B.14 Termination of Right to Operate [326 IAC 2-7-10] [326 IAC 2-7-4(a)]

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 2-7-3 and 326 IAC 2-7-4(a).

B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-7-5(6)(C)] [326 IAC 2-7-8(a)] [326 IAC 2-7-9]

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 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 2-7-5(6)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

- (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 2-7-9(a)(3)]
- (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 2-7-9(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-7-9(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 2-7-9(c)]

B.16 Permit Renewal [326 IAC 2-7-3] [326 IAC 2-7-4] [326 IAC 2-7-8(e)]

- (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 2-7-4. 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(42). The renewal application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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 2-7 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 2-7-4(a)(2)(D), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.17 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

(a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 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 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.18 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)] [326 IAC 2-7-12(b)(2)]

(a) No Part 70 permit revision or notice shall be required under any approved economic incentives, marketable Part 70 permits, emissions trading, and other similar programs or processes for changes that are provided for in a Part 70 permit.

(b) Notwithstanding 326 IAC 2-7-12(b)(1) and 326 IAC 2-7-12(c)(1), minor Part 70 permit modification procedures may be used for Part 70 modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA.

B.19 Operational Flexibility [326 IAC 2-7-20] [326 IAC 2-7-10.5]

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b) or (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 preconstruction approval required by 326 IAC 2-7-10.5 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 2-7-20(b)(1) and (c)(1). 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 2-7-20(b)(1) and (c)(1).

- (b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(37)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:
- (1) A brief description of the change within the source;
 - (2) The date on which the change will occur;
 - (3) Any change in emissions; and
 - (4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted is not considered an application form, report or compliance certification. Therefore, the notification by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

- (c) Emission Trades [326 IAC 2-7-20(c)]
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 2-7-20(c).
- (d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]
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 2-7-5(9). No prior notification of IDEM, OAQ or U.S. EPA is required.
- (e) 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.20 Source Modification Requirement [326 IAC 2-7-10.5]

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

B.21 Inspection and Entry [326 IAC 2-7-6] [IC 13-14-2-2] [IC 13-30-3-1] [IC 13-17-3-2]

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 Part 70 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 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 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 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.22 Transfer of Ownership or Operational Control [326 IAC 2-7-11]

- (a) The Permittee must comply with the requirements of 326 IAC 2-7-11 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 IGCM 1003
Indianapolis, Indiana 46204-2251

Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)][326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees to IDEM, OAQ within 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) Except as provided in 326 IAC 2-7-19(e), 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.24 Credible Evidence [326 IAC 2-7-5(3)][326 IAC 2-7-6][62 FR 8314] [326 IAC 1-1-6]

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

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-7-5(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 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.3 Open Burning [326 IAC 4-1] [IC 13-17-9]

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

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

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

C.5 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

C.6 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted. The provisions of 326 IAC 1-7-1(3), 326 IAC 1-7-2, 326 IAC 1-7-3(c) and (d), 326 IAC 1-7-4, and 326 IAC 1-7-5(a), (b), and (d) are not federally enforceable.

C.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least

thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
 - (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
 - (2) If there is a change in the following:
 - (A) Asbestos removal or demolition start date;
 - (B) Removal or demolition contractor; or
 - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

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

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

- (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. The requirement to use an Indiana Licensed Asbestos inspector is not federally enforceable.

Testing Requirements [326 IAC 2-7-6(1)]

C.8 Performance Testing [326 IAC 3-6]

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

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

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

- (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 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).
- (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]

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 2-7-5(1)][326 IAC 2-7-6(1)]

C.10 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)] [40 CFR 64] [326 IAC 3-8]

- (a) For new units:
Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units shall be implemented on and after the date of initial start-up.
- (b) For existing units:
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 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, 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 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

- (c) For monitoring required by CAM, at all times, the Permittee shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.
- (d) For monitoring required by CAM, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the Permittee shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

C.11 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

- (a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale. The analog instrument shall be capable of measuring values outside of the normal range.
- (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 2-7-5] [326 IAC 2-7-6]

C.12 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68]

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

C.13 Response to Excursions or Exceedances [40 CFR 64] [326 IAC 3-8] [326 IAC 2-7-5] [326 IAC 2-7-6]

- (l) Upon detecting an excursion where a response step is required by the D Section, or an exceedance of a limitation, not subject to CAM, 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.

(II)

- (a) *CAM Response to excursions or exceedances.*
 - (1) Upon detecting an excursion or exceedance, subject to CAM, the Permittee shall restore operation of the pollutant-specific emissions unit (including the 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 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 cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.
 - (2) 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, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.

- (b) If the Permittee identifies a failure to achieve compliance with an emission limitation, subject to CAM, or standard, subject to CAM, for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the Permittee shall promptly notify the IDEM, OAQ and, if necessary, submit a proposed significant permit modification to this permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.
- (c) Based on the results of a determination made under paragraph (II)(a)(2) of this condition, the EPA or IDEM, OAQ may require the Permittee to develop and implement a QIP. The Permittee shall develop and implement a QIP if notified to in writing by the EPA or IDEM, OAQ.
- (d) Elements of a QIP:
The Permittee shall maintain a written QIP, if required, and have it available for inspection. The plan shall conform to 40 CFR 64.8 b (2).
- (e) If a QIP is required, the Permittee shall develop and implement a QIP as expeditiously as practicable and shall notify the IDEM, OAQ if the period for completing the improvements contained in the QIP exceeds 180 days from the date on which the need to implement the QIP was determined.
- (f) Following implementation of a QIP, upon any subsequent determination pursuant to paragraph (II)(a)(2) of this condition the EPA or the IDEM, OAQ may require that the Permittee make reasonable changes to the QIP if the QIP is found to have:
 - (1) Failed to address the cause of the control device performance problems;
or
 - (2) Failed to provide adequate procedures for correcting control device performance problems as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.
- (g) Implementation of a QIP shall not excuse the Permittee from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the Act.
- (h) *CAM recordkeeping requirements.*
 - (1) The Permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to paragraph (II)(a)(2) of this condition and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under this condition (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). Section C - General Record Keeping Requirements of this permit contains the Permittee's obligations with regard to the records required by this condition.
 - (2) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks,

or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements

C.14 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

- (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 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

C.15 Emission Statement [326 IAC 2-7-5(3)(C)(iii)] [326 IAC 2-7-5(7)] [326 IAC 2-7-19(c)] [326 IAC 2-6]

Pursuant to 326 IAC 2-6-3(b)(2), starting in 2005 and every three (3) years thereafter, the Permittee shall submit by July 1 an emission statement covering the previous calendar year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:

- (1) Indicate estimated actual emissions of all pollutants listed in 326 IAC 2-6-4(a);
- (2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1(33) ("Regulated pollutant, which is used only for purposes of Section 19 of this rule") from the source, for purpose of fee assessment.

The statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Quality
100 North Senate Avenue
MC 61-50 IGCN 1003
Indianapolis, Indiana 46204-2251

The emission statement does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

C.16 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]

- (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, where applicable:
 - (AA) All calibration and maintenance records.
 - (BB) All original strip chart recordings for continuous monitoring instrumentation.

- (CC) Copies of all reports required by the Part 70 permit.
Records of required monitoring information include the following, where applicable:
- (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 2-7-5(3)(C)] [326 IAC 2-1.1-11] [40 CFR 64]
[326 IAC 3-8]

-
- (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 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

On and after the date by which the Permittee must use monitoring that meets the requirements of 40 CFR Part 64 and 326 IAC 3-8, the Permittee shall submit CAM reports to the IDEM, OAQ.

A report for monitoring under 40 CFR Part 64 and 326 IAC 3-8 shall include, at a minimum, the information required under paragraph (a) of this condition and 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 actions 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 daily calibration checks, if applicable); and
- (3) A description of the actions taken to implement a QIP during the reporting period as specified in Section C-Response to Excursions or Exceedances. Upon

completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

The Permittee may combine the Quarterly Deviation and Compliance Monitoring Report and a report pursuant to 40 CFR 64 and 326 IAC 3-8.

- (b) The address for report submittal is:

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

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

Stratospheric Ozone Protection

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

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

SECTION D.1

Reserved

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Metal Melting

- (a) One (1) electric induction furnace, identified as EU-3A, constructed in 1998, approved in 2015 to exhaust to a dust collector, with a maximum capacity of 10.2 tons of iron per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;

The electric induction furnace is considered part of the affected source under 40 CFR Part 63, Subpart ZZZZZ.

- (b) One (1) electric induction furnace, identified as EU-3B, approved in 2015 for construction, with a maximum capacity of 10.2 tons of iron per hour, with emissions controlled by dust collector DC-2, and exhausting to stack 009;

The electric induction furnace is considered part of the affected source under 40 CFR Part 63, Subpart ZZZZZ.

Raw Material Handling and Preparation

- (c) One (1) scrap and charge handling operation, identified as EU-2A, constructed in 1998, approved in 2015 to exhaust to a dust collector, with a maximum capacity of 10.2 tons of iron per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;

The scrap and charge handling system is considered part of the affected source under 40 CFR Part 63, Subpart ZZZZZ.

- (d) One (1) scrap and charge handling operation, identified as EU-2B, approved in 2015 for construction, with a maximum capacity of 10.2 tons of iron per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;

The scrap and charge handling system is considered part of the affected source under 40 CFR Part 63, Subpart ZZZZZ.

- (e) One (1) magnesium treatment/inoculation operation, identified as EU-6A, constructed in 1971, approved in 2015 to exhaust to a dust collector, with a maximum capacity of 10.2 tons of iron per hour, with emissions controlled by a sealed reaction chamber and by dust collector DC-1, and exhausting to stack 003;

- (f) One (1) magnesium treatment operation, identified as EU-6B, approved in 2015 for construction, with a maximum capacity of 10.2 tons of iron per hour, with emissions controlled by a sealed reaction chamber and by dust collector DC-2, and exhausting to stack 009.

- (g) Sand handling operations, with a maximum capacity of 100 tons per hour of sand and 10.2 tons of iron per hour of castings, consisting of the following equipment:

- (1) One (1) muller, identified as EU-17, constructed in 1971 and approved in 2014 for reconstruction, with emissions controlled by dust collector DC-1, and exhausting to stack 003;

- (2) One (1) overhead shaker screen, identified as EU-18, constructed in 1971 and approved in 2014 for reconstruction, with emissions controlled by dust collector DC-1, and exhausting to stack 003;
- (3) One (1) Mag belt/bin top belt, identified as EU-27, constructed in 1971 and approved in 2014 for reconstruction, with emissions controlled by dust collector DC-1, and exhausting to stack 003;
- (4) One (1) vibratory conveyor, identified as EU-37, approved in 2014 for construction, with emissions controlled by dust collector DC-1, and exhausting to stack 003;

And the following storage bins:

- (5) Two (2) return sand storage silos (East and West), identified as EU-19 and EU-20, both constructed in 1971, with capacities of 80 and 100 tons, respectively, with emissions controlled by dust collector DC-1, and exhausting to stack 003;
 - (6) One (1) outdoor bond silo, identified as EU-22, constructed in 1978, with a capacity of 80 tons of premixed casting sand binder, with emissions controlled by a sock filter system;
 - (7) One (1) indoor bond storage silo, identified as EU-23, constructed in 1971, with a capacity of 1 ton of premixed casting sand binder, with emissions controlled dust collector DC-1, and exhausting to stack 003;
 - (8) One (1) West outdoor sand storage bin, identified as EU-24, constructed in 1971, with a capacity of 150 tons, with emissions uncontrolled;
 - (9) One (1) indoor new sand storage bin, identified as EU-26, constructed in 1971, with a capacity of 1 ton, emissions controlled by dust collector DC-1, and exhausting to stack 003;
- (h) One (1) natural gas-fired scrap preheater, identified as EU-1A, approved in 2015 for construction, with a maximum capacity of 20.4 tons of iron per hour and a heat input capacity of 14.0 MMBtu/hr, controlled by dust collector DC-1, and exhausting to stack 003;

Pouring, Cooling, and Shakeout

- (i) One (1) Disa pouring/casting machine, identified as EU-8, constructed in 1997, with a maximum capacity of 3.4 tons of iron and 39 tons of sand per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;
- (j) One (1) Disa cooling line, identified as EU-8A, constructed in 1997, approved in 2015 to exhaust to a dust collector, with a maximum capacity of 3.4 tons of iron and 39 tons of sand per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;
- (k) "A", "B", and "C" shakers, identified as EU-16, constructed in 1996, approved in 2015 to exhaust to a dust collector, with a maximum capacity of 3.4 tons of iron and 39 tons of sand per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;

- (l) One (1) Didion shake-out unit, identified as EU-11, constructed in 2007, with a maximum capacity of 3.4 tons of iron and 39 tons of sand per hour, with emissions controlled by dust collector DC-1, and exhausting through stack 003;
- (m) One (1) Hunter 1 pouring/casting line, identified as EU-35, approved in 2014 for construction, with a maximum capacity of 4.0 tons of iron and 42 tons of sand per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;
- (n) One (1) Hunter 1 cooling line and shake-out unit, collectively identified as EU-35A, consisting of the following:
 - (1) One (1) Hunter 1 cooling line, approved in 2014 for construction, with a maximum capacity of 4.0 tons of iron and 42 tons of sand per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;
 - (2) One (1) Hunter 1 shake-out unit, approved in 2014 for construction, with a maximum capacity of 4.0 tons of iron and 42 tons of sand per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;
- (o) One (1) Hunter 2 pouring/casting line, identified as EU-36, approved in 2014 for construction, with a maximum capacity of 4.0 tons of iron and 42 tons of sand per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;
- (p) One (1) Hunter 2 cooling line and shake-out unit, collectively identified as EU-36A, consisting of the following:
 - (1) One (1) Hunter 2 cooling line, approved in 2014 for construction, with a maximum capacity of 4.0 tons of iron and 42 tons of sand per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;
 - (2) One (1) Hunter 2 shake-out unit, approved in 2014 for construction, with a maximum capacity of 4.0 tons of iron and 42 tons of sand per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;

Dust collector DC-1 is also approved in 2014 to increase its air flow to accommodate Hunter 1 and Hunter 2 lines.

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

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.2.1 PSD Minor Limits for PM, PM₁₀, PM_{2.5}, and CO [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the Permittee shall comply with the following limits:

- (a) The total iron throughput to the electric induction furnace (EU-3A) and electric induction furnace (EU-3B) shall not exceed 17,500 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (b) The CO emissions from the following operations shall not exceed the emission limit listed in the table below:

Emission Units	CO Emission Limit (pounds per ton of iron throughput)
Disa Pouring/Casting Line (EU-8)	6.0 (combined)
Disa Cooling Line (EU-8A)	
Casting Shakeout (Didion shake-out Unit EU-11)	
Casting Shakeout ("A", "B", and "C" shakers EU-16)	
Hunter 1 pouring/casting line	
Hunter 1 cooling line	
Hunter 1 shake-out unit	
Hunter 2 pouring/casting line	
Hunter 2 cooling line	
Hunter 2 shake-out unit	

(c) The PM, PM₁₀, and PM_{2.5} emissions from the following operations shall not exceed the emission limits listed in the table below:

Emission Units	Control Device	PM Emission Limit (pounds per ton of iron throughput)	PM ₁₀ Emission Limit (pounds per ton of iron throughput)	PM _{2.5} Emission Limit (pounds per ton of iron throughput)
Induction Furnace (EU-3A)	Dust collector DC-1	6.30	6.30	6.30
Charge Handling (EU-2A)				
Charge Handling (EU-2B)				
Magnesium Treatment (EU-6A)				
Sand Handling (EU-17 through EU-20, EU-23, EU-26, EU-27, EU-37)				
Scrap Preheater (EU-1A)				
Disa Pouring/Casting Line (EU-8)				
Disa Cooling Line (EU-8A)				
Casting Shakeout ("A", "B", and "C" shakers EU-16; and Didion shakeout Unit EU-11)				
Hunter 1 pouring/casting line				
Hunter 1 cooling line				
Hunter 1 shake-out unit				
Hunter 2 pouring/casting line				
Hunter 2 cooling line				
Hunter 2 shake-out unit				
Induction Furnace (EU-3B)	Dust Collector DC-2	2.70	2.66	2.66
Magnesium Treatment (EU-6B)				

Compliance with these limits, combined with the potential to emit PM, PM₁₀, PM_{2.5}, and CO from other emission units at this source, shall limit the source-wide PM, PM₁₀, PM_{2.5}, and CO to less than 100 tons per twelve (12) consecutive month period, each, and render 326 IAC 2-2 not applicable.

D.2.2 HAPs Limits [40 CFR Part 63]

In order to render the requirements of 40 CFR Part 63, Subpart EEEEE (National Emission Standard for Hazardous Air Pollutants for Iron and Steel Foundries) not applicable, the combined organic HAPs emissions from the following operations shall not exceed the emission limit listed in the table below:

Emission Units	Organic HAPs Emission Limit (pounds per ton of iron throughput)
Disa Pouring/Casting Line (EU-8)	0.4322 (combined)
Disa Cooling Line (EU-8A)	
Casting Shakeout (Didion shake-out Unit EU-11)	
Casting Shakeout ("A", "B", and "C" shakers EU-16)	
Hunter 1 pouring/casting line	
Hunter 1 cooling line	
Hunter 1 shake-out unit	
Hunter 2 pouring/casting line	
Hunter 2 cooling line	
Hunter 2 shake-out unit	

Compliance with these limits, combined with the total iron throughput limit to the electric induction furnace (EU-3A) in Condition D.2.1(a) and the potential to emit HAPs from other emission units at this source, shall limit the source-wide single HAPs to less than ten (10) tons per year and the source-wide combination of HAPs to less than twenty-five (25) tons per year and shall render 40 CFR Part 63, Subpart EEEEE (National Emission Standard for Hazardous Air Pollutants for Iron and Steel Foundries) not applicable.

D.2.3 Particulate Matter [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rates from facilities at this source shall be limited as follows when operating at the given maximum process weight rates:

Facility/Process	Process weight rate (tons/hr)	Allowable Emissions (lbs/hr)
Scrap Preheater (EU-1A)	20.40	36.63
Charge Handling (EU-2A)	10.20	19.43
Charge Handling (EU-2B)	10.20	19.43
Induction Furnace (EU-3A)	10.20	19.43
Induction Furnace (EU-3B)	10.20	19.43
Magnesium Treatment (EU-6A)	10.20	19.43
Sand Handling (EU-17 through EU-20, EU-22 through EU-24, EU-26, EU-27, EU-37) *	100.00	51.28
Disa Pouring/Casting Line (EU-8)	42.40	43.06
Disa Cooling Line (EU-8A)	42.40	43.06
Casting Shakeout ("A", "B", and "C" shakers EU-16; and Didion shakeout Unit EU-11)	49.20	44.43
Hunter 1 pouring/casting line	46.00	43.80
Hunter 1 cooling line	46.00	43.80
Hunter 1 shake-out unit	46.00	43.80
Hunter 2 pouring/casting line	46.00	43.80
Hunter 2 cooling line	46.00	43.80
Hunter 2 shake-out unit	46.00	43.80

* Sand handling units EU-22 is controlled by a sock filter system and EU-24 is uncontrolled.

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

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

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

Interpolation and extrapolation of the data for the process weight rate in excess of 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

D.2.4 VOC BACT Avoidance Limits [326 IAC 8-1-6]

- (a) In order to render the requirements of 326 IAC 8-1-6 (VOC BACT) not applicable, the VOC emissions from the Casting Shakeout ("A", "B", and "C" Shakers EU-16) shall not exceed 1.20 lb/ton of iron throughput.

Compliance with this limit, combined with the total iron throughput limit to the electric induction furnace (EU-3A) in Condition D.2.1(a), will limit the VOC emissions from the Casting Shakeout ("A", "B", and "C" Shakers EU-16) to less than twenty-five (25) tons per year and render the requirements of 326 IAC 8-1-6 (BACT) not applicable to the Casting Shakeout ("A", "B", and "C" Shakers EU-16).

- (b) In order to render the requirements of 326 IAC 8-1-6 (VOC BACT) not applicable, the VOC emissions from the Casting Shakeout (Shake-out Unit EU-11) shall not exceed 1.20 lb/ton of iron throughput.

Compliance with this limit, combined with the total iron throughput limit to the electric induction furnace (EU-3A) in Condition D.2.1(a), will limit the VOC emissions from the Casting Shakeout (Shake-out Unit EU-11) to less than twenty-five (25) tons per year and render the requirements of 326 IAC 8-1-6 (BACT) not applicable to the Casting Shakeout (Shake-out Unit EU-11).

D.2.5 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

Compliance Determination Requirements

D.2.6 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

PM, PM₁₀, and PM_{2.5} Testing

- (a) Dust collector DC-1

In order to demonstrate compliance with Condition D.2.1(c), the Permittee shall perform PM, PM₁₀, and PM_{2.5} testing not later than 180 days after startup of Dust collector DC-1 (stack 003), and not later than 180 days after each installation of the following emission units:

Hunter 1,
Hunter 2,
Scrap Charge Handling Operation (EU-2B), and
Preheater (EU-1A),

with DC-1 controlling the following:
Induction Furnace (EU-3A),
Charge Handling (EU-2A),
Charge Handling (EU-2B),
Preheater (EU-1A),
Magnesium Treatment (EU-6A),
Disa casting machines (EU-8),
Disa Cooling Line (EU-8A),
Didion shakeout unit (EU-11),
Casting Shakeout ("A", "B", and "C" shakers EU-16),
sand handling operations, including muller (EU-17),
over head shaker screen (EU-18),
return sand storage silos (East and West) (EU-19 and EU-20),
indoor bond storage silo (EU-23),
vibratory conveyor (EU-37),
indoor new sand storage bin (EU-26),
mag belt/bin top belt (EU-27),
Hunter 1 pouring/casting line,
Hunter 1 cooling line,
Hunter 1 shake-out unit,
Hunter 2 pouring/casting line,
Hunter 2 cooling line, and
Hunter 2 shake-out unit,
utilizing methods as approved by the Commissioner.

This test shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration or after each of the following are constructed:

Hunter 1,
Hunter 2,
Scrap Charge Handling Operation (EU-2B), and
Preheater (EU-1A),

PM₁₀ includes filterable PM₁₀ and condensable PM. PM_{2.5} includes filterable PM_{2.5} and condensable PM.

The respective facilities shall process 100% ductile iron during the tests.

VOC Testing

- (b) In order to demonstrate compliance with Condition D.2.4(a), within one hundred and eighty (180) days after the issuance of Part 70 Renewal No. T057-33889-00002, the Permittee shall perform one-time VOC testing on the Casting Shakeout ("A", "B", and "C" Shakers EU-16) operation, using methods as approved by the Commissioner.
- (c) In order to demonstrate compliance with Condition D.2.4(b), within one hundred and eighty (180) days after the issuance of Part 70 Renewal No. T057-33889-00002, the Permittee shall perform one-time VOC testing on the Casting Shakeout (Didion shake-out Unit EU-11) operation, using methods as approved by the Commissioner.
- (d) Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C- Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

D.2.7 Particulate Control

- (a) In order to comply with Conditions D.2.1(c) and D.2.3, the dust collector DC-1 for particulate control shall be in operation at all times whenever any of the following:
Induction Furnace (EU-3A),
Charge Handling (EU-2A),
Charge Handling (EU-2B),
Preheater (EU-1A),
Magnesium Treatment (EU-6A),
Disa casting machines (EU-8),
Disa Cooling Line (EU-8A),
shakeout unit (EU-11),
Casting Shakeout ("A", "B", and "C" shakers EU-16),
sand handling operations including muller (EU-17),
over head shaker screen (EU-18),
return sand storage silos (East and West) (EU-19 and EU-20),
indoor bond storage silo (EU-23),
vibratory conveyor (EU-37),
indoor new sand storage bin (EU-26),
mag belt/bin top belt (EU-27)
Hunter 1 pouring/casting line,
Hunter 1 cooling line,
Hunter 1 shake-out unit,
Hunter 2 pouring/casting line,
Hunter 2 cooling line, and
Hunter 2 shake-out unit,
are in operation.
- (b) In order to comply with Conditions D.2.1(c) and D.2.3, the dust collector DC-1 for particulate control shall be in operation at all times whenever any of the following:
Induction Furnace (EU-3B), and
Magnesium Treatment (EU-6B)
are in operation.
- (c) In the event that a bag or cartridge failure is observed in a multi-compartment bag or cartridge filter, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.2.8 Visible Emissions Notations [40 CFR 64] [326 IAC 2-7-5(1)]

- (a) Pursuant to 40 CFR 64, visible emission notations of the exhaust from dust collector DC-1, exhausting to stack 003, shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (b) Visible emission notations of the exhaust from dust collector DC-2, exhausting to stack 009, shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (c) 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.

- (d) 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.
- (e) 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.
- (f) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

D.2.9 Parametric Monitoring - Dust Collector [40 CFR 64] [326 IAC 2-7-5(1)]

- (a) Pursuant to 40 CFR 64, the Permittee shall record the pressure drop across the dust collector DC-1 used in conjunction with the following:
Induction Furnace (EU-3A),
Charge Handling (EU-2A),
Charge Handling (EU-2B),
Preheater (EU-1A),
Magnesium Treatment (EU-6A),
Disa casting machines (EU-8),
Disa Cooling Line (EU-8A),
shakeout unit (EU-11),
Casting Shakeout ("A", "B", and "C" shakers EU-16)
sand handling operations including muller (EU-17),
over head shaker screen (EU-18),
return sand storage silos (East and West) (EU-19 and EU-20),
indoor bond storage silo (EU-23),
vibratory conveyor (EU-37),
indoor new sand storage bin (EU-26),
mag belt/bin top belt (EU-27),
Hunter 1 pouring/casting line,
Hunter 1 cooling line,
Hunter 1 shake-out unit,
Hunter 2 pouring/casting line,
Hunter 2 cooling line, and
Hunter 2 shake-out unit,
at least once per day when the casting, shake out, and sand handling processes are in operation. When for any one reading, the pressure drop across the control device is outside the normal range, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. The normal range for the dust collector DC-1 is a pressure drop range between 2.0 and 6.0 inches of water unless a different upper-bound or lower-bound value for this range is determined during the most recent valid stack test. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

The instrument used for determining the pressure drop shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.
- (b) The Permittee shall record the pressure drop across the dust collector DC-2 used in conjunction with the following:

Induction Furnace (EU-3B), and
Magnesium Treatment (EU-6B)

at least once per day when the metal melting processes are in operation. When for any one reading, the pressure drop across the control device is outside the normal range, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. The normal range for the dust collector DC-1 is a pressure drop range between 2.0 and 6.0 inches of water unless a different upper-bound or lower-bound value for this range is determined during the most recent valid stack test. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

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

D.2.10 Broken or Failed Bag or Cartridge Detection [40 CFR 64]

Pursuant to 40 CFR 64,

- (a) For single compartment bag filters or cartridge dust collectors controlling emissions from a process operated continuously, failed units and the associated process shall be shut down immediately until the failed unit has 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 single compartment bag filters or cartridge dust collectors controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. 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 or Cartridge failure can be indicated by a significant drop in the 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 Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.2.11 Record Keeping Requirements

- (a) To document the compliance status with Condition D.2.1(a), the Permittee shall maintain monthly records of the iron throughput to the electric induction furnace (EU-3A) and electric induction furnace (EU-3B).
- (b) To document the compliance status with Condition D.2.8, the Permittee shall maintain records of daily visible emission notations of the exhaust from stack 003 and stack 009. 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.2.9, the Permittee shall maintain daily records of the pressure drop of dust collector DC-1 and dust collector DC-2 as required by Condition D.2.9. 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 obligation with regard to the record keeping required by this condition.

D.2.12 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.2.1(a) shall be submitted using the reporting forms located at the end of this permit, or their equivalent not later than thirty (30) days following the end of each calendar year. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Finishing Operations

- (q) One (1) No. 3 cleaning machine, identified as EU-34, constructed in 2001, with a maximum capacity of 5.6 tons per hour of castings and 15 tons per hour of steel shot, with emissions controlled by baghouse BH-2, and exhausting to stack 007;
- (r) Casting, grinding and finishing operations with a maximum throughput of 5.6 tons per hour of finished castings, consisting of the following equipment:
 - (1) Nine (9) stand grinders, identified as EU-32, constructed in 1965, with emissions controlled by baghouse BH-1, and exhausting to stack 006;
 - (2) Ten (10) finishing (Burr Stations) units, identified as EU-33, all constructed in 1992, with emissions uncontrolled, and exhausting to the general ventilation area.

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

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.3.1 PSD Minor Limits for PM, PM₁₀, and PM_{2.5} [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the Permittee shall comply with the following limits:

The PM, PM₁₀, and PM_{2.5} emissions from the following operations shall not exceed the emission limits listed in the table below:

Emission Unit	PM Emission Limit (pounds per ton of iron throughput)	PM ₁₀ Emission Limit (pounds per ton of iron throughput)	PM _{2.5} Emission Limit (pounds per ton of iron throughput)
No. 3 Cleaning Machine (EU-34)	0.17	0.02	0.02
Grinding (EU-32)	0.01	0.0045	0.0045
Finishing (EU-33)	0.01	0.0045	0.0045

Compliance with these limits, combined with the total iron throughput limit to the electric induction furnace (EU-3A) in Condition D.2.1(a) and the potential to emit PM, PM₁₀, and PM_{2.5} from other emission units at this source, shall limit the source-wide PM, PM₁₀, and PM_{2.5} to less than 100 tons per twelve (12) consecutive month period, each, and render 326 IAC 2-2 not applicable.

D.3.2 Particulate Matter [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rates from facilities at this source shall be limited as follows when operating at the given maximum process weight rates:

Facility/Process	Process weight rate (tons/hr)	Allowable Emissions (lbs/hr)
No. 3 Cleaning Machine (EU-34)*	20.60	31.12
Grinding (EU-32)	5.60	13.00
Finishing (EU-33)	5.60	13.00

*Process weight rate includes the weight of the steel shot plus the weight of the castings

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

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

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

D.3.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

Compliance Determination Requirements

D.3.4 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

In order to demonstrate compliance with Conditions D.3.1 and D.3.2, within one hundred and eighty (180) days after the issuance of Part 70 Renewal No. T057-33889-00002, the Permittee shall perform PM, PM10, and PM2.5 testing on the No. 3 Cleaning Machine (EU-34), controlled by Baghouse BH-2, using methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration.

PM10 includes filterable PM10 and condensable PM. PM2.5 includes filterable PM2.5 and condensable PM.

D.3.5 Particulate Control

- (a) In order to comply with Conditions D.3.1 and D.3.2:
- (1) The baghouse, identified as BH-1, for particulate control shall be in operation at all times when the nine (9) grinding units (EU-32) are in operation.
 - (2) The baghouse, identified as BH-2, for particulate control shall be in operation at all times when the No. 3 Cleaning Machine (EU-34) is in operation.
- (b) In the event that a bag failure is observed in a multi-compartment bag, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.3.6 Visible Emissions Notations [40 CFR 64]

- (a) Pursuant to 40 CFR 64, visible emission notations of the exhaust from stacks 006 and 007 shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

- (b) Visible emission notations of the exhaust from general ventilation exhausts from EU-33 shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (c) 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.
- (d) 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.
- (e) 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.
- (f) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

D.3.7 Parametric Monitoring - Baghouses [40 CFR 64]

Pursuant to 40 CFR 64, the Permittee shall record the pressure drop across the baghouses, identified as BH-1 and BH-2, used in conjunction with the nine (9) grinding units (EU-32) and No. 3 Cleaning Machine (EU-34) at least once per day when the respective facilities are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. The normal range for the baghouses, identified as BH-1 and BH-2 is a pressure drop range between 2.0 and 8.0 inches of water unless a different upper-bound or lower-bound value for this range is determined during the most recent valid stack test. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

The instrument 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 at least once every six (6) months.

D.3.8 Broken or Failed Bag Detection [40 CFR 64]

Pursuant to 40 CFR 64,

- (a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has 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 baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. 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).

Baghouse failure can be indicated by a significant drop in the bags 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 Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.3.9 Record Keeping Requirements

- (a) To document the compliance status with Condition D.3.6, the Permittee shall maintain records of daily visible emission notations of the exhausts from stacks 006 and 007 and general ventilation exhausts. 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).
- (b) To document the compliance status with Condition D.3.7, the Permittee shall maintain daily records of the pressure drop across each baghouse as required by Condition D.3.6. 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).
- (c) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the record keeping required by this condition.

SECTION E.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Metal Melting

- (a) One (1) electric induction furnace, identified as EU-3A, constructed in 1998, approved in 2014 to exhaust to a dust collector, with a maximum capacity of 10.2 tons of iron per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;

The electric induction furnace is considered part of the affected source under 40 CFR Part 63, Subpart ZZZZZ.

- (b) One (1) electric induction furnace, identified as EU-3B, approved in 2015 for construction, with a maximum capacity of 10.2 tons of iron per hour, with emissions controlled by dust collector DC-2, and exhausting to stack 009;

The electric induction furnace is considered part of the affected source under 40 CFR Part 63, Subpart ZZZZZ.

Raw Material Handling and Preparation

- (c) One (1) scrap and charge handling operation, identified as EU-2A, constructed in 1998, approved in 2014 to exhaust to a dust collector, with a maximum capacity of 10.2 tons of iron per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;

The scrap and charge handling system is considered part of the affected source under 40 CFR Part 63, Subpart ZZZZZ.

- (d) One (1) scrap and charge handling operation, identified as EU-2B, approved in 2015 for construction, with a maximum capacity of 10.2 tons of iron per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;

The scrap and charge handling system is considered part of the affected source under 40 CFR Part 63, Subpart ZZZZZ.

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

E.1.1 General Provisions Relating to National Emissions Standards for Hazardous Air Pollutants under 40 CFR Part 63 [326 IAC 20-1] [40 CFR Part 63, Subpart A]

The Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1, as specified in 40 CFR 63.10890(i) in accordance with schedule in 40 CFR Part 63, Subpart ZZZZZ.

E.1.2 National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries Area Sources [40 CFR Part 63, Subpart ZZZZZ]

The Permittee which engages in iron and steel iron foundry operations shall comply with the following provisions of 40 CFR Part 63, Subpart ZZZZZ (included as Attachment A of this permit) for a small foundry, with a compliance date of January 2, 2009 for 40 CFR 63.10885(a) and 40 CFR 63.10886 and a compliance date of January 4, 2010 for 40 CFR 63.10885(b):

- (a) 40 CFR 63.10880(a), (b)(1), (c), (f);
(b) 40 CFR 63.10881(a)(1), (a)(2), (d);

- (c) 40 CFR 63.10885(a)(1), (a)(2)(i), (b);
- (d) 40 CFR 63.10886;
- (e) 40 CFR 63.10890;
- (f) 40 CFR 63.10899(a), (b)(1)-(b)(6), (c)(3), (d);
- (g) 40 CFR 63.10905; and
- (h) 40 CFR 63.10906.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
PART 70 OPERATING PERMIT
CERTIFICATION**

Source Name: ID Castings, LLC
Source Address: 1600 South 8th Street, Noblesville, Indiana 46060
Part 70 Permit No.: T057-33889-00002

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:

Phone:

Date:

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

**PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT**

Source Name: ID Castings, LLC
Source Address: 1600 South 8th Street, Noblesville, Indiana 46060
Part 70 Permit No.: T057-33889-00002

This form consists of 2 pages

Page 1 of 2

- This is an emergency as defined in 326 IAC 2-7-1(12)
- The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and
 - The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16.

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

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

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

Page 2 of 2

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

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

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

Part 70 Quarterly Report

Source Name: ID Castings, LLC
Source Address: 1600 South 8th Street, Noblesville, Indiana 46060
Part 70 Permit No.: T057-33889-00002
Facility: Electric induction furnaces (EU-3A) and (EU-3B)
Parameter: Throughput of metal melted
Limit: Shall not exceed 17,500 tons of iron per twelve (12) consecutive month period
with compliance determined at the end of each month

QUARTER :

YEAR:

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

No deviation occurred in this quarter.

Deviation/s occurred in this quarter.
Deviation has been reported on:

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

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF AIR QUALITY
 COMPLIANCE AND ENFORCEMENT BRANCH
 PART 70 OPERATING PERMIT
 QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: ID Castings, LLC
 Source Address: 1600 South 8th Street, Noblesville, Indiana 46060
 Part 70 Permit No.: T057-33889-00002

Months: _____ to _____ Year: _____

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

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

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

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

Addendum to the Technical Support Document (ATSD) for a
Part 70 Significant Source Modification and Significant Permit Modification

Source Background and Description

Source Name:	ID Castings, LLC
Source Location:	1600 South 8th Street, Noblesville, Indiana 46060
County:	Hamilton
SIC Code:	3321 (Gray and Ductile Iron Foundries)
Operation Permit No.:	T 057-33889-00002
Operation Permit Issuance Date:	July 21, 2014
Significant Source Modification No.:	057-35618-00002
Significant Permit Modification No.:	057-35620-00002
Permit Reviewer:	Brian Williams

On July 2, 2015, the Office of Air Quality (OAQ) had a notice published in The Times, Noblesville, Indiana, stating that ID Castings, LLC had applied for a Significant Source Modification and Significant Permit Modification to construct and operate new emission units and control devices. The notice also stated that the OAQ proposed to issue a Significant Source Modification and Significant Permit Modification for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

Comments and Responses

On July 13, 2015, ID Castings, LLC submitted a comment to IDEM, OAQ on the draft Significant Source Modification and Significant Permit Modification.

The Technical Support Document (TSD) is used by IDEM, OAQ for historical purposes. IDEM, OAQ does not make any changes to the original TSD, but the Permit will have the updated changes. The comments and revised permit language are provided below with deleted language as ~~strikeouts~~ and new language **bolded**.

Comment 1:

References to core making have been removed from the permit and TSD, however, the emissions calculations, provided in Appendix A to the TSD, still show emissions from the two shell core machine burners and shell core drying conveyor heating torch. The emissions calculations spreadsheets still need updated to remove all references to core making emission units and related activities.

Response to Comment 1:

IDEM agrees with the recommended changes, since the source removed the core making and related activities from the source in Significant Permit Modification No. 057-35196-00002, issued on April 20, 2015. The calculations in Appendix A have been updated as requested (see Appendix A to ATSD). This comment did not require any changes to the permit.

PTE of the Entire Source After Issuance of the Modification

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.

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of Modification (tons/year)								Total HAPs	Worst Single HAP
	PM	PM ₁₀ *	PM _{2.5} **	SO ₂	NO _x	VOC	CO			
EIF Furnace EU-3A	55.13	55.13	55.13	-	-	-	-	5.69	3.89 (Organic HAPs) ^(d)	
Melting Dept. - Charge Handling (EU-2A)				-	-	-	-			
Melting Dept. - Charge Handling (EU-2B)				-	-	-	-			
Melting Dept. - Magnesium Treatment (EU-6A)				-	-	0.09	-			
Sand Handling (EU-17 through EU-20, EU-23, EU-26, EU-27, EU-37)				-	-	-	-			
Scrap Preheater (EU-1A)				0.04	6.01	0.33	5.05			
Disa Pouring/Casting Line (EU-8)				0.18	0.09	1.23	52.50 ^(c)			
Hunter 1 pouring/casting line (EU-35)				0.18	0.09	1.23				
Hunter 2 pouring/casting line (EU-36)				0.18	0.09	1.23				
Hunter 1 cooling line (EU-35A)				-	-	-				
Hunter 2 cooling line (EU-36A)				-	-	-				
Hunter 1 shake-out unit (EU-35A)				-	-	10.50				
Hunter 2 shake-out unit(EU-36A)				-	-	10.50				
Casting Shakeout (Didion shake-out Unit EU-11 and "A", "B", and "C" Shakers EU-16)				-	-	10.50 ^(b)				
Disa Cooling Line (EU-8A)				-	-	-				
EIF Furnace (EU-3B)	-	-	-	-						
Melting Dept. - Magnesium Treatment (EU-6B)	23.63	23.28	23.28	-	-	0.09	-			
Outdoor bond silo (EU-22)***	1.52	0.98	0.98	-	-	-	-			
Outdoor sand storage bin (EU-24)***	2.85	1.83	1.83	-	-	-	-			
No. 3 Cleaning Machine (EU-34)	1.49	0.18	0.18	-	-	-	-			
Grinding (EU-32)	0.09	0.04	0.04	-	-	-	-			
Finishing (EU-33)	0.09	0.04	0.04	-	-	-	-			
Combustion	0.06 0.02	0.22 0.07	0.22 0.07	0.35 0.10	4.16 1.24	0.32 0.10	2.40 0.72			
Cooling Tower	0.04	0.04	0.04	-	-	-	-			
Paved & Unpaved Roads	0.77	0.15	0.02	-	-	-	-			
Total PTE of Entire Source	85.65 85.61 ^(a)	81.88 81.72 ^(a)	81.75 81.59 ^(a)	0.91 0.67	10.43 7.52	36.00 35.78	59.95 58.27	5.69	3.89	
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), PM₁₀ and PM_{2.5}, not particulate matter (PM), are each considered as a regulated air pollutant".

**PM_{2.5} listed is direct PM_{2.5}.

***EU-22 and EU-24 are part of the Sand Handling Operation but are not controlled by DC-1. Therefore the PTE of these units are not included under the PTE of the units controlled by DC-1.

(a) PM, PM₁₀, and PM_{2.5} limits specified to be PSD minor source (326 IAC 2-2).

(b) VOC limits to render 326 IAC 8-1-6 not applicable.

(c) CO limits specified to be PSD minor source (326 IAC 2-2).

(d) HAP limits to continue to be a Minor Source under Section 112 of the Clean Air Act and render 40 CFR Part 63 Subpart EEEEE not applicable.

The table below summarizes the potential to emit of the entire source after issuance of this modification, reflecting all limits, of the emission units. Note: the table below was generated from the above table, with bold text un-bolded and strikethrough text deleted.

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of Modification (tons/year)								Total HAPs	Worst Single HAP
	PM	PM ₁₀ *	PM _{2.5} **	SO ₂	NO _x	VOC	CO			
EIF Furnace EU-3A	55.13	55.13	55.13	-	-	-	-	5.69	3.89 (Organic HAPs) ^(d)	
Melting Dept. - Charge Handling (EU-2A)				-	-	-	-			
Melting Dept. - Charge Handling (EU-2B)				-	-	-	-			
Melting Dept. - Magnesium Treatment (EU-6A)				-	-	0.09	-			
Sand Handling (EU-17 through EU-20, EU-23, EU-26, EU-27, EU-37)				-	-	-	-			
Scrap Preheater (EU-1A)				0.04	6.01	0.33	5.05			
Disa Pouring/Casting Line (EU-8)				0.18	0.09	1.23	52.50 ^(c)			
Hunter 1 pouring/casting line (EU-35)				0.18	0.09	1.23				
Hunter 2 pouring/casting line (EU-36)				0.18	0.09	1.23				
Hunter 1 cooling line (EU-35A)				-	-	-				
Hunter 2 cooling line (EU-36A)				-	-	-				
Hunter 1 shake-out unit (EU-35A)				-	-	10.50				
Hunter 2 shake-out unit (EU-36A)				-	-	10.50				
Casting Shakeout (Didion shake-out Unit EU-11 and "A", "B", and "C" Shakers EU-16)				-	-	10.50 ^(b)				
Disa Cooling Line (EU-8A)				-	-	-				
EIF Furnace (EU-3B)				-	-	-				
Melting Dept. - Magnesium Treatment (EU-6B)	23.63	23.28	23.28	-	-	0.09	-			
Outdoor bond silo (EU-22) ^{***}	1.52	0.98	0.98	-	-	-	-			
Outdoor sand storage bin (EU-24) ^{***}	2.85	1.83	1.83	-	-	-	-			
No. 3 Cleaning Machine (EU-34)	1.49	0.18	0.18	-	-	-	-			
Grinding (EU-32)	0.09	0.04	0.04	-	-	-	-			
Finishing (EU-33)	0.09	0.04	0.04	-	-	-	-			
Combustion	0.02	0.07	0.07	0.10	1.24	0.10	0.72			
Cooling Tower	0.04	0.04	0.04	-	-	-	-			
Paved & Unpaved Roads	0.77	0.15	0.02	-	-	-	-			
Total PTE of Entire Source	85.61^(a)	81.72^(a)	81.59^(a)	0.67	7.52	35.78	58.27	5.69	3.89	
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), PM₁₀ and PM_{2.5}, not particulate matter (PM), are each considered as a regulated air pollutant".

**PM_{2.5} listed is direct PM_{2.5}.

***EU-22 and EU-24 are part of the Sand Handling Operation but are not controlled by DC-1. Therefore the PTE of these units are not included under the PTE of the units controlled by DC-1.

(a) PM, PM₁₀, and PM_{2.5} limits specified to be PSD minor source (326 IAC 2-2).

(b) VOC limits to render 326 IAC 8-1-6 not applicable.

(c) CO limits specified to be PSD minor source (326 IAC 2-2).

(d) HAP limits to continue to be a Minor Source under Section 112 of the Clean Air Act and render 40 CFR Part 63 Subpart EEEEE not applicable.

Additional Changes

IDEM, OAQ has decided to make additional revisions to the permit as described below, with deleted language as ~~strikeouts~~ and new language **bolded**.

- (a) In Significant Permit Modification No. 057-35196-00002, issued on April 20, 2015, the PM10 and PM2.5 testing requirements in Conditions D.2.6(d), (e), and (f) were combined into Conditions D.2.6(a), (b), and (c). However, due to a typographical error PM10 and PM2.5 were omitted from Conditions D.2.6(a), (b), and (c). Conditions D.2.6(b) and (c) were deleted in this modification. However, IDEM has revised Condition D.2.6(a) to clarify that the intent of this condition is for the source to also perform PM10 and PM2.5 testing on the dust collector and associated emission units.

...
Compliance Determination Requirements

D.2.6 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

PM, PM₁₀, and PM_{2.5} Testing

- (a) Dust collector DC-1

In order to demonstrate compliance with Condition D.2.1(c), the Permittee shall perform PM, **PM10, and PM2.5** testing not later than 180 days after startup of Dust collector DC-1 (stack 003), and not later than 180 days after each installation of the ~~the~~ following emission units:

IDEM Contact

- (a) Questions regarding this proposed Significant Source Modification and Significant Permit Modification can be directed to Brian Williams 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) 234-5375 or toll free at 1-800-451-6027 extension 4-5375.
- (b) A copy of the permit 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 Permit Guide on the Internet at: <http://www.in.gov/idem/5881.htm>; and the Citizens' Guide to IDEM on the Internet at: <http://www.in.gov/idem/6900.htm>.

Appendix A: Emissions Calculations

Summary

Unlimited PTE

Company Name: ID Castings, LLC

Source Address: 1600 South 8th Street, Noblesville, Indiana 46060

Permit No.: T057-33889-00002

Significant Source Modification No.: 057-35618-00002

Significant Permit Modification No.: 057-35620-00002

Reviewer: Brandon Miller/Brian Williams

Process Description / Emission Unit		Unlimited Potential to Emit (tons/year)							Hazardous Air Pollutants	
		Criteria Pollutants							Metallic HAPs	Organic HAPs
PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO				
Metal Melting	EIF Furnace EU-3A	40.21	38.42	38.42	-	-	-	-	1.44	-
	EIF Furnace EU-3B	40.21	38.42	38.42	-	-	-	-	1.44	-
Raw Material Handling and Preparation	Melting Dept. - Charge Handling (EU-2A)	26.81	16.08	16.08	-	-	-	-	0.14	-
	Melting Dept. - Charge Handling (EU-2B)	26.81	16.08	16.08	-	-	-	-	0.14	-
	Melting Dept. - Magnesium Treatment (EU-6A)	80.42	80.42	80.42	-	-	0.45	-	1.90	-
	Melting Dept. Magnesium Treatment (EU-6B)	80.42	80.42	80.42	-	-	0.45	-	1.90	-
	Sand Handling (EU-17 through EU-20, EU-22 through EU-24, EU-26, EU-27, EU-37)	1,576.80	24.13	24.13	-	-	-	-	-	-
	Scrap Preheater (EU-1A)	17.87	16.08	15.19	0.04	6.01	0.33	5.05	0.00	0.11
Sand handling (not controlled by DC-1)	Outdoor bond silo (EU-22)	1.52	0.98	0.98	-	-	-	-	-	-
	Outdoor sand storage bin (EU-24)	2.85	1.83	1.83	-	-	-	-	-	-
Pouring, Cooling, and Shakeout	Disa Pouring/Casting Line (EU-8)	41.70	30.68	30.68	0.30	0.15	2.08	478.30	0.21	34.45
	Hunter 1 pouring/casting line	49.06	36.09	36.09	0.35	0.18	2.45			
	Hunter 2 pouring/casting line	49.06	36.09	36.09	0.35	0.18	2.45			
	Disa Cooling Line (EU-8A)	20.85	20.85	20.85	-	-	-			
	Hunter 1 cooling line	24.53	24.53	24.53	-	-	-			
	Hunter 2 cooling line	24.53	24.53	24.53	-	-	-			
	Casting Shakeout ("A", "B", and "C" shakers EU-16; and Didion shakeout Unit EU-11)	142.96	100.07	100.07	-	-	53.61			
	Hunter 1 shake-out unit	56.06	39.24	39.24	-	-	21.02			
	Hunter 2 shake-out unit	56.06	39.24	39.24	-	-	21.02			
Cleaning & Finishing	No. 3 Cleaning Machine (EU-34)	416.98	41.70	41.70	-	-	-	-	0.65	-
	Grinding (EU-32)	0.25	0.11	0.11	-	-	-	-	0.25	-
	Finishing (EU-33)	0.25	0.11	0.11	-	-	-	-	0.25	-
Combustion	Insignificant Combustion	0.02	0.07	0.07	0.10	1.24	0.10	0.72	-	-
Insignificant Units	Cooling Tower	0.04	0.04	0.04	-	-	-	-	-	-
Fugitives	Paved & Unpaved Roads	0.77	0.15	0.02	-	-	-	-	-	-
Total		2,777.00	706.36	705.34	1.14	7.76	103.97	484.06	8.31	34.57
									Total HAPs:	42.87

Appendix A: Emissions Calculations Summary
 Unlimited PTE
 Company Name: ID Castings, LLC
 Source Address: 1600 South 8th Street, Noblesville, Indiana 46060
 Permit No.: T057-33889-0002
 Significant Source Modification No.: 057-35618-00002
 Significant Permit Modification No.: 057-35620-00002
 Reviewer: Brandon Miller/Brian Williams

Process Description / Emission Unit		Control Device	Limited Potential to Emit (tons/year)							Hazardous Air Pollutants	
			PM	PM10	PM2.5	SO ₂	NOx	VOC	CO	Metallic HAPs	Organic HAPs
Metal Melting	EIF Furnace EU-3A					-	-	-	-	0.28	-
	Melting Dept. - Charge Handling (EU-2A)					-	-	-	-	0.03	-
	Melting Dept. - Charge Handling (EU-2B)					-	-	-	-	0.03	-
	Melting Dept. - Magnesium Treatment (EU-6A)					-	-	0.09	-	0.37	-
	Sand Handling (EU-17 through EU-20, EU-23, EU-26, EU-27, EU-37)					-	-	-	-	-	-
Raw Material Handling and Preparation	Scrap Preheater EU-1A					0.04	6.01	0.33	5.05	0.00	0.11
	Disa Pouring/Casting Line (EU-8)	Dust Collector DC-1	55.13	55.13	55.13	0.18	0.09	1.23			
	Hunter 1 pouring/casting line					0.18	0.09	1.23			
	Hunter 2 pouring/casting line					0.18	0.09	1.23			
	Hunter 1 cooling line					-	-	-			
	Hunter 2 cooling line					-	-	-			
	Hunter 1 shake-out unit					-	-	10.50	52.50	0.02	3.78
	Hunter 2 shake-out unit					-	-	10.50			
	Casting Shakeout ("A", "B", and "C" shakers EU-16; and Didion shakeout Unit EU-11)					-	-	10.50			
	Disa Cooling Line (EU-8A)					-	-	-			
	EIF Furnace EU-3B					-	-	-	-	0.28	-
	Metal Melting	Melting Dept. - Magnesium Treatment (EU-6B)	Dust Collector DC-2	23.63	23.28	23.28	-	-	0.09	-	0.37
Sand handling (not controlled by DC-1)		Outdoor bond silo (EU-22)	1.52	0.98	0.98	-	-	-	-	-	-
Cleaning & Finishing	Outdoor sand storage bin (EU-24)	No control	2.85	1.83	1.83	-	-	-	-	-	-
	No. 3 Cleaning Machine (EU-34)	Baghouse BH-2	1.49	0.18	0.18	-	-	-	-	0.23	-
Combustion	Grinding (EU-32)	Baghouse BH-1	0.09	0.04	0.04	-	-	-	-	0.09	-
	Finishing (EU-33)	No control	0.09	0.04	0.04	-	-	-	-	0.09	-
Insignificant Activity	Insignificant Combustion	No control	0.02	0.07	0.07	0.10	1.24	0.10	0.72	-	-
Fugitives	Cooling Tower	No control	0.04	0.04	0.04	-	-	-	-	-	-
	Paved & Unpaved Roads	No control	0.77	0.15	0.02	-	-	-	-	-	-
Total			85.61	81.72	81.59	0.67	7.52	35.78	58.27	1.79	3.89
										Total HAPs:	5.69

Notes:
 This table represents limited emissions only; control efficiencies are not taken into account in the calculations.
 With no permit limits, Limited PTE = Unlimited PTE

PSD Minor Limits

Limited Metal Melt Throughput (tons/yr)
17,500.00

Emission Unit ID(s)	Control Device	Emission Limits (lb/ton)				CO	Organic HAPs
		PM	PM10	PM2.5			
EIF Furnace EU-3A					N/A	N/A	
Melting Dept. - Charge Handling (EU-2A)					N/A	N/A	
Melting Dept. - Charge Handling (EU-2B)					N/A	N/A	
Melting Dept. - Magnesium Treatment (EU-6A)					N/A	N/A	
Sand Handling (EU-17 through EU-20, EU-23, EU-26, EU-27, EU-37)					N/A	N/A	
Scrap Preheater EU-1A					N/A	N/A	
Disa Pouring/Casting Line (EU-8)	Dust Collector DC-1	6.30	6.30	6.30			
Disa Cooling Line (EU-8A)							
Casting Shakeout ("A", "B", and "C" shakers EU-16; and Didion shakeout Unit EU-11)					6.0	0.4322	
Hunter 1 pouring/casting line							
Hunter 1 cooling line							
Hunter 1 shake-out unit							
Hunter 2 pouring/casting line							
Hunter 2 cooling line							
Hunter 2 shake-out unit							
EIF Furnace EU-3B					N/A	N/A	
Melting Dept. - Magnesium Treatment (EU-6B)	Dust Collector DC-2	2.70	2.66	2.66	N/A	N/A	
No. 3 Cleaning Machine (EU-34)	Baghouse BH-2	0.17	0.02	0.02	N/A	N/A	
Grinding (EU-32)	Baghouse BH-1	0.01	0.0045	0.0045	N/A	N/A	
Finishing (EU-33)	No control	0.01	0.0045	0.0045	N/A	N/A	

*EU-22 and EU-24 are part of the Sand Handling Operation but are not controlled by DC-1. Therefore the PTE of these units are not included under the PTE of the units controlled by DC-1. EU-22 is controlled by a sock filter system and the EU-24 is uncontrolled. The emission limit is equivalent to the AP-42 emission factor for cement unloading to elevated storage silo (SCC 3-05-011-08). AP-42 Chapter 11.12, Table 11.12-2.

Appendix A: Emissions Calculations
Modification Summary
Company Name: ID Castings, LLC
Source Address: 1600 South 8th Street, Noblesville, Indiana 46060
Permit No.: T057-33889-00002
Significant Source Modification No.: 057-35618-00002
Significant Permit Modification No.: 057-35620-00002
Reviewer: Brandon Miller/Brian Williams

Process Description / Emission Unit		Unlimited Potential to Emit (tons/year)							Hazardous Air Pollutants	
		Criteria Pollutants							Metallic HAPs	Organic HAPs
		PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO		
Metal Melting	EIF Furnace EU-3B	40.21	38.42	38.42	-	-	-	-	1.44	-
Raw Material Handling and Preparation	Melting Dept. - Charge Handling (EU-2B)	26.81	16.08	16.08	-	-	-	-	0.14	-
	Melting Dept. - Magnesium Treatment (EU-6B)	80.42	80.42	80.42	-	-	0.45	-	1.90	-
	Scrap Preheater (EU-1A)	17.87	16.08	15.19	0.04	6.01	0.33	5.05	0.00	0.11
Insignificant Activity	Cooling Tower	0.04	0.04	0.04	-	-	-	-	-	-
Total		165.30	151.00	150.11	0.04	6.01	0.78	5.05	3.48	0.11
									Total HAPs:	3.59

**Appendix A: Emissions Calculations
Ductile Iron Foundries
Metal Melting**

Company Name: ID Castings, LLC
Source Address: 1600 South 8th Street, Noblesville, Indiana 46060
Permit No.: T057-33889-00002
Significant Source Modification No.: 057-35618-00002
Significant Permit Modification No.: 057-35620-00002
Reviewer: Brandon Miller/Brian Williams

Emission Factors

Metal Melting			Emission Unit ID(s)	Maximum Throughput (tons/hr)	Uncontrolled Emission Factors (lb/ton)							
					PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO	Metallic HAPs
Electric Induction Furnaces	(SCC-3-04-003-03)	EIF Furnace EU-3A	10.20	0.90	0.86	0.86	-	-	-	-	3.23E-02	-
	(SCC-3-04-003-03)	EIF Furnace EU-3B	10.20	0.90	0.86	0.86	-	-	-	-	3.23E-02	-

Notes

Emission factors from AP-42 Chapter 12.10 Gray Iron Foundries and US EPA Fire Version 6.25, except as otherwise noted

Summary of Emissions (Uncontrolled)

Metal Melting		Uncontrolled Potential to Emit (tons/yr)								
		PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO	Metallic HAPs	Organic HAPs
Electric Induction Furnaces	EIF Furnace EU-3A	40.21	38.42	38.42	-	-	-	-	1.44	-
	EIF Furnace EU-3B	40.21	38.42	38.42	-	-	-	-	1.44	-

Methodology

Uncontrolled PTE (tons/yr) = Maximum Throughput (tons/hr) * Emission Factor (lb/ton) * 8,760 hr/yr * 1 ton/2,000 lbs

Summary of Emissions (Controlled)

Metal Melting		Control Device	Control Efficiency	Controlled Potential to Emit (tons/yr)							
				PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO	Metallic HAPs
EIF Furnace EU-3A	Dust Collector DC-1	99.90%	0.04	0.04	0.04	-	-	-	-	0.0014	-
EIF Furnace EU-3B	Dust Collector DC-2	99.90%	0.04	0.04	0.04	-	-	-	-	0.0014	-

Methodology

Controlled PTE (tons/yr) = Uncontrolled PTE (tons/yr) * 1-Control Efficiency%

Appendix A: Emissions Calculations
Ductile Iron Foundries
Raw Material Handling and Preparation
Company Name: ID Castings, LLC
Source Address: 1600 South 8th Street, Noblesville, Indiana 46060
Permit No.: T057-33889-00002
Significant Source Modification No.: 057-35618-00002
Significant Permit Modification No.: 057-35620-00002
Reviewer: Brandon Miller/Brian Williams

Emission Factors

Raw Material Handling and Preparation		Emission Unit ID(s)	Maximum Throughput (tons/hr)	Uncontrolled Emission Factors (lb/ton)								
				PM	PM10	PM2.5	SO ₂	NOx	VOC	CO	Metallic HAPs	Organic HAPs
Scrap and Charge Handling	(SCC 3-04-003-15)	Melting Dept. - Charge Handling (EU-2A)	10.20	0.60	0.36	0.36	-	-	-	-	3.08E-03	-
	(SCC 3-04-003-15)	Melting Dept. - Charge Handling (EU-2B)	10.20	0.60	0.36	0.36	-	-	-	-	3.08E-03	-
Magnesium Treatment	(SCC 3-04-003-21)	Melting Dept. - Magnesium Treatment (EU-6A)	10.20	1.80	1.80	1.80	-	-	0.01	-	4.25E-02	-
	(SCC 3-04-003-21)	Melting Dept. - Magnesium Treatment (EU-6B)	10.2	1.80	1.80	1.80	-	-	0.01	-	4.25E-02	-
Sand Handling	(SCC 3-04-003-50)	Sand Handling (EU-17 through EU-20, EU-23, EU-26, EU-27, EU-37)	100.00	3.60	0.54	0.54	-	-	-	-	-	-
Sand handling (silos not controlled by DC-1)	(SCC 3-05-011-07)*	Outdoor bond silo (EU-22)	0.47	0.73	0.47	0.47	-	-	-	-	-	-
		Outdoor sand storage bin (EU-24)	0.89	0.73	0.47	0.47	-	-	-	-	-	-

Notes

Emission factors from AP-42 Chapter 12.10 Gray Iron Foundries and US EPA Fire Version 6.25, except as otherwise noted.
 *Emission factors for the silos are from AP-42 Section 11.12, Table 11.12-2 for cement unloading to elevated storage silo.
 Max throughput of EU-22 and EU-24 is based on the capacity volume and a worst-case assumption of filling the silo and bin once per week each.

Summary of Emissions (Uncontrolled)

Raw Material Handling and Preparation	Uncontrolled Potential to Emit (tons/yr)									
	PM	PM10	PM2.5	SO ₂	NOx	VOC	CO	Metallic HAPs	Organic HAPs	
Melting Dept. - Charge Handling (EU-2A)	26.81	16.08	16.08	-	-	-	-	0.14	-	
Melting Dept. - Charge Handling (EU-2B)	26.81	16.08	16.08	-	-	-	-	0.14	-	
Melting Dept. - Magnesium Treatment (EU-6A)	80.42	80.42	80.42	-	-	0.45	-	1.90	-	
Melting Dept. - Magnesium Treatment (EU-6B)	80.42	80.42	80.42	-	-	0.45	-	1.90	-	
Sand Handling (EU-17 through EU-20, EU-23, EU-26, EU-27, EU-37)	1,576.80	24.13	24.13	-	-	-	-	-	-	
Outdoor bond silo (EU-22)	1.52	0.98	0.98	-	-	-	-	-	-	
Outdoor sand storage bin (EU-24)	2.85	1.83	1.83	-	-	-	-	-	-	

Methodology

Uncontrolled PTE (tons/yr) = Maximum Throughput (tons/hr) * Emission Factor (lb/ton) * 8,760 hr/yr * 1 ton/2,000 lbs

Summary of Emissions (Controlled)

Raw Material Handling and Preparation	Control Device	Control Efficiency	Controlled Potential to Emit (tons/yr)								
			PM	PM10	PM2.5	SO ₂	NOx	VOC	CO	Metallic HAPs	Organic HAPs
Melting Dept. - Charge Handling (EU-2A)	Dust Collector DC-1	99.90%	0.03	0.02	0.02	-	-	-	-	0.00	-
Melting Dept. - Charge Handling (EU-2B)	Dust Collector DC-1	99.90%	0.03	0.02	0.02	-	-	-	-	0.00	-
Melting Dept. - Magnesium Treatment (EU-6A)	Sealed Reaction Chambers and Dust Collector DC-1	99.90%	0.08	0.08	0.08	-	-	0.00	-	0.00	-
Melting Dept. - Magnesium Treatment (EU-6B)	Sealed Reaction Chambers and Dust Collector DC-2	99.90%	0.08	0.08	0.08	-	-	0.00	-	0.00	-
Sand Handling (EU-17 through EU-20, EU-22 through EU-24, EU-26, EU-27, EU-37)	Dust Collector DC-1	99.90%	1.58	0.02	0.02	-	-	-	-	-	-
Outdoor bond silo (EU-22)	Sock filter system	99.90%	0.0015	0.0010	0.0010	-	-	-	-	-	-
Outdoor sand bin (EU-24)	No control	NA	NA	NA	NA	-	-	-	-	-	-

Methodology

Controlled PTE (tons/yr) = Uncontrolled PTE (tons/yr) * 1-Control Efficiency%
 Sealed Reaction Chambers is for PM, PM10, PM2.5, VOC, and Metallic HAPs
 Dust Collector DC-1 control is for PM, PM10, PM2.5, and Metallic HAPs
 Dust Collector DC-2 control is for PM, PM10, PM2.5, and Metallic HAPs

Appendix A: Emissions Calculations
Ductile Iron Foundries
Scrap Preheating
Company Name: ID Castings, LLC
Source Address: 1600 South 8th Street, Noblesville, Indiana 46060
Permit No.: T057-33889-00002
Significant Source Modification No.: 057-35618-00002
Significant Permit Modification No.: 057-35620-00002
Reviewer: Brandon Miller/Brian Williams

Emission Factors

Scrap Metal Pre-Heating		Emission Unit ID(s)	Capacity	Heater Rating	Uncontrolled Emission Factors								
					PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO	Metallic HAPs	Organic HAPs
Natural Gas Fired Pre-Heater	(SCC 3-04-003-14)	Scrap Preheater EU-1A	ton/hr	10 ⁶ scf/hr	lb/ton	lb/ton	lb/ton	lb/10 ⁶ scf					
					0.2	0.18	0.17	0.600	100.000	5.500	84.000	6.06E-03	1.88

Notes

PM, PM10, and PM2.5 emission factors for preheaters taken from Table 3-8 of, "Emission Estimation Protocol for Iron and Steel Foundries," RTI International. All other emission factors from AP-42 Table 1.4-2.

Summary of Emissions (Uncontrolled)

Scrap Metal Pre-Heating	Emission Unit ID(s)	Uncontrolled Potential to Emit (ton/yr)									
		PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO	Metallic HAPs	Organic HAPs	
Natural Gas Fired Pre-Heater	Scrap Preheater EU-1A	17.87	16.08	15.19	0.04	6.01	0.33	5.05	3.64E-04	0.11	

Methodology

Uncontrolled PTE (ton/yr) = Maximum Throughput (ton/hr) * Emission Factor (lb/ton) * 8,760 hr/yr * 1 ton/2,000 lbs

Uncontrolled PTE (ton/yr) = Maximum Throughput (106 scf/hr) * Emission Factor (lb/106 scf) * 8,760 hr/yr * 1 ton/2,000 lbs

Summary of Emissions (Controlled)

Scrap Metal Pre-Heating	Emission Unit ID(s)	Control Device	Control Efficiency	Controlled Potential to Emit (ton/yr)								
				PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO	Metallic HAPs	Organic HAPs
Natural Gas Fired Pre-Heater	Scrap Preheater EU-1A	Dust Collector DC-1	99.90%	0.02	0.02	0.02	0.04	6.01	0.33	5.05	3.64E-07	0.11

Methodology

Controlled PTE (ton/yr) = Uncontrolled PTE (ton/yr) * 1-Control Efficiency%

**Appendix A: Emissions Calculations
Ductile Iron Foundries
Pouring, Cooling, and Shakeout
Company Name: ID Castings, LLC
Source Address: 1600 South 8th Street, Noblesville, Indiana 46060
Permit No.: T057-33889-00002
Significant Source Modification No.: 057-35618-00002
Significant Permit Modification No.: 057-35620-00002
Reviewer: Brandon Miller/Brian Williams**

Emission Factors

Pouring, Cooling, and Shakeout		Emission Unit ID(s)	Maximum Sand Throughput (tons/hr)	Maximum Metal Throughput (tons/hr)	Uncontrolled Emission Factors (lb/ton)						CO ⁽¹⁾	Metallic HAPs ⁽²⁾	Organic HAPs ⁽³⁾
					PM	PM10	PM2.5	SO ₂	NO _x	VOC			
Pouring/Casting	(SCC 3-04-003-20)	Disa Pouring/Casting Line (EU-8)	39.00	3.40	2.80	2.06	2.06	0.02	0.01	0.14	6.00	2.64E-03	0.4322
		Hunter 1 pouring/casting line	42.00	4.00	2.80	2.06	2.06	0.02	0.01	0.14			
		Hunter 2 pouring/casting line	42.00	4.00	2.80	2.06	2.06	0.02	0.01	0.14			
Cooling	(SCC 3-04-003-25)	Disa Cooling Line (EU-8A)	39.00	3.40	1.40	1.40	1.40	-	-	-			
		Hunter 1 cooling line	42.00	4.00	1.40	1.40	1.40	-	-	-			
		Hunter 2 cooling line	42.00	4.00	1.40	1.40	1.40	-	-	-			
Casting Shakeout	(SCC 3-04-003-31)	Casting Shakeout ("A", "B", and "C" shakers EU-16; and Didion shakeout Unit EU-11)	39.00	10.20	3.20	2.24	2.24	-	-	1.20			
		Hunter 1 shake-out unit	42.00	4.00	3.20	2.24	2.24	-	-	1.20			
		Hunter 2 shake-out unit	42.00	4.00	3.20	2.24	2.24	-	-	1.20			

Notes

- Emission factors from AP-42 Chapter 12.10 Gray Iron Foundries and US EPA Fire Version 6.25, except as otherwise noted
Emission factors are in lb/ton of metal throughput
(1) CO emission factor based on "CO Emissions Guidelines" notice for CO emissions from pouring, cooling and shakeout operations combined.
(2) Metallic HAPs emission factor for pouring/cooling and shakeout combined are from Kennedy Valve Engineering Estimate.
(3) Organic HAPs emission factor for pouring/cooling and shakeout combined are from CERP Study.

Summary of Emissions (Uncontrolled)

Pouring, Cooling, and Shakeout		Uncontrolled Potential to Emit (tons/yr)							CO	Metallic HAPs	Organic HAPs
		PM	PM10	PM2.5	SO ₂	NO _x	VOC				
Pouring/Casting	Disa Pouring/Casting Line (EU-8)	41.70	30.68	30.68	0.30	0.15	2.08	478.30	0.21	34.45	
	Hunter 1 pouring/casting line	49.06	36.09	36.09	0.35	0.18	2.45				
	Hunter 2 pouring/casting line	49.06	36.09	36.09	0.35	0.18	2.45				
Cooling	Disa Cooling Line (EU-8A)	20.85	20.85	20.85	-	-	-				
	Hunter 1 cooling line	24.53	24.53	24.53	-	-	-				
	Hunter 2 cooling line	24.53	24.53	24.53	-	-	-				
Casting Shakeout	Casting Shakeout ("A", "B", and "C" shakers EU-16; and Didion shakeout Unit EU-11)	142.96	100.07	100.07	-	-	53.61				
	Hunter 1 shake-out unit	56.06	39.24	39.24	-	-	21.02				
	Hunter 2 shake-out unit	56.06	39.24	39.24	-	-	21.02				

Methodology

Uncontrolled PTE (tons/yr) = Maximum Throughput (tons/hr) * Emission Factor (lb/ton) * 8,760 hr/yr * 1 ton/2,000 lbs

Summary of Emissions (Controlled)

Pouring, Cooling, and Shakeout			Controlled Potential to Emit (tons/yr)									
			PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO	Metallic HAPs	Organic HAPs	
Disa Pouring/Casting Line (EU-8)	Dust Collector DC-1	99.90%	0.04	0.03	0.03	0.30	0.15	2.08	478.30	0.21	34.45	
	Hunter 1 pouring/casting line	Dust Collector DC-1	99.90%	0.05	0.04	0.04	0.35	0.18				2.45
	Hunter 2 pouring/casting line	Dust Collector DC-1	99.90%	0.05	0.04	0.04	0.35	0.18				2.45
Disa Cooling Line (EU-8A)	Dust Collector DC-1	99.90%	0.02	0.02	0.02	-	-	-				
	Hunter 1 cooling line	Dust Collector DC-1	99.90%	0.02	0.02	0.02	-	-				-
	Hunter 2 cooling line	Dust Collector DC-1	99.90%	0.02	0.02	0.02	-	-				-
Casting Shakeout ("A", "B", and "C" shakers EU-16; and Didion shakeout Unit EU-11)	Dust Collector DC-1	99.90%	0.14	0.10	0.10	-	-	53.61				
	Hunter 1 shake-out unit	Dust Collector DC-1	99.90%	0.06	0.04	0.04	-	-				21.02
	Hunter 2 shake-out unit	Dust Collector DC-1	99.90%	0.06	0.04	0.04	-	-				21.02

Methodology

Controlled PTE (tons/yr) = Uncontrolled PTE (tons/yr) * 1-Control Efficiency%

Appendix A: Emissions Calculations
Ductile Iron Foundries
Cleaning & Finishing
Company Name: ID Castings, LLC
Source Address: 1600 South 8th Street, Noblesville, Indiana 46060
Permit No.: T057-33889-00002
Significant Source Modification No.: 057-35618-00002
Significant Permit Modification No.: 057-35620-00002
Reviewer: Brandon Miller/Brian Williams

Emission Factors

Cleaning & Finishing			Emission Unit ID(s)	Maximum Throughput (tons/hr)	Uncontrolled Emission Factors (lb/ton)							
					PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO	Metallic HAPs
Cleaning	(SCC 3-04-003-40)	No. 3 Cleaning Machine (EU-34)	5.60	17.00	1.70	1.70	-	-	-	-	2.63E-02	-
Castings Finishing	(SCC 3-04-003-60)	Grinding (EU-32)	5.60	0.01	0.0045	0.0045	-	-	-	-	0.01	-
Castings Finishing	(SCC 3-04-003-60)	Finishing (EU-33)	5.60	0.01	0.0045	0.0045	-	-	-	-	0.01	-

Notes

Emission factors from AP-42 Chapter 12.10 Gray Iron Foundries and US EPA Fire Version 6.25, except as otherwise noted

Summary of Emissions (Uncontrolled)

Cleaning & Finishing	Uncontrolled Potential to Emit (tons/yr)									
	PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO	Metallic HAPs	Organic HAPs	
No. 3 Cleaning Machine (EU-34)	416.98	41.70	41.70	-	-	-	-	0.65	-	
Grinding (EU-32)	0.25	0.11	0.11	-	-	-	-	0.25	-	
Finishing (EU-33)	0.25	0.11	0.11	-	-	-	-	0.25	-	

Methodology

Uncontrolled PTE (tons/yr) = Maximum Throughput (tons/hr) * Emission Factor (lb/ton) * 8,760 hr/yr * 1 ton/2,000 lbs

Summary of Emissions (Controlled)

Cleaning & Finishing	Control Device	Control Efficiency	Controlled Potential to Emit (tons/yr)								
			PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO	Metallic HAPs	Organic HAPs
No. 3 Cleaning Machine (EU-34)	Baghouse BH-2	80.00%	83.40	8.34	8.34	-	-	-	-	0.13	-
Grinding (EU-32)	Baghouse BH-1	99.00%	0.002	0.001	0.001	-	-	-	-	0.002	-
Finishing (EU-33)	No control	0.00%	0.25	0.11	0.11	-	-	-	-	0.25	-

Methodology

Controlled PTE (tons/yr) = Uncontrolled PTE (tons/yr) * 1-Control Efficiency%
 Baghouse BH-1 and BH-2 controls are for PM, PM10, PM2.5, and Metallic HAPs

Appendix A: Emission Calculations
LPG-Propane - Industrial Boilers
 (Heat input capacity: > 10 MMBtu/hr and < 100 MMBtu/hr)

Company Name: ID Castings, LLC
Source Address: 1600 South 8th Street, Noblesville, Indiana 46060
Permit No.: T057-33889-00002
Significant Source Modification No.: 057-35618-00002
Significant Permit Modification No.: 057-35620-00002
Reviewer: Brandon Miller/Brian Williams

Emission unit	MMBtu/hr	Potential Throughput	SO ₂ Emission factor = 0.10 x S
heating ladle torches	1.00	kgals/year	S = Sulfur Content =
auto pour torches	1.00	191.48	10.90 grains/100ft ³
Total	2.00		

	Pollutant						
	PM*	PM10*	direct PM2.5**	SO ₂	NO _x	VOC**	CO
Emission Factor in lb/kgal	0.20	0.70	0.70	1.09	13.00	1.00	7.50
Potential Emission in tons/yr	0.02	0.07	0.07	0.10	1.24	0.10	0.72

*PM emission factor is filterable PM only. PM emissions are stated to be all less than 10 microns in aerodynamic equivalent diameter, footnote in Table 1.5-1, therefore PM10 is based on the filterable and condensable PM emission factors.

** No direct PM2.5 emission factor was given. Direct PM2.5 is a subset of PM10. If one assumes all PM10 to be all direct PM2.5, then a worst case assumption of direct PM2.5 can be made.

**The VOC value given is TOC. The methane emission factor is 0.2 lb/kgal.

Methodology

1 gallon of LPG has a heating value of 94,000 Btu

1 gallon of propane has a heating value of 91,500 Btu (use this to convert emission factors to an energy basis for propane)

(Source - AP-42 (Supplement B 10/96) page 1.5-1)

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.0915 MMBtu

Emission Factors are from AP42 (7/08), Table 1.5-1 (SCC #1-02-010-02)

Propane Emission Factors shown. Please see AP-42 for butane.

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

Emission Factors are from AP 42 (7/08), Table 1.5-1 (SCC #1-02-010-02)

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

Appendix A: Emissions Calculations

Ductile Iron Foundries

Cooling Tower

Company Name: ID Castings, LLC

Source Address: 1600 South 8th Street, Noblesville, Indiana 46060

Permit No.: T057-33889-00002

Significant Source Modification No.: 057-35618-00002

Significant Permit Modification No.: 057-35620-00002

Reviewer: Brandon Miller/Brian Williams

Emission Unit: Non-Contact Water Cooling Tower

Source description: Potential emissions due to release of dissolved solids in total drift from water recirculation stream.

OPERATION/PRODUCTION RELATED INFORMATION PER COOLING TOWER

Parameter	value	units	Reference
Total circulating flow rate	2.64	gal/min	equipment design specification
	158.3	gal/hr	
Cooling tower drift (pct of recirculation flow)	0.300	percent	Assumed worst case
Total cooling tower drift	0.47	gal/hr	calculated value
	4.0	lbs/hr	calc value (density = 8.345 lbs/gal)

EMISSION RELATED INFORMATION AND CALCULATION METHODOLOGY

PM/PM₁₀ emissions calculated based on the total dissolved solids (TDS) content of recirculating water and resulting drift.

Calculation method taken from AP-42, Section 13.4.

Pollutant	value	units	Reference
TDS content of water used in cooling tower	2,170	ppm	max TDS expected from water source after being concentrated at 5 cycles

POTENTIAL EMISSION CALCULATIONS - calculated at 8,760 hrs/yr

Pollutant	Total Potential Emissions	
	lbs/hr	tpy
PM/PM ₁₀	0.009	0.038

Methodology

Assumed PM = PM10 = PM2.5

Total circulating flow rate (gal/hr) = total circulating flow rate (gal/min) * 60 min/1 hr

Total Cooling tower drift (gal/hr) = (Cooling tower drift (pct of recirculation flow)/100) * Total circulating flow rate (gal/hr)

Total Cooling tower drift (lbs/hr) = Total Cooling tower drift (gal/hr) * density of water

Potential Emission Calculations (lbs/hr) = total cooling tower drift (lbs/hr) * (TDS content of water used in cooling tower (ppm)/1,000,000)

Appendix A: Emissions Calculations
Ductile Iron Foundries
Fugitives from Paved & Unpaved Roads
Company Name: ID Castings, LLC
Source Address: 1600 South 8th Street, Noblesville, Indiana 46060
Permit No.: T057-33889-00002
Significant Source Modification No.: 057-35618-00002
Significant Permit Modification No.: 057-35620-00002
Reviewer: Brandon Miller/Brian Williams

VEHICLE TRAFFIC ON PAVED AND UNPAVED ROADS

Estimated Regulated Criteria Air Pollutant Emission Rate

Air Emission Source	Total VMT	PM Emissions		PM ₁₀ Emissions		PM _{2.5} Emissions	
		Emission Factor (lb/VMT)	Emissions (tons/yr)	Emission Factor (lb/VMT)	Emissions (tons/yr)	Emission Factor (lb/VMT)	Emissions (tons/yr)
In-Plant Paved Roads	152.08	10.19	0.77	1.99	0.15	0.30	0.02

Methodology:

1100 ft per trip X 2 trips per round trip ÷ 5280 ft per mile = 0.4167 VMT/round trip
 0.4167 VMT per round trip X 1 round trip per day X 365 days per year = 152.08 VMT/year

AP-42, Section 13.2.1 - Paved Roads

$$\text{lbs/VMT: } E = \{[k \cdot (sL/2)^{0.65} \cdot (W/3)^{1.5}] - C\} \cdot (1 - P/4N)$$

Where:

E = Particulate Matter Emission Factor

k (for PM) = Particle Size Number 0.082 lb/VMT (Table 13.2.1-1)

k (for PM₁₀) = Particle Size Number 0.016 lb/VMT (Table 13.2.1-1)

k (for PM_{2.5}) = Particle Size Number 0.0024 lb/VMT (Table 13.2.1-1)

sL = Road Surface Silt Loading 9.7 g/m² (Table 13.2.1-4)

W = Average Vehicle Weight 40 tons

C (for PM) = Exhaust Emission Factor 0.00047 lb/VMT (Table 13.2.1-2)

C (for PM₁₀) = Exhaust Emission Factor 0.00047 lb/VMT (Table 13.2.1-2)

C (for PM_{2.5}) = Exhaust Emission Factor 0.00036 lb/VMT (Table 13.2.1-2)

P = Number of "wet" days during an averaging period 125 days (Figure 13.2.1-2)

N = number of days in averaging 365 days

Notes:

PM/PM₁₀/PM_{2.5}, tons/yr = Total VMT * EF, lb/VMT * ton/2000 lbs

Appendix A: Emissions Calculations
Compliance with 326 IAC 6-3-2 PM Limitations

Company Name: ID Castings, LLC
 Source Address: 1600 South 8th Street, Noblesville, Indiana 46060
 Permit No.: T057-33889-00002
 Significant Source Modification No.: 057-35618-00002
 Significant Permit Modification No.: 057-35620-00002
 Reviewer: Brandon Miller/Brian Williams

	Emission Units	Control Device	Process Weight Rate (tons/hr)	Unlimited PM (lb/hr)	Controlled PM (lb/hr)	PM Limit (lb/hr)	Able to Comply?
Metal Melting	EIF Furnace EU-3A	Dust Collector DC-1	10.20	9.18	0.00918	19.43	Y - without control
	EIF Furnace EU-3B	Dust Collector DC-2	10.20	9.18	0.00918	19.43	Y - without control
Raw Material Handling and Preparation	Melting Dept. - Charge Handling (EU-2A)	Dust Collector DC-1	10.20	6.12	0.01	19.43	Y - without control
	Melting Dept. - Charge Handling (EU-2B)	Dust Collector DC-1	10.20	6.12	0.01	19.43	Y - without control
	Melting Dept. - Magnesium Treatment (EU-6A)	Sealed Reaction Chambers and Dust Collector DC-1	10.20	18.36	0.02	19.43	Y - without control
	Melting Dept. - Magnesium Treatment (EU-6B)	Sealed Reaction Chambers and Dust Collector DC-2	10.20	18.36	0.02	19.43	Y - without control
	Sand Handling (EU-16 through EU-20, EU-22 through EU-24, EU-26, EU-27, EU-37)	Dust Collector DC-1	100.00	360.00	0.36	51.28	Y - with control
	Scrap Preheater (EU-1A)	Dust Collector DC-1	20.40	4.08	0.00408	36.63	Y - without control
	Disa Pouring/Casting Line (EU-8)	Dust Collector DC-1	42.40	9.52	0.01	43.06	Y - without control
Pouring, Cooling, and Shakeout	Hunter 1 pouring/casting line	Dust Collector DC-1	46.00	11.20	0.01	43.80	Y - without control
	Hunter 2 pouring/casting line	Dust Collector DC-1	46.00	11.20	0.01	43.80	Y - without control
	Disa Cooling Line (EU-8A)	Dust Collector DC-1	42.40	4.76	0.00	43.06	Y - without control
	Hunter 1 cooling line	Dust Collector DC-1	46.00	5.60	0.01	43.80	Y - without control
	Hunter 2 cooling line	Dust Collector DC-1	46.00	5.60	0.01	43.80	Y - without control
	Casting Shakeout ("A", "B", and "C" shakers EU-16; and Didion shakeout Unit EU-11)	Dust Collector DC-1	49.20	32.64	0.03	44.43	Y - without control
	Hunter 1 shake-out unit	Dust Collector DC-1	46.00	12.80	0.01	43.80	Y - without control
	Hunter 2 shake-out unit	Dust Collector DC-1	46.00	12.80	0.01	43.80	Y - without control
	Cleaning & Finishing	No. 3 Cleaning Machine (EU-34)*	Baghouse BH-2	20.60	95.20	19.04	31.12
Grinding (EU-32)		Baghouse BH-1	5.60	0.06	0.001	13.00	Y - without control
Finishing (EU-33)		No control	5.60	0.06	0.06	13.00	Y - without control

*Process weight rate includes the weight of the steel shot plus the weight of the castings

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

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

and interpolation and extrapolation of the data for process weight rates in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 * P^{0.11} - 40$$

Where:

E=Rate of emission in pounds per hour.

P=Process weight rate in tons per hour.

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

**Technical Support Document (TSD) for a Part 70 Significant Source and
Significant Permit Modification**

Source Description and Location

Source Name:	ID Castings, LLC
Source Location:	1600 South 8th Street, Noblesville, Indiana 46060
County:	Hamilton
SIC Code:	3321 (Gray and Ductile Iron Foundries)
Operation Permit No.:	T 057-33889-00002
Operation Permit Issuance Date:	July 21, 2014
Significant Source Modification No.:	057-35618-00002
Significant Permit Modification No.:	057-35620-00002
Permit Reviewer:	Brandon Miller/Brian Williams

Existing Approvals

The source was issued Part 70 Operating Permit No. 057-33889-00002 on July 21, 2014. The source has since received the following approvals:

- (a) Significant Source Modification No. 057-34050-00002, issued on August 28, 2014;
- (b) Significant Permit Modification No. 057-34576-00002, issued on September 19, 2014; and
- (c) Significant Permit Modification No. 057-35196-00002, issued on April 20, 2015.

County Attainment Status

The source is located in Hamilton County.

Pollutant	Designation
SO ₂	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O ₃	Unclassifiable or attainment effective July 20, 2012, for the 2008 8-hour ozone standard. ¹
PM _{2.5}	Attainment effective July 11, 2013, for the annual PM _{2.5} standard.
PM _{2.5}	Unclassifiable or attainment effective December 13, 2009, for the 24-hour PM _{2.5} standard.
PM ₁₀	Unclassifiable effective November 15, 1990.
NO ₂	Cannot be classified or better than national standards.
Pb	Unclassifiable or attainment effective December 31, 2011.

¹Unclassifiable 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 (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to ozone. Hamilton County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

- (b) **PM_{2.5}**
Hamilton County has been classified as attainment for PM_{2.5}. Therefore, direct PM_{2.5}, SO₂, and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (c) **Other Criteria Pollutants**
Hamilton County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

Since this source is classified as 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.

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

This table is from the TSD for Significant Permit Modification #057-34196-00002, issued on April 20, 2015.

Process/ Emission Unit	Potential To Emit of the Entire Source Before Issuance of Modification (tons/year)							Total HAPs	Worst Single HAP
	PM	PM ₁₀ *	PM _{2.5} **	SO ₂	NO _x	VOC	CO		
EIF Furnace EU-3A	65.54	54.69	54.69	-	-	-	-	4.89	3.78 (Organic HAPs) ^(d)
Melting Dept. - Charge Handling (EU-2)				-	-	-	-		
Melting Dept. - Magnesium Treatment (EU-6)				-	-	0.09	-		
Sand Handling (EU-17 through EU-20, EU-23, EU-26, EU-27, EU-37)				-	-	-	-		
Disa Pouring/Casting Line (EU-8)				0.18	0.09	1.23	52.50 ^(c)		
Hunter 1 pouring/casting line (EU-35)				0.18	0.09	1.23			
Hunter 2 pouring/casting line (EU-36)				0.18	0.09	1.23			
Hunter 1 cooling line (EU-35A)				-	-	-			
Hunter 2 cooling line (EU-36A)				-	-	-			
Hunter 1 shake-out unit (EU-35A)				-	-	10.50			
Hunter 2 shake-out unit (EU-36A)				-	-	10.50			
Casting Shakeout (Didion shake-out Unit EU-11)				-	-	10.50 ^(b)			
Casting Shakeout ("A" Shaker EU-16)				-	-	10.50 ^(b)			
Disa Cooling Line (EU-8A)				-	-	-			
Outdoor bond silo (EU-22) ^{***}				1.52	0.98	0.98			
Outdoor sand storage bin (EU-24) ^{***}	2.85	1.83	1.83	-	-	-		-	
No. 3 Cleaning Machine (EU-34)	1.49	0.18	0.18	-	-	-		-	
Grinding (EU-32)	0.09	0.04	0.04	-	-	-		-	
Finishing (EU-33)	0.09	0.04	0.04	-	-	-		-	
Combustion	0.06	0.22	0.22	0.35	4.16	0.32	2.40		
Paved & Unpaved Roads	0.77	0.15	0.02	-	-	-	-		
Total PTE of Entire Source	72.40^(a)	58.13^(a)	58.00^(a)	0.87	4.42	46.08	54.90	4.89	3.78
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), PM₁₀ and PM_{2.5}, not particulate matter (PM), are each considered as a regulated air pollutant".
 **PM_{2.5} listed is direct PM_{2.5}.
 ***EU-22 and EU-24 are part of the Sand Handling Operation but are not controlled by DC-1. Therefore the PTE of these units are not included under the PTE of the units controlled by DC-1.
 (a) PM, PM₁₀, and PM_{2.5} limits specified to be PSD minor source (326 IAC 2-2).
 (b) VOC limits to render 326 IAC 8-1-6 not applicable.
 (c) CO limits specified to be PSD minor source (326 IAC 2-2).
 (d) HAP limits to continue to be a Minor Source under Section 112 of the Clean Air Act and render 40 CFR Part 63 Subpart EEEEE not applicable.

- (a) This existing source is not a major stationary source, under PSD (326 IAC 2-2), because no PSD regulated pollutant, excluding GHGs, is emitted at a rate of one hundred (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 63.2, because HAPs emissions are limited to 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).
- (c) On June 23, 2014, in the case of *Utility Air Regulatory Group v. EPA*, cause no. 12-1146, (available at http://www.supremecourt.gov/opinions/13pdf/12-1146_4g18.pdf) the United States Supreme Court ruled that the U.S. EPA does not have the authority to treat greenhouse gases (GHGs) as an air pollutant for the purpose of determining operating permit applicability or PSD Major source status. On July 24, 2014, the U.S. EPA issued a memorandum to the Regional Administrators outlining next steps in permitting decisions in light of the Supreme Court's decision. U.S. EPA's guidance states that U.S. EPA will no longer require PSD or Title V permits for sources "previously classified as 'Major' based solely on greenhouse gas emissions."

The Indiana Environmental Rules Board adopted the GHG regulations required by U.S. EPA at 326 IAC 2-2-1(zz), pursuant to Ind. Code § 13-14-9-8(h) (Section 8 rulemaking). A rule, or part of

a rule, adopted under Section 8 is automatically invalidated when the corresponding federal rule, or part of the rule, is invalidated. Due to the United States Supreme Court Ruling, IDEM, OAQ cannot consider GHGs emissions to determine operating permit applicability or PSD applicability to a source or modification.

Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed a modification application, submitted by ID Castings, LLC on March 24, 2015, relating to the following changes:

- (1) Construct and operate four (4) new emission units which includes a scrap and charge handling unit (EU-2B), magnesium treatment unit (EU-6B), scrap preheater (EU-1A), and an electric induction furnace (EU-3B).
- (2) Modify the descriptive identifiers of the existing scrap and charge handling unit and magnesium treatment/inoculation unit to differentiate them from the new emissions units.
- (3) Construct and operate a dust collector (DC-2) for control on the new magnesium treatment unit and electric induction furnace.
- (4) Construct and operate a cooling tower as an insignificant activity.
- (5) Combine the calculations of shakeout units EU-16 and EU-11 as they are part of one process even though they are separate units. The separate calculations resulted in double counting of potential to emit calculations for the units.
- (6) Modify the existing PSD minor limits in conjunction with new PSD minor limits to maintain the existing PSD Minor Source Status of the facility.
- (7) To remove the one-time organic HAP testing requirement for the pouring, casting, cooling, and shakeout processes. The source performed uncontrolled VOC testing on these processes on January 15, 2015. Based on the results of this test the non-methane-ethane VOC emissions were 0.10 pounds per ton of metal. This is substantially less than the organic HAPs limit of 0.4322 pounds per ton of metal. Therefore, the VOC testing demonstrated compliance with the organic HAPs limit and an additional test is unnecessary.

The following is a list of the proposed emission units and pollution control devices:

- (a) One (1) electric induction furnace, identified as EU-3B, approved in 2015 for construction, with a maximum capacity of 10.2 tons of iron per hour, with emissions controlled by dust collector DC-2, and exhausting to stack 009;

The electric induction furnace is considered part of the affected source under 40 CFR Part 63, Subpart ZZZZZ.

- (b) One (1) scrap and charge handling operation, identified as EU-2B, approved in 2015 for construction, with a maximum capacity of 10.2 tons of iron per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;

The scrap and charge handling system is considered part of the affected source under 40 CFR Part 63, Subpart ZZZZZ.

(This new scrap and charge handling operation will be controlled by the existing dust collector DC-1.)

- (c) One (1) magnesium treatment operation, identified as EU-6B, approved in 2015 for construction, with a maximum capacity of 10.2 tons of iron per hour, with emissions

controlled by a sealed reaction chamber and by dust collector DC-2, and exhausting to stack 009.

- (d) One (1) natural gas-fired scrap preheater, identified as EU-1A, approved in 2015 for construction, with a maximum capacity of 20.4 tons of iron per hour and a heat input capacity of 14.0 MMBtu/hr, controlled by dust collector DC-1, and exhausting to stack 003;

(This new scrap preheater will be controlled by the existing dust collector DC-1.)

The following is a list of the emission units and pollution control devices where the identifier is being modified (descriptive change only):

- (a) One (1) scrap and charge handling operation, identified as EU-2A, constructed in 1998, approved in 2015 to exhaust to a dust collector, with a maximum capacity of 10.2 tons of iron per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;

The scrap and charge handling system is considered part of the affected source under 40 CFR Part 63, Subpart ZZZZZ.

- (b) One (1) magnesium treatment/inoculation operation, identified as EU-6A, constructed in 1971, approved in 2015 to exhaust to a dust collector, with a maximum capacity of 10.2 tons of iron per hour, with emissions controlled by a sealed reaction chamber and by dust collector DC-1, and exhausting to stack 003;

The following is the proposed insignificant activity:

- (a) One (1) cooling tower, approved in 2015 for construction, with a total circulating flow rate of 3,800 gallons per day, no control, and exhausting outdoors.

Enforcement Issues

There are no pending enforcement actions related to this modification.

Emission Calculations

See Appendix A of this Technical Support Document for detailed emission calculations.

Permit Level Determination – Part 70 Modification to an Existing Source

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

The following table is used to determine the appropriate permit level under 326 IAC 2-7-10.5. This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit. If the control equipment has been determined to be integral, the table reflects the PTE after consideration of the integral control device.

Process / Emission Unit	Project Emissions (ton/yr)							
	PM	PM ₁₀	PM _{2.5} *	SO ₂	NO _x	VOC	CO	Total HAPs
EIF Furnace EU-3B	40.21	38.42	38.42	-	-	17.36	-	1.44
Melting Dept. - Charge Handling (EU-2B)	26.81	16.08	16.08	-	-	17.36	-	0.14
Melting Dept. - Magnesium Treatment (EU-6B)	80.42	80.42	80.42	-	-	6.32	-	1.90
Scrap Preheater (EU-1A)	17.87	16.08	15.19	0.04	6.01	6.32	5.05	0.11
Cooling Tower	0.04	0.04	0.04	-	-	1.81	-	-
Total for Modification	165.30	151.00	150.11	0.04	6.01	54.23	5.05	3.59

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

- (a) **Significant Source Modification - Approval to Construct**
 This source modification is subject to 326 IAC 2-7-10.5(g)(4) because the modification has a potential to emit greater than twenty-five (25) tons per year of PM, PM₁₀, PM_{2.5} and VOC.
- (b) **Significant Permit Modification - Approval to Operate**
 The modification will be incorporated into the Part 70 Operating Permit through a significant permit modification issued pursuant to 326 IAC 2-7-12(d) because the permit application does not qualify as an administrative amendment or as a minor permit modification because it involves significant changes to monitoring and significant changes to the minor PSD limitations in the permit. These do result in modifications under any provision of Title I of the Clean Air Act and is required by the Part 70 program to be processed as a significant modification.

Permit Level Determination – PSD

Prior to this modification, the existing source was a PSD minor source with PSD minor limits for PM, PM₁₀, PM_{2.5}, and CO. The source is going to maintain the existing PM, PM₁₀, and PM_{2.5} limits for the No. 3 cleaning machine (EU-34), the nine (9) stand grinders (EU-32), and the ten (10) finishing units (EU-33). The source will also maintain the existing CO PSD minor limits. The other PSD minor limits will be modified as follows to maintain the source's PSD minor status (see table below).

In order to render the requirements of 326 IAC 2-2 not applicable, the Permittee shall comply with the following:

- (a) The total iron throughput to the electric induction furnace (EU-3A) and to the electric induction furnace (EU-3B) shall not exceed 17,500 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

 (The existing total iron throughput is not being changed in this modification.)
- (b) The PM, PM₁₀, and PM_{2.5} emissions from the following operations shall not exceed the emission limits listed in the table below:

Emission Units	Control Device	PM Emission Limit (pounds per ton of iron throughput)	PM ₁₀ Emission Limit (pounds per ton of iron throughput)	PM _{2.5} Emission Limit (pounds per ton of iron throughput)
Induction Furnace (EU-3A)	Dust collector DC-1	6.30	6.30	6.30
Charge Handling (EU-2A)				
Charge Handling (EU-2B)				
Magnesium Treatment (EU-6A)				
Sand Handling (EU-17 through EU-20, EU-23, EU-26, EU-27, EU-37)				
Scrap Preheater (EU-1A)				
Disa Pouring/Casting Line (EU-8)				
Disa Cooling Line (EU-8A)				
Casting Shakeout ("A", "B", and "C" shakers EU-16; and Didion shakeout Unit EU-11)				
Hunter 1 pouring/casting line				
Hunter 1 cooling line				
Hunter 1 shake-out unit				
Hunter 2 pouring/casting line				
Hunter 2 cooling line				
Hunter 2 shake-out unit				
Induction Furnace (EU-3B)	Dust Collector DC-2	2.70	2.66	2.66
Magnesium Treatment (EU-6B)				

Compliance with these limits, combined with the potential to emit PM, PM₁₀, and PM_{2.5} from other emission units at this source, shall limit the source-wide PM, PM₁₀, and PM_{2.5} to less than 100 tons per twelve (12) consecutive month period, each, and render 326 IAC 2-2 not applicable.

This modification to an existing minor PSD stationary source is not major because the total emissions of each PSD regulated pollutant are less than the PSD major source thresholds. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

PTE of the Entire Source After Issuance of the Modification
--

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 ~~values~~.

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of Modification (tons/year)								Total HAPs	Worst Single HAP
	PM	PM ₁₀ *	PM _{2.5} **	SO ₂	NO _x	VOC	CO			
EIF Furnace EU-3A				-	-	-	-			
Melting Dept. - Charge Handling (EU-2A)				-	-	-	-			
Melting Dept. - Charge Handling (EU-2B)				-	-	-	-			
Melting Dept. - Magnesium Treatment (EU-6A)				-	-	0.09	-			
Sand Handling (EU-17 through EU-20, EU-23, EU-26, EU-27, EU-37)				-	-	-	-			
Scrap Preheater (EU-1A)				0.04	6.01	0.33	5.05			
Disa Pouring/Casting Line (EU-8)	65.54	54.69	54.69	0.18	0.09	1.23		4.89	3.78 3.89 (Organic HAPs) ^(d)	
Hunter 1 pouring/casting line (EU-35)	55.13	55.13	55.13	0.18	0.09	1.23		5.69		
Hunter 2 pouring/casting line (EU-36)				0.18	0.09	1.23				
Hunter 1 cooling line (EU-35A)				-	-	-				
Hunter 2 cooling line (EU-36A)				-	-	-				
Hunter 1 shake-out unit (EU-35A)				-	-	10.50				
Hunter 2 shake-out unit (EU-36A)				-	-	10.50				
Casting Shakeout (Didion shake-out Unit EU-11 and "A", "B", and "C" Shakers EU-16)				-	-	10.50 ^(b)				
Casting Shakeout ("A" Shaker EU-16)				-	-	10.50 ^(b)				
Disa Cooling Line (EU-8A)				-	-	-				
EIF Furnace (EU-3B)				-	-	-	-			
Melting Dept. - Magnesium Treatment (EU-6B)	23.63	23.28	23.28	-	-	0.09	-			
Outdoor bond silo (EU-22) ^{***}	1.52	0.98	0.98	-	-	-	-			
Outdoor sand storage bin (EU-24) ^{***}	2.85	1.83	1.83	-	-	-	-			
No. 3 Cleaning Machine (EU-34)	1.49	0.18	0.18	-	-	-	-			
Grinding (EU-32)	0.09	0.04	0.04	-	-	-	-			
Finishing (EU-33)	0.09	0.04	0.04	-	-	-	-			
Combustion	0.06	0.22	0.22	0.35	4.16	0.32	2.40			
Cooling Tower	0.04	0.04	0.04	-	-	-	-			
Paved & Unpaved Roads	0.77	0.15	0.02	-	-	-	-			
Total PTE of Entire Source	72.40 85.65 ^(a)	58.13 81.88 ^(a)	58.00 81.75 ^(a)	0.87 0.91	4.42 10.43	46.08 36.00	54.90 59.95	4.89 5.69	3.78 3.89	
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), PM10 and PM2.5, not particulate matter (PM), are each considered as a regulated air pollutant".

**PM_{2.5} listed is direct PM_{2.5}.

***EU-22 and EU-24 are part of the Sand Handling Operation but are not controlled by DC-1. Therefore the PTE of these units are not included under the PTE of the units controlled by DC-1.

(a) PM, PM₁₀, and PM_{2.5} limits specified to be PSD minor source (326 IAC 2-2).

(b) VOC limits to render 326 IAC 8-1-6 not applicable.

(c) CO limits specified to be PSD minor source (326 IAC 2-2).

(d) HAP limits to continue to be a Minor Source under Section 112 of the Clean Air Act and render 40 CFR Part 63 Subpart EEEEE not applicable.

The table below summarizes the potential to emit of the entire source after issuance of this modification, reflecting all limits, of the emission units. Note: the table below was generated from the above table, with bold text un-bolded and strikethrough text deleted.

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of Modification (tons/year)								Total HAPs	Worst Single HAP
	PM	PM ₁₀ *	PM _{2.5} **	SO ₂	NO _x	VOC	CO			
EIF Furnace EU-3A	55.13	55.13	55.13	-	-	-	-	5.69	3.89 (Organic HAPs) ^(d)	
Melting Dept. - Charge Handling (EU-2A)				-	-	-	-			
Melting Dept. - Charge Handling (EU-2B)				-	-	-	-			
Melting Dept. - Magnesium Treatment (EU-6A)				-	-	0.09	-			
Sand Handling (EU-17 through EU-20, EU-23, EU-26, EU-27, EU-37)				-	-	-	-			
Scrap Preheater (EU-1A)				0.04	6.01	0.33	5.05			
Disa Pouring/Casting Line (EU-8)				0.18	0.09	1.23	52.50 ^(c)			
Hunter 1 pouring/casting line (EU-35)				0.18	0.09	1.23				
Hunter 2 pouring/casting line (EU-36)				0.18	0.09	1.23				
Hunter 1 cooling line (EU-35A)				-	-	-				
Hunter 2 cooling line (EU-36A)				-	-	-				
Hunter 1 shake-out unit (EU-35A)				-	-	10.50				
Hunter 2 shake-out unit (EU-36A)				-	-	10.50				
Casting Shakeout (Didion shake-out Unit EU-11 and "A", "B", and "C" Shakers EU-16)				-	-	10.50 ^(b)				
Disa Cooling Line (EU-8A)				-	-	-				
EIF Furnace (EU-3B)	-	-	-	-						
Melting Dept. - Magnesium Treatment (EU-6B)	23.63	23.28	23.28	-	-	0.09		-		
Outdoor bond silo (EU-22) ^{***}	1.52	0.98	0.98	-	-	-		-		
Outdoor sand storage bin (EU-24) ^{***}	2.85	1.83	1.83	-	-	-		-		
No. 3 Cleaning Machine (EU-34)	1.49	0.18	0.18	-	-	-		-		
Grinding (EU-32)	0.09	0.04	0.04	-	-	-		-		
Finishing (EU-33)	0.09	0.04	0.04	-	-	-	-			
Combustion	0.06	0.22	0.22	0.35	4.16	0.32	2.40			
Cooling Tower	0.04	0.04	0.04	-	-	-	-			
Paved & Unpaved Roads	0.77	0.15	0.02	-	-	-	-			
Total PTE of Entire Source	85.65^(a)	81.88^(a)	81.75^(a)	0.91	10.43	36.00	59.95	5.69	3.89	
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), PM₁₀ and PM_{2.5}, not particulate matter (PM), are each considered as a regulated air pollutant.
 **PM_{2.5} listed is direct PM_{2.5}.
 ***EU-22 and EU-24 are part of the Sand Handling Operation but are not controlled by DC-1. Therefore the PTE of these units are not included under the PTE of the units controlled by DC-1.
 (a) PM, PM₁₀, and PM_{2.5} limits specified to be PSD minor source (326 IAC 2-2).
 (b) VOC limits to render 326 IAC 8-1-6 not applicable.
 (c) CO limits specified to be PSD minor source (326 IAC 2-2).
 (d) HAP limits to continue to be a Minor Source under Section 112 of the Clean Air Act and render 40 CFR Part 63 Subpart EEEEE not applicable.

Federal Rule Applicability Determination

The following federal rules are applicable to the source due to this modification:

- NSPS:**
- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this proposed modification.

NESHAP:

- (b) This source is still subject to the National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries Area Sources (40 CFR 63.10880, Subpart ZZZZZ). Pursuant to 40 CFR 63.10880(b)(1), an affected source is existing if you commenced construction or reconstruction of the affected source before September 17, 2007. Pursuant to 40 CFR 63.10880(f), this source is an existing small foundry since the overall metal melt production is limited such that the metal melt production shall not exceed 17,500 tons per year (to be a PSD minor source under 326 IAC 2-2).

With the modification the source is going to maintain the total metal melt production at the foundry such that the metal melt production shall not exceed 17,500 tons per year (the new electric induction furnace will be included into the existing limit).

The new units subject to this rule include the following:

- (i) One (1) electric induction furnace, identified as EU-3B, approved in 2015 for construction, with a maximum capacity of 10.2 tons of iron per hour, with emissions controlled by dust collector DC-2, and exhausting to stack 009;

The electric induction furnace is considered part of the affected source under 40 CFR Part 63, Subpart ZZZZZ.

- (ii) One (1) scrap and charge handling operation, identified as EU-2B, approved in 2015 for construction, with a maximum capacity of 10.2 tons of iron per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;

The scrap and charge handling system is considered part of the affected source under 40 CFR Part 63, Subpart ZZZZZ.

Nonapplicable portions of the NESHAP will not be included in the permit. The source is subject to the following portions of Subpart ZZZZZ:

- (1) 40 CFR 63.10880(a), (b)(1), (c), (f);
- (2) 40 CFR 63.10881(a)(1), (a)(2), (d);
- (3) 40 CFR 63.10885(a)(1), (a)(2)(i), (b);
- (4) 40 CFR 63.10886;
- (5) 40 CFR 63.10890;
- (6) 40 CFR 63.10899(a), (b)(1)-(b)(6), (c)(3), (d);
- (7) 40 CFR 63.10905; and
- (8) 40 CFR 63.10906.

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

- (c) There are no other National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) applicable to this proposed modification.

CAM:

- (d) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to new or modified emission units that involve a pollutant-specific emission unit and meet the following criteria:

- (1) has a potential to emit before controls equal to or greater than the Part 70 major source threshold for the pollutant involved;
- (2) is subject to an emission limitation or standard for that pollutant; and

- (3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

The following table is used to identify the applicability of each of the criteria, under 40 CFR 64.1, to each new or modified emission unit involved:

CAM Applicability Analysis							
Emission Unit	Control Device Used	Emission Limitation (Y/N)	Uncontrolled PTE (ton/yr)	Controlled PTE (ton/yr)	Part 70 Major Source Threshold (ton/yr)	CAM Applicable (Y/N)	Large Unit (Y/N)
EIF Furnace EU-3B - PM	Dust Collector 2	Y	40.21	0.04	100	N	N
EIF Furnace EU-3B PM	Dust Collector 2	Y	38.42	0.04	100	N	N
EIF Furnace EU-3B - PM	Dust Collector 2	Y	38.42	0.04	100	N	N
EIF Furnace EU-3B - all other criteria pollutants	None	-	-	-	100	N	N
Charge Handling EU-2B - PM	Dust Collector 1	Y	26.81	0.03	100	N	N
Charge Handling EU-2B - PM10	Dust Collector 1	Y	16.08	0.02	100	N	N
Charge Handling EU-2B - PM2.5	Dust Collector 1	Y	16.08	0.02	100	N	N
Charge Handling EU-2B - All other criteria pollutants	None	-	-	-	100	N	N
Magnesium Treatment EU-6B - PM	Dust Collector 2	Y	80.42	0.08	100	N	N
Magnesium Treatment EU-6B - PM10	Dust Collector 2	Y	80.42	0.08	100	N	N
Magnesium Treatment EU-6B - PM2.5	Dust Collector 2	Y	80.42	0.08	100	N	N
Magnesium Treatment EU-6B - all other criteria pollutants	None	-	-	-	100	N	N
Scrap Preheater EU-1A - PM	Dust Collector 1	Y	17.87	0.02	100	N	N
Scrap Preheater EU-1A - PM10	Dust Collector 1	Y	16.08	0.02	100	N	N
Scrap Preheater EU-1A - PM2.5	Dust Collector 1	Y	15.19	0.02	100	N	N
Scrap Preheater EU-1A - all other criteria pollutants	None	-	-	-	100	N	N
Cooling Tower - all criteria pollutants	None	-	-	-	100	N	N

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are not applicable to any of the new units as part of this modification permit.

State Rule Applicability Determination - Entire Source

The following state rules are applicable to the source due to the modification:

- (a) 326 IAC 2-2 (PSD)
 PSD applicability is discussed under the Permit Level Determination – PSD section. This source is still classified as PSD minor.
- (b) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
 The operation of the source will emit less than ten (10) tons per year for a single HAP and less than twenty-five (25) tons per year for a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.
- (c) 326 IAC 2-6 (Emission Reporting)
 Since this source is required to have an operating permit under 326 IAC 2-7, Part 70 Permit Program, this source is subject to 326 IAC 2-6 (Emission Reporting). In accordance with the compliance schedule in 326 IAC 2-6-3, an emission statement must be submitted triennially. The first report is due no later than July 1, 2005, and subsequent reports are due every three (3) years thereafter. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.
- (d) 326 IAC 2-7-6(5) (Annual Compliance Certification)
 The U.S. EPA Federal Register 79 FR 54978 notice does not exempt Title V Permittees from the requirements of 40 CFR 70.6(c)(5)(iv) or 326 IAC 2-7-6(5)(D), but the submittal of the Title V annual compliance certification to IDEM satisfies the requirement to submit the Title V annual compliance certifications to EPA. IDEM does not intend to revise any permits since the requirements of 40 CFR 70.6(c)(5)(iv) or 326 IAC 2-7-6(5)(D) still apply, but Permittees can note on their Title V annual compliance certification that submission to IDEM has satisfied reporting to EPA per Federal Register 79 FR 54978. This only applies to Title V Permittees and Title V compliance certifications.

State Rule Applicability – Individual Facilities

Electric Induction Furnace (EU-3B)

- (a) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
 Pursuant to 326 IAC 6-3-2 the particulate emissions from the electric induction furnace (EIF), identified as EU-3B, shall be limited according to the table below, when operating at the following process weight rate:

Emission Unit	Control Device	Process Weight Rate (tons/hr)	Allowable Particulate emissions (lb/hr)	Unlimited Particulate emissions (lb/hr)
Electric Induction Furnace EU-3B	Dust Collector DC-2	10.20	19.43	9.18

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 electric induction furnace is able to comply with this limit without the use of a control device.

- (b) 326 IAC 8-1-6 (New Facilities; General Reduction Requirements)
 The EIF has potential to emit VOC emissions less than 25 tons per year; therefore this unit is not subject to the requirements of 326 IAC 8-1-6.

- (c) 326 IAC 8 (VOC Rules)
There are no VOC rules applicable to the EIF.
- (d) 326 IAC 9 (Carbon Monoxide Emission Rules)
There are no CO rules applicable to the EIF.

Scrap and Charge Handling (EU-2B)

- (a) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-2 the particulate emissions from the scrap and charge handling operations shall be limited according to the table below, when operating at the following process weight rate:

Emission Unit	Control Device	Process Weight Rate (tons/hr)	Allowable Particulate emissions (lb/hr)	Unlimited Particulate emissions (lb/hr)
Scrap and Charge Handling (EU-2B)	Dust Collector DC-1	10.20	19.43	6.12

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 scrap and charge handling operation is able to comply with this limit without the use of a control device.

- (b) 326 IAC 8-1-6 (New Facilities; General Reduction Requirements)
The scrap and charge handling operation has potential to emit VOC emissions less than 25 tons per year; therefore this unit is not subject to the requirements of 326 IAC 8-1-6.
- (c) 326 IAC 8 (VOC Rules)
There are no VOC rules applicable to the scrap and charge handling operation.

Magnesium Treatment (EU-6B)

- (a) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-2 the particulate emissions from the magnesium treatment operation shall be limited according to the table below, when operating at the following process weight rate:

Emission Unit	Control Device	Process Weight Rate (tons/hr)	Allowable Particulate emissions (lb/hr)	Unlimited Particulate emissions (lb/hr)
Magnesium treatment (EU-6B)	Sealed Reaction Chamber and Dust Collector DC-2	10.20	19.43	18.36

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 magnesium treatment process is able to comply with this limit without the use of a control device.

- (b) 326 IAC 8-1-6 (New Facilities; General Reduction Requirements)
The magnesium treatment operation has a potential to emit VOC emissions less than 25 tons per year; therefore this unit is not subject to the requirements of 326 IAC 8-1-6.

- (c) 326 IAC 8 (VOC Rules)
 There are no VOC rules applicable to the magnesium treatment operation.

Scrap Preheater (EU-1A)

- (a) 326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)
 The natural gas-fired dryers for Lines L20 through L27 are not subject to 326 IAC 6-2 (Particulate Emission limitations for Sources of Indirect Heating) because, pursuant to 326 IAC 1-2-19, these emission units do not meet the definition of an indirect heating unit.
- (b) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
 Pursuant to 326 IAC 6-3-2 the particulate emissions from the scrap preheater shall be limited according to the table below, when operating at the following process weight rate:

Emission Unit	Control Device	Process Weight Rate (tons/hr)	Allowable Particulate emissions (lb/hr)	Unlimited Particulate emissions (lb/hr)
Scrap Preheater (EU-1A)	Dust Collector DC-1	20.40	36.63	4.08

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 scrap preheater is able to comply with this limit without the use of a control device.

The natural gas combusted is exempt from the requirements of 326 IAC 6-3, because, pursuant to 326 IAC 1-2-59, liquid and gaseous fuels and combustion air are not considered as part of the process weight. Therefore, only the metal processed through the preheater was included in the process weight rate.

- (c) 326 IAC 7-1.1-1 (Sulfur Dioxide Emission Limitations)
 This source is not subject to 326 IAC 7-1.1-1 (Sulfur Dioxide Emission Limitations) because the potential to emit sulfur dioxide from each natural gas-fired combustion unit is less than twenty-five (25) tons per year and ten (10) pounds per hour.
- (d) 326 IAC 8-1-6 (New Facilities; General Reduction Requirements)
 The scrap preheater has a potential to emit VOC emissions less than 25 tons per year; therefore this unit is not subject to the requirements of 326 IAC 8-1-6.
- (e) 326 IAC 8 (VOC Rules)
 There are no VOC rules applicable to the scrap preheater.

Cooling Tower

- (a) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
 Pursuant to 326 IAC 6-3-1(b)(14), the cooling tower is exempt from the requirements of 326 IAC 6-3-2, because the potential to emit particulate for the cooling tower is less than 0.551 pounds per hour.
- (b) 326 IAC 8-1-6 (New Facilities; General Reduction Requirements)
 The cooling has a potential to emit VOC emissions less than 25 tons per year; therefore this unit is not subject to the requirements of 326 IAC 8-1-6.
- (c) 326 IAC 8 (VOC Rules)
 There are no VOC rules applicable to the cooling tower.

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions; however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

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

(a) The compliance monitoring requirements applicable to this modification are as follows:

Compliance Monitoring - Particulate			
Emission Unit	Control Device	Operating Parameters	Frequency
Charge Handling (EU-2B)	DC-1 ⁽¹⁾	Visible Emission	Once per day
Preheater (EU-1A)		Pressure Drop	Once per day
EIF (EU-3B)	DC-2 ⁽²⁾	Visible Emission	Once per day
Magnesium Treatment (EU-6B)		Pressure Drop	Once per day

- (1) These monitoring requirements are necessary to ensure compliance with the PSD minor limits necessary to avoid the requirements of 326 IAC 2-2. These are existing monitoring conditions for Dust Collector DC-1.
- (2) These monitoring requirements are necessary to ensure compliance with the PSD minor limits necessary to avoid the requirements of 326 IAC 2-2. These are new monitoring conditions for the source. This is a Title I change.

(b) The testing requirements applicable to this source are as follows:

Summary of Testing Requirements			
Emission Unit	Control Device	Pollutant	Frequency of Testing
Charge Handling (EU-2B)	DC-1	PM, PM ₁₀ , and PM _{2.5}	Once every 5 years
Preheater (EU-1A)			

- (1) These testing requirements are necessary because the source is adding new equipment to an existing limit and also lowering the limit. As a result, after the addition of the new units, the source will need to test to ensure that Dust Collector DC-1 will operate at the new limit.
- (2) There are no testing requirements for Dust Collector DC-2 because the source only needs to operate it at an 80% efficiency to ensure compliance and the units being controlled are not substantial in comparison to the overall source potential to emit.
- (3) On June 23, 2015, Steve Friend of IDEM's Compliance Data Section determined that the one-time organic HAP test on the pouring, cooling, casting, and shake out processes in Condition D.2.6 was no longer necessary. This decision was based on the results of the January 15, 2015 VOC testing of these processes, since it is assumed that organic HAPs

are also VOCs. Therefore, the one time organic HAP testing requirement will be removed from the permit. This is a Title 1 change.

Proposed Changes

The changes listed below have been made to Part 70 Operating Permit No. 057-33889-00002. Deleted language appears as ~~strike throughs~~ and new language appears in **bold**:

- (a) Section A.2 has been updated to include the new emission units and to modify the identifiers of a couple of units. Section A.3 has been updated to include the new cooling tower and to delete the heating torch, which was associated with the core making operations that were previously removed.
- (b) The description of the emission units in the D Sections and the E Section has been updated to match Sections A.2 and A.3.
- (c) Condition D.2.1 has been updated to include the new electric induction furnace, scrap preheater, scrap and charge handling, and magnesium treatment. It has been updated to the new identifiers as applicable. It has also been updated to modify and add new PSD minor limits as requested by the source.
- (d) Condition D.2.3 has been updated for the new allowable emission rates for the new units.
- (e) Condition D.2.6 has been updated with the new identifiers. The testing requirements for after construction of the new scrap and charge handling unit and preheater have been added. In addition, the organic HAP testing requirement has been removed.
- (f) Condition D.2.7 has been updated to include the new units controlled by dust collector DC-1 and to include DC-2.
- (g) Conditions D.2.8 and D.2.9 have been updated for visible emission notations for the new dust collector DC-2.
- (h) Condition D.2.11 has been updated for the new record keeping requirements.
- (i) Condition D.3.2 has been revised to include the correct process weight rate in tons per hour.
- (j) The Part 70 Quarterly Report has been updated to include both Electric Induction Furnaces (EU-3A and EU-3B). The months have also been removed for easier use by the source.

...
A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)]
[326 IAC 2-7-5(14)]

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

Metal Melting

- (a) One (1) electric induction furnace, identified as EU-3A, constructed in 1998, approved in 2015 to exhaust to a dust collector, with a maximum capacity of 10.2 tons of iron per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;

The electric induction furnace is considered part of the affected source under 40 CFR Part 63, Subpart ZZZZZ.

- (b) **One (1) electric induction furnace, identified as EU-3B, approved in 2015 for construction, with a maximum capacity of 10.2 tons of iron per hour, with emissions controlled by dust collector DC-2, and exhausting to stack 009;**

The electric induction furnace is considered part of the affected source under 40 CFR Part 63, Subpart ZZZZZ.

Raw Material Handling and Preparation

- (bc) One (1) scrap and charge handling operation, identified as EU-2A, constructed in 1998, approved in 2015 to exhaust to a dust collector, with a maximum capacity of 10.2 tons of iron per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;

The scrap and charge handling system is considered part of the affected source under 40 CFR Part 63, Subpart ZZZZZ.

- (d) **One (1) scrap and charge handling operation, identified as EU-2B, approved in 2015 for construction, with a maximum capacity of 10.2 tons of iron per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;**

The scrap and charge handling system is considered part of the affected source under 40 CFR Part 63, Subpart ZZZZZ.

- (ee) One (1) magnesium treatment/inoculation operation, identified as EU-6A, constructed in 1971, approved in 2015 to exhaust to a dust collector , with a maximum capacity of 10.2 tons of iron per hour, with emissions controlled by a sealed reaction chamber and by dust collector DC-1, and exhausting to stack 003;

- (f) **One (1) magnesium treatment operation, identified as EU-6B, approved in 2015 for construction, with a maximum capacity of 10.2 tons of iron per hour, with emissions controlled by a sealed reaction chamber and by dust collector DC-2, and exhausting to stack 009.**

- (dg) Sand handling operations, with a maximum capacity of 100 tons per hour of sand and 10.2 tons of iron per hour of castings, consisting of the following equipment:

...

- (h) **One (1) natural gas-fired scrap preheater, identified as EU-1A, approved in 2015 for construction, with a maximum capacity of 20.4 tons of iron per hour and a heat input capacity of 14.0 MMBtu/hr, controlled by dust collector DC-1, and exhausting to stack 003;**

Pouring, Cooling, and Shakeout

- (ei) One (1) Disa pouring/casting machine, identified as EU-8, constructed in 1997, with a maximum capacity of 3.4 tons of iron and 39 tons of sand per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;
- (fj) One (1) Disa cooling line, identified as EU-8A, constructed in 1997, approved in 2015 to exhaust to a dust collector, with a maximum capacity of 3.4 tons of iron and 39 tons of sand per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;
- (gk) "A", "B", and "C" shakers, identified as EU-16, constructed in 1996, approved in 2015 to exhaust to a dust collector, with a maximum capacity of 3.4 tons of iron and 39 tons of sand per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;
- (hl) One (1) Didion shake-out unit, identified as EU-11, constructed in 2007, with a maximum capacity of 3.4 tons of iron and 39 tons of sand per hour, with emissions controlled by dust collector DC-1, and exhausting through stack 003;

- (im) One (1) Hunter 1 pouring/casting line, identified as EU-35, approved in 2014 for construction, with a maximum capacity of 4.0 tons of iron and 42 tons of sand per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;
- (jn) One (1) Hunter 1 cooling line and shake-out unit, collectively identified as EU-35A, consisting of the following:
...
- (ko) One (1) Hunter 2 pouring/casting line, identified as EU-36, approved in 2014 for construction, with a maximum capacity of 4.0 tons of iron and 42 tons of sand per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;
- (lp) One (1) Hunter 2 cooling line and shake-out unit, collectively identified as EU-36A, consisting of the following:
...

Finishing Operations

- (mq) One (1) No. 3 cleaning machine, identified as EU-34, constructed in 2001, with a maximum capacity of 5.6 tons per hour of castings and 15 tons per hour of steel shot, with emissions controlled by baghouse BH-2, and exhausting to stack 007;
- (pr) Casting, grinding and finishing operations with a maximum throughput of 5.6 tons per hour of finished castings, consisting of the following equipment:
...

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)]
[326 IAC 2-7-5(14)]

- (b) Propane-fired combustion sources with heat input equal to or less than six million (6,000,000) Btu per hour:

~~(2) One (1) 0.5 MMBtu/hr core drying conveyor heating torch;~~

(32) Two (2) 0.5 MMBtu/hr auto pour torches.

- (c) **One (1) cooling tower, approved in 2015 for construction, with a total circulating flow rate of 3,800 gallons per day, no control, and exhausting outdoors.**

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Metal Melting

- (a) One (1) electric induction furnace, identified as EU-3A, constructed in 1998, approved in 2015 to exhaust to a dust collector, with a maximum capacity of 10.2 tons of iron per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;

The electric induction furnace is considered part of the affected source under 40 CFR Part 63, Subpart ZZZZZ.

- (b) **One (1) electric induction furnace, identified as EU-3B, approved in 2015 for construction, with a maximum capacity of 10.2 tons of iron per hour, with emissions controlled by dust collector DC-2, and exhausting to stack 009;**

The electric induction furnace is considered part of the affected source under 40 CFR Part 63, Subpart ZZZZZ.

Raw Material Handling and Preparation

- (bc) One (1) scrap and charge handling operation, identified as EU-2A, constructed in 1998, approved in 2015 to exhaust to a dust collector, with a maximum capacity of 10.2 tons of iron per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;

The scrap and charge handling system is considered part of the affected source under 40 CFR Part 63, Subpart ZZZZZ.

- (d) **One (1) scrap and charge handling operation, identified as EU-2B, approved in 2015 for construction, with a maximum capacity of 10.2 tons of iron per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;**

The scrap and charge handling system is considered part of the affected source under 40 CFR Part 63, Subpart ZZZZZ.

- (ee) One (1) magnesium treatment/inoculation operation, identified as EU-6A, constructed in 1971, approved in 2015 to exhaust to a dust collector, with a maximum capacity of 10.2 tons of iron per hour, with emissions controlled by a sealed reaction chamber and by dust collector DC-1, and exhausting to stack 003;

- (f) **One (1) magnesium treatment operation, identified as EU-6B, approved in 2015 for construction, with a maximum capacity of 10.2 tons of iron per hour, with emissions controlled by a sealed reaction chamber and by dust collector DC-2, and exhausting to stack 009.**

- (dg) Sand handling operations, with a maximum capacity of 100 tons per hour of sand and 10.2 tons of iron per hour of castings, consisting of the following equipment:

- (1) One (1) muller, identified as EU-17, constructed in 1971 and approved in 2014 for reconstruction, with emissions controlled by dust collector DC-1, and exhausting to stack 003;
- (2) One (1) overhead shaker screen, identified as EU-18, constructed in 1971 and approved in 2014 for reconstruction, with emissions controlled by dust collector DC-1, and exhausting to stack 003;
- (3) One (1) Mag belt/bin top belt, identified as EU-27, constructed in 1971 and approved in 2014 for reconstruction, with emissions controlled by dust collector DC-1, and exhausting to stack 003;
- (4) One (1) vibratory conveyor, identified as EU-37, approved in 2014 for construction, with emissions controlled by dust collector DC-1, and exhausting to stack 003;

And the following storage bins:

- (5) Two (2) return sand storage silos (East and West), identified as EU-19 and EU-20, both constructed in 1971, with capacities of 80 and 100 tons, respectively, with emissions controlled by dust collector DC-1, and exhausting to stack 003;
- (6) One (1) outdoor bond silo, identified as EU-22, constructed in 1978, with a capacity of 80 tons of premixed casting sand binder, with emissions controlled by a sock filter system;
- (7) One (1) indoor bond storage silo, identified as EU-23, constructed in 1971, with a capacity of 1 ton of premixed casting sand binder, with emissions

controlled dust collector DC-1, and exhausting to stack 003;

(8) One (1) West outdoor sand storage bin, identified as EU-24, constructed in 1971, with a capacity of 150 tons, with emissions uncontrolled;

(9) One (1) indoor new sand storage bin, identified as EU-26, constructed in 1971, with a capacity of 1 ton, emissions controlled by dust collector DC-1, and exhausting to stack 003;

(h) One (1) natural gas-fired scrap preheater, identified as EU-1A, approved in 2015 for construction, with a maximum capacity of 20.4 tons of iron per hour and a heat input capacity of 14.0 MMBtu/hr, controlled by dust collector DC-1, and exhausting to stack 003;

Pouring, Cooling, and Shakeout

(ei) One (1) Disa pouring/casting machine, identified as EU-8, constructed in 1997, with a maximum capacity of 3.4 tons of iron and 39 tons of sand per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;

(fj) One (1) Disa cooling line, identified as EU-8A, constructed in 1997, approved in 2015 to exhaust to a dust collector, with a maximum capacity of 3.4 tons of iron and 39 tons of sand per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;

(gk) "A", "B", and "C" shakers, identified as EU-16, constructed in 1996, approved in 2015 to exhaust to a dust collector, with a maximum capacity of 3.4 tons of iron and 39 tons of sand per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;

(hl) One (1) Didion shake-out unit, identified as EU-11, constructed in 2007, with a maximum capacity of 3.4 tons of iron and 39 tons of sand per hour, with emissions controlled by dust collector DC-1, and exhausting through stack 003;

(im) One (1) Hunter 1 pouring/casting line, identified as EU-35, approved in 2014 for construction, with a maximum capacity of 4.0 tons of iron and 42 tons of sand per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;

(jn) One (1) Hunter 1 cooling line and shake-out unit, collectively identified as EU-35A, consisting of the following:

(1) One (1) Hunter 1 cooling line, approved in 2014 for construction, with a maximum capacity of 4.0 tons of iron and 42 tons of sand per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;

(2) One (1) Hunter 1 shake-out unit, approved in 2014 for construction, with a maximum capacity of 4.0 tons of iron and 42 tons of sand per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;

(ko) One (1) Hunter 2 pouring/casting line, identified as EU-36, approved in 2014 for construction, with a maximum capacity of 4.0 tons of iron and 42 tons of sand per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;

(lp) One (1) Hunter 2 cooling line and shake-out unit, collectively identified as EU-36A, consisting of the following:

(1) One (1) Hunter 2 cooling line, approved in 2014 for construction, with a maximum capacity of 4.0 tons of iron and 42 tons of sand per hour, with

emissions controlled by dust collector DC-1, and exhausting to stack 003;

(2) One (1) Hunter 2 shake-out unit, approved in 2014 for construction, with a maximum capacity of 4.0 tons of iron and 42 tons of sand per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;

Dust collector DC-1 is also approved in 2014 to increase its air flow to accommodate Hunter 1 and Hunter 2 lines.

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

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.2.1 PSD Minor Limits for PM, PM₁₀, PM_{2.5}, and CO [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the Permittee shall comply with the following limits:

- (a) The total iron throughput to the electric induction furnace (EU-3A) **and electric induction furnace (EU-3B)** shall not exceed 17,500 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (b) The CO emissions from the following operations shall not exceed the emission limit listed in the table below:

Emission Units	CO Emission Limit (pounds per ton of iron throughput)
Disa Pouring/Casting Line (EU-8)	6.0 (combined)
Disa Cooling Line (EU-8A)	
Casting Shakeout (Didion shake-out Unit EU-11)	
Casting Shakeout ("A", "B", and "C" shakers EU-16)	
Hunter 1 pouring/casting line	
Hunter 1 cooling line	
Hunter 1 shake-out unit	
Hunter 2 pouring/casting line	
Hunter 2 cooling line	
Hunter 2 shake-out unit	

- (c) The PM, PM₁₀, and PM_{2.5} emissions from the following operations shall not exceed the emission limits listed in the table below:

Emission Units	Control Device	PM Emission Limit (pounds per ton of iron throughput)	PM ₁₀ Emission Limit (pounds per ton of iron throughput)	PM _{2.5} Emission Limit (pounds per ton of iron throughput)
Induction Furnace (EU-3A)	Dust collector DC-1	7.49 6.30	6.25 6.30	6.25 6.30
Charge Handling (EU-2A)				
Charge Handling (EU-2B)				
Magnesium Treatment (EU-6A)				
Sand Handling (EU-17 through EU-20, EU-23, EU-26, EU-27, EU-37)				
Scrap Preheater (EU-1A)				
Disa Pouring/Casting Line (EU-8)				
Disa Cooling Line (EU-8A)				
Casting Shakeout (Didion shake-out Unit EU-11) Casting Shakeout ("A", "B", and "C" shakers EU-16; and Didion shakeout Unit EU-11)				
Casting Shakeout ("A", "B", and "C" shakers EU-16)				
Hunter 1 pouring/casting line				
Hunter 1 cooling line				
Hunter 1 shake-out unit				
Hunter 2 pouring/casting line				
Hunter 2 cooling line				
Hunter 2 shake-out unit				
Induction Furnace (EU-3B)	Dust Collector DC-2	2.70	2.66	2.66
Magnesium Treatment (EU-6B)				

Compliance with these limits, combined with the potential to emit PM, PM₁₀, PM_{2.5}, and CO from other emission units at this source, shall limit the source-wide PM, PM₁₀, PM_{2.5}, and CO to less than 100 tons per twelve (12) consecutive month period, each, and render 326 IAC 2-2 not applicable.

...
 D.2.3 Particulate Matter [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rates from facilities at this source shall be limited as follows when operating at the given maximum process weight rates:

Facility/Process	Process weight rate (tons/hr)	Allowable Emissions (lbs/hr)
Scrap Preheater (EU-1A)	20.40	36.63
Charge Handling (EU-2A)	10.20	19.43
Charge Handling (EU-2B)	10.20	19.43
Induction Furnace (EU-3A)	10.20	19.43
Induction Furnace (EU-3B)	10.20	19.43
Magnesium Treatment (EU-6A)	10.20	19.43
Sand Handling (EU-17 through EU-20, EU-22 through EU-24, EU-26, EU-27, EU-37) *	100.00	51.28
Disa Pouring/Casting Line (EU-8)	42.40	43.06
Disa Cooling Line (EU-8A)	42.40	43.06
Casting Shakeout ("A", "B", and "C" shakers EU-16; and Didion shakeout Unit EU-11) Casting Shakeout (Didion shake-out Unit EU-11)	45.80 49.20	43.76 44.43

Facility/Process	Process weight rate (tons/hr)	Allowable Emissions (lbs/hr)
Casting Shakeout ("A", "B", and "C" shakers EU-16)	49.20	44.43
Hunter 1 pouring/casting line	46.00	43.80
Hunter 1 cooling line	46.00	43.80
Hunter 1 shake-out unit	46.00	43.80
Hunter 2 pouring/casting line	46.00	43.80
Hunter 2 cooling line	46.00	43.80
Hunter 2 shake-out unit	46.00	43.80

* Sand handling units EU-22 is controlled by a sock filter system and EU-24 is uncontrolled.

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

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

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

Interpolation and extrapolation of the data for the process weight rate in excess of 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

...

D.2.6 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

PM, PM₁₀, and PM_{2.5} Testing

- (a) ~~Dust collector DC-1 —upon initial start up of DC-1 and prior to the installation of Hunter 1 and Hunter 2 Lines~~

In order to demonstrate compliance with Condition D.2.1(c), the Permittee shall perform PM testing not later than 180 days after startup of Dust collector DC-1 (stack 003), **and not later than 180 days after each installation of the following emission units:**

**Hunter 1,
 Hunter 2,
 Scrap Charge Handling Operation (EU-2B), and
 Preheater (EU-1A),**

~~with DC-1 controlling the following:~~

**Induction Furnace (EU-3A),
 Charge Handling (EU-2A),
 Charge Handling (EU-2B),
 Preheater (EU-1A),
 Magnesium Treatment (EU-6A),
 Disa casting machines (EU-8),
 Disa Cooling Line (EU-8A),
 Didion shakeout unit (EU-11),
 Casting Shakeout ("A", "B", and "C" shakers EU-16),
 sand handling operations, including muller (EU-17),
 over head shaker screen (EU-18),
 return sand storage silos (East and West) (EU-19 and EU-20),
 indoor bond storage silo (EU-23),**

**vibratory conveyor (EU-37),
indoor new sand storage bin (EU-26),
mag belt/bin top belt (EU-27),
Hunter 1 pouring/casting line,
Hunter 1 cooling line,
Hunter 1 shake-out unit,
Hunter 2 pouring/casting line,
Hunter 2 cooling line, and
Hunter 2 shake-out unit,
Induction Furnace (EU-3A),
Charge Handling (EU-2),
Magnesium Treatment (EU-6),
Disa casting machines (EU-8),
Disa Cooling Line (EU-8A),
Didion shakeout unit (EU-11),
Casting Shakeout ("A", "B", and "C" shakers EU-16),
sand handling operations, including muller (EU-17),
over head shaker screen (EU-18),
return sand storage silos (East and West) (EU-19 and EU-20),
indoor bond storage silo (EU-23),
indoor new sand storage bin (EU-26), and
mag belt/bin top belt (EU-27),**

utilizing methods as approved by the Commissioner.

This test shall be repeated at least once every five (5) years from the date of ~~this~~ **the most recent** valid compliance demonstration **or after each of the following are constructed:**

**Hunter 1,
Hunter 2,
Scrap Charge Handling Operation (EU-2B), and
Preheater (EU-1A),**
~~if either Hunter 1 or Hunter 2 are not constructed.~~

PM₁₀ includes filterable PM₁₀ and condensable PM. PM_{2.5} includes filterable PM_{2.5} and condensable PM.

The respective facilities shall process 100% ductile iron during the tests.

~~(b) Dust collector DC-1 upon initial start up of either Hunter 1 or Hunter 2~~

~~In order to demonstrate compliance with Conditions D.2.1(c), not later than 180 days after startup of the Hunter 1 pouring/casting line, Hunter 1 cooling line, and Hunter 1 shake-out unit, or the Hunter 2 pouring/casting line, Hunter 2 cooling line, and Hunter 2 shake-out unit, the Permittee shall perform PM testing of Dust collector DC-1 (stack 003), controlling the following:~~

~~Induction Furnace (EU-3A),
Charge Handling (EU-2),
Magnesium Treatment (EU-6),
Disa casting machines (EU-8),
Disa Cooling Line (EU-8A),
Didion shakeout unit (EU-11),
Casting Shakeout ("A", "B", and "C" shakers EU-16),
sand handling operations, including muller (EU-17),
over head shaker screen (EU-18),
return sand storage silos (East and West) (EU-19 and EU-20),
indoor bond storage silo (EU-23),
vibratory conveyor (EU-37),
indoor new sand storage bin (EU-26),~~

~~mag belt/bin top belt (EU-27),
Hunter 1 pouring/casting line,
Hunter 1 cooling line,
Hunter 1 shake-out unit,
Hunter 2 pouring/casting line,
Hunter 2 cooling line, and
Hunter 2 shake-out unit,
utilizing methods as approved by the Commissioner.~~

~~PM₁₀ includes filterable PM₁₀ and condensable PM. PM_{2.5} includes filterable PM_{2.5} and condensable PM.~~

~~The respective facilities shall process 100% ductile iron during the tests.~~

- ~~(c) Dust collector DC-1 after construction of either Hunter 1 or Hunter 2, or both, and fulfilling testing requirement (b)~~

~~In order to demonstrate compliance with Conditions D.2.1(c), not later than five (5) years after the most recent valid compliance demonstration for Dust collector DC-1 (stack 003), the Permittee shall perform PM testing of Dust collector DC-1 (stack 003), controlling the following:~~

~~Induction Furnace (EU-3A),
Charge Handling (EU-2),
Magnesium Treatment (EU-6),
Disa casting machines (EU-8),
Disa Cooling Line (EU-8A),
Didion shakeout unit (EU-11),
Casting Shakeout ("A", "B", and "C" shakers EU-16),
sand handling operations, including muller (EU-17),
over head shaker screen (EU-18),
return sand storage silos (East and West) (EU-19 and EU-20),
indoor bond storage silo (EU-23),
vibratory conveyor (EU-37),
indoor new sand storage bin (EU-26),
mag belt/bin top belt (EU-27),
Hunter 1 pouring/casting line,
Hunter 1 cooling line,
Hunter 1 shake-out unit,
Hunter 2 pouring/casting line,
Hunter 2 cooling line, and
Hunter 2 shake-out unit,
utilizing methods as approved by the Commissioner.~~

~~This test shall be repeated at least once every five (5) years from the date of most recent valid compliance demonstration of DC-1.~~

~~PM₁₀ includes filterable PM₁₀ and condensable PM. PM_{2.5} includes filterable PM_{2.5} and condensable PM.~~

~~The respective facilities shall process 100% ductile iron during the tests.~~

HAPs Testing

- ~~(d) In order to demonstrate compliance with Condition D.2.2, the Permittee shall perform one-time HAPs testing on the following:~~
- ~~Disa Pouring/Casting Line (EU-8)~~
 - ~~Disa Cooling Line (EU-8A)~~
 - ~~Casting Shakeout (Didion shake-out Unit EU-11),~~
 - ~~Casting Shakeout ("A", "B", and "C" shakers EU-16), and~~
 - ~~Hunter 1 pouring/casting line,~~

~~Hunter 1 cooling line,
Hunter 1 shake-out unit,
Hunter 2 pouring/casting line,
Hunter 2 cooling line,
Hunter 2 shake-out unit,~~

~~using methods as approved by the Commissioner.~~

VOC Testing

- (eb) In order to demonstrate compliance with Condition D.2.4(a), within one hundred and eighty (180) days after the issuance of Part 70 Renewal No. T057-33889-00002, the Permittee shall perform one-time VOC testing on the Casting Shakeout ("A", "B", and "C" Shakers EU-16) operation, using methods as approved by the Commissioner.
- (fc) In order to demonstrate compliance with Condition D.2.4(b), within one hundred and eighty (180) days after the issuance of Part 70 Renewal No. T057-33889-00002, the Permittee shall perform one-time VOC testing on the Casting Shakeout (Didion shake-out Unit EU-11) operation, using methods as approved by the Commissioner.
- (gd) Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C- Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

D.2.7 Particulate Control

- (a) In order to comply with Conditions D.2.1(c) and D.2.3, the dust collector DC-1 for particulate control shall be in operation at all times whenever any of the following:
Induction Furnace (EU-3A),
Charge Handling (EU-2A),
Charge Handling (EU-2B),
Preheater (EU-1A),
Magnesium Treatment (EU-6A),
Disa casting machines (EU-8),
Disa Cooling Line (EU-8A),
shakeout unit (EU-11),
Casting Shakeout ("A", "B", and "C" shakers EU-16),
sand handling operations including muller (EU-17),
over head shaker screen (EU-18),
return sand storage silos (East and West) (EU-19 and EU-20),
indoor bond storage silo (EU-23),
vibratory conveyor (EU-37),
indoor new sand storage bin (EU-26),
mag belt/bin top belt (EU-27)
Hunter 1 pouring/casting line,
Hunter 1 cooling line,
Hunter 1 shake-out unit,
Hunter 2 pouring/casting line,
Hunter 2 cooling line, and
Hunter 2 shake-out unit,
are in operation.
- (b) **In order to comply with Conditions D.2.1(c) and D.2.3, the dust collector DC-1 for particulate control shall be in operation at all times whenever any of the following: Induction Furnace (EU-3B), and Magnesium Treatment (EU-6B) are in operation.**
- (bc) In the event that a bag or cartridge failure is observed in a multi-compartment bag or cartridge filter, if operations will continue for ten (10) days or more after the failure is

observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

D.2.8 Visible Emissions Notations [40 CFR 64] [326 IAC 2-7-5(1)]

- (a) Pursuant to 40 CFR 64, visible emission notations of the exhaust from dust collector DC-1, exhausting to stack 003, shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (b) Visible emission notations of the exhaust from dust collector DC-2, exhausting to stack 009, shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.**
- (bc) 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.
- (ed) 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.
- (de) 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.
- (ef) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

D.2.9 Parametric Monitoring - Dust Collector [40 CFR 64] [326 IAC 2-7-5(1)]

- (a) Pursuant to 40 CFR 64, the Permittee shall record the pressure drop across the dust collector DC-1 used in conjunction with the following:
Induction Furnace (EU-3A),
Charge Handling (EU-2A),
Charge Handling (EU-2B),
Preheater (EU-1A),
Magnesium Treatment (EU-6A),
Disa casting machines (EU-8),
Disa Cooling Line (EU-8A),
shakeout unit (EU-11),
Casting Shakeout ("A", "B", and "C" shakers EU-16)
sand handling operations including muller (EU-17),
over head shaker screen (EU-18),
return sand storage silos (East and West) (EU-19 and EU-20),
indoor bond storage silo (EU-23),
vibratory conveyor (EU-37),
indoor new sand storage bin (EU-26),
mag belt/bin top belt (EU-27),
Hunter 1 pouring/casting line,
Hunter 1 cooling line,
Hunter 1 shake-out unit,
Hunter 2 pouring/casting line,
Hunter 2 cooling line, and
Hunter 2 shake-out unit,

at least once per day when the casting, shake out, and sand handling processes are in operation. When for any one reading, the pressure drop across the control device is outside the normal range, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. The normal range for the dust collector DC-1 is a pressure drop range between 2.0 and 6.0 inches of water unless a different upper-bound or lower-bound value for this range is determined during the most recent valid stack test. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

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

- (b) **The Permittee shall record the pressure drop across the dust collector DC-2 used in conjunction with the following: Induction Furnace (EU-3B), and Magnesium Treatment (EU-6B) at least once per day when the metal melting processes are in operation. When for any one reading, the pressure drop across the control device is outside the normal range, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. The normal range for the dust collector DC-1 is a pressure drop range between 2.0 and 6.0 inches of water unless a different upper-bound or lower-bound value for this range is determined during the most recent valid stack test. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.**

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

...
D.2.11 Record Keeping Requirements

- (a) To document the compliance status with Condition D.2.1(a), the Permittee shall maintain monthly records of the iron throughput to the electric induction furnace (EU-3A) **and electric induction furnace (EU-3B)**.
- (b) To document the compliance status with Condition D.2.8, the Permittee shall maintain records of daily visible emission notations of the exhaust from stack 003 and ~~general ventilation exhausts~~ **stack 009**. 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.2.9, the Permittee shall maintain daily records of the pressure drop of dust collector DC-1 **and dust collector DC-2** as required by Condition D.2.9. 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).

...
SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Finishing Operations

- (lq) One (1) No. 3 cleaning machine, identified as EU-34, constructed in 2001, with a maximum capacity of 5.6 tons per hour of castings and 15 tons per hour of steel shot, with emissions controlled by baghouse BH-2, and exhausting to stack 007;
- (mr) Casting, grinding and finishing operations with a maximum throughput of 5.6 tons per hour of finished castings, consisting of the following equipment:
- (1) Nine (9) stand grinders, identified as EU-32, constructed in 1965, with emissions controlled by baghouse BH-1, and exhausting to stack 006;
 - (2) Ten (10) finishing (Burr Stations) units, identified as EU-33, all constructed in 1992, with emissions uncontrolled, and exhausting to the general ventilation area.
- (The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

...
 D.3.2 Particulate Matter [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rates from facilities at this source shall be limited as follows when operating at the given maximum process weight rates:

Facility/Process	Process weight rate (tons/hr)	Allowable Emissions (lbs/hr)
No. 3 Cleaning Machine (EU-34)*	95.20 20.60	31.12
Grinding (EU-32)	0.06 5.60	13.00
Finishing (EU-33)	0.06 5.60	13.00

*Process weight rate includes the weight of the steel shot plus the weight of the castings

...
 SECTION E.1 EMISSIONS UNIT OPERATION CONDITIONS

- Emissions Unit Description:
- Metal Melting
- (a) One (1) electric induction furnace, identified as EU-3A, constructed in 1998, approved in 2014 to exhaust to a dust collector, with a maximum capacity of 10.2 tons of iron per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;
- The electric induction furnace is considered part of the affected source under 40 CFR Part 63, Subpart ZZZZZ.
- (b) **One (1) electric induction furnace, identified as EU-3B, approved in 2015 for construction, with a maximum capacity of 10.2 tons of iron per hour, with emissions controlled by dust collector DC-2, and exhausting to stack 009;**
- The electric induction furnace is considered part of the affected source under 40 CFR Part 63, Subpart ZZZZZ.**
- Raw Material Handling and Preparation
- (bc) One (1) scrap and charge handling operation, identified as EU-2A, constructed in 1998, approved in 2014 to exhaust to a dust collector, with a maximum capacity of 10.2 tons of iron per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;
- The scrap and charge handling system is considered part of the affected source under 40 CFR

Part 63, Subpart ZZZZZ.

(d) One (1) scrap and charge handling operation, identified as EU-2B, approved in 2015 for construction, with a maximum capacity of 10.2 tons of iron per hour, with emissions controlled by dust collector DC-1, and exhausting to stack 003;

The scrap and charge handling system is considered part of the affected source under 40 CFR Part 63, Subpart ZZZZZ.

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

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

Part 70 Quarterly Report

Source Name: ID Castings, LLC
 Source Address: 1600 South 8th Street, Noblesville, Indiana 46060
 Part 70 Permit No.: T057-33889-00002
 Facility: ~~One (1) 10.2 ton per hour~~ Electric induction furnaces (EU-3A) and (EU-3B)
 Parameter: Throughput of metal melted
 Limit: Shall not exceed 17,500 tons of iron per twelve (12) consecutive month period with compliance determined at the end of each month

QUARTER :

YEAR:

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

...

Conclusion and Recommendation

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 057-35618-00002 and Significant Permit Modification No. 057-35620-00002. The staff recommends to the Commissioner that this Part 70 Significant Source and Significant Permit Modification be approved.

IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Brian Williams at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCM 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5375 or toll free at 1-800-451-6027 extension 4-5375.
- (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 Permit Guide on the Internet at: <http://www.in.gov/idem/5881.htm>; and the Citizens' Guide to IDEM on the Internet at: <http://www.in.gov/idem/6900.htm>.

Appendix A: Emissions Calculations
Summary
Unlimited PTE
Company Name: ID Castings, LLC
Source Address: 1600 South 8th Street, Noblesville, Indiana 46060
Permit No.: T057-33889-00002
Significant Source Modification No.: 057-35618-00002
Significant Permit Modification No.: 057-35620-00002
Reviewer: Brandon Miller/Brian Williams

Process Description / Emission Unit		Unlimited Potential to Emit (tons/year)							Hazardous Air Pollutants	
		Criteria Pollutants							Metallic HAPs	Organic HAPs
		PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO		
Metal Melting	EIF Furnace EU-3A	40.21	38.42	38.42	-	-	-	-	1.44	-
	EIF Furnace EU-3B	40.21	38.42	38.42	-	-	-	-	1.44	-
Raw Material Handling and Preparation	Melting Dept. - Charge Handling (EU-2A)	26.81	16.08	16.08	-	-	-	-	0.14	-
	Melting Dept. - Charge Handling (EU-2B)	26.81	16.08	16.08	-	-	-	-	0.14	-
	Melting Dept. - Magnesium Treatment (EU-6A)	80.42	80.42	80.42	-	-	0.45	-	1.90	-
	Melting Dept. Magnesium Treatment (EU-6B)	80.42	80.42	80.42	-	-	0.45	-	1.90	-
	Sand Handling (EU-17 through EU-20, EU-22 through EU-24, EU-26, EU-27, EU-37)	1,576.80	24.13	24.13	-	-	-	-	-	-
	Scrap Preheater (EU-1A)	17.87	16.08	15.19	0.04	6.01	0.33	5.05	0.00	0.11
Sand handling (not controlled by DC-1)	Outdoor bond silo (EU-22)	1.52	0.98	0.98	-	-	-	-	-	-
	Outdoor sand storage bin (EU-24)	2.85	1.83	1.83	-	-	-	-	-	-
Pouring, Cooling, and Shakeout	Disa Pouring/Casting Line (EU-8)	41.70	30.68	30.68	0.30	0.15	2.08	478.30	0.21	34.45
	Hunter 1 pouring/casting line	49.06	36.09	36.09	0.35	0.18	2.45			
	Hunter 2 pouring/casting line	49.06	36.09	36.09	0.35	0.18	2.45			
	Disa Cooling Line (EU-8A)	20.85	20.85	20.85	-	-	-			
	Hunter 1 cooling line	24.53	24.53	24.53	-	-	-			
	Hunter 2 cooling line	24.53	24.53	24.53	-	-	-			
	Casting Shakeout ("A", "B", and "C" shakers EU-16; and Didion shakeout Unit EU-11)	142.96	100.07	100.07	-	-	53.61			
	Hunter 1 shake-out unit	56.06	39.24	39.24	-	-	21.02			
Hunter 2 shake-out unit	56.06	39.24	39.24	-	-	21.02				
Cleaning & Finishing	No. 3 Cleaning Machine (EU-34)	416.98	41.70	41.70	-	-	-	-	0.65	-
	Grinding (EU-32)	0.25	0.11	0.11	-	-	-	-	0.25	-
	Finishing (EU-33)	0.25	0.11	0.11	-	-	-	-	0.25	-
Combustion	Two (2) shell core machine burners	0.06	0.22	0.22	0.35	4.16	0.32	2.40	-	-
	Insignificant Combustion									
Insignificant Units	Cooling Tower	0.04	0.04	0.04	-	-	-	-	-	-
Fugitives	Paved & Unpaved Roads	0.77	0.15	0.02	-	-	-	-	-	-
Total		2,777.05	706.52	705.50	1.38	10.67	104.19	485.74	8.31	34.57
									Total HAPs:	42.87

**Appendix A: Emissions Calculations
Summary
Unlimited PTE**

Company Name: ID Castings, LLC
Source Address: 1600 South 8th Street, Noblesville, Indiana 46060
Permit No.: T057-33889-00002
Significant Source Modification No.: 057-35618-00002
Significant Permit Modification No.: 057-35620-00002
Reviewer: Brandon Miller/Brian Williams

Process Description / Emission Unit		Control Device	Limited Potential to Emit (tons/year)							Hazardous Air Pollutants	
			PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO	Metallic HAPs	Organic HAPs
Metal Melting	EIF Furnace EU-3A					-	-	-	-	0.28	-
	Melting Dept. - Charge Handling (EU-2A)					-	-	-	-	0.03	-
	Melting Dept. - Charge Handling (EU-2B)					-	-	-	-	0.03	-
	Melting Dept. - Magnesium Treatment (EU-6A)					-	-	0.09	-	0.37	-
	Sand Handling (EU-17 through EU-20, EU-23, EU-26, EU-27, EU-37) Scrap Preheater EU-1A					0.04	6.01	0.33	5.05	0.00	0.11
Pouring, Cooling, and Shakeout	Disa Pouring/Casting Line (EU-8)	Dust Collector DC-1	55.13	55.13	55.13	0.18	0.09	1.23	52.50	0.02	3.78
	Hunter 1 pouring/casting line				0.18	0.09	1.23				
	Hunter 2 pouring/casting line				0.18	0.09	1.23				
	Hunter 1 cooling line				-	-	-				
	Hunter 2 cooling line				-	-	-				
	Hunter 1 shake-out unit				-	-	10.50				
	Hunter 2 shake-out unit				-	-	10.50				
	Casting Shakeout ("A", "B", and "C" shakers EU-16; and Didion shakeout Unit EU-11)				-	-	10.50				
	Disa Cooling Line (EU-8A)				-	-	-				
						-	-	-			
Metal Melting	EIF Furnace EU-3B					-	-	-	-	0.28	-
	Melting Dept. - Magnesium Treatment (EU-6B)	Dust Collector DC-2	23.63	23.28	23.28	-	-	0.09	-	0.37	-
Sand handling (not controlled by DC-1)	Outdoor bond silo (EU-22)	Sock filter system	1.52	0.98	0.98	-	-	-	-	-	-
	Outdoor sand storage bin (EU-24)	No control	2.85	1.83	1.83	-	-	-	-	-	-
Cleaning & Finishing	No. 3 Cleaning Machine (EU-34)	Baghouse BH-2	1.49	0.18	0.18	-	-	-	-	0.23	-
	Grinding (EU-32)	Baghouse BH-1	0.09	0.04	0.04	-	-	-	-	0.09	-
	Finishing (EU-33)	No control	0.09	0.04	0.04	-	-	-	-	0.09	-
Combustion	Two (2) shell core machine burners	No control	0.06	0.22	0.22	0.35	4.16	0.32	2.40	-	-
	Insignificant Combustion										
Insignificant Activity	Cooling Tower	No control	0.04	0.04	0.04	-	-	-	-	-	-
Fugitives	Paved & Unpaved Roads	No control	0.77	0.15	0.02	-	-	-	-	-	-
Total			85.65	81.88	81.75	0.91	10.43	36.00	59.95	1.79	3.89
										Total HAPs:	5.69

Notes:
This table represents limited emissions only; control efficiencies are not taken into account in the calculations.
With no permit limits, Limited PTE = Unlimited PTE

PSD Minor Limits

Limited Metal Melt Throughput (tons/yr)
17,500.00

Emission Unit ID(s)	Control Device	Emission Limits (lb/ton)				
		PM	PM10	PM2.5	CO	Organic HAPs
EIF Furnace EU-3A	Dust Collector DC-1	6.30	6.30	6.30	N/A	N/A
Melting Dept. - Charge Handling (EU-2A)					N/A	N/A
Melting Dept. - Charge Handling (EU-2B)					N/A	N/A
Melting Dept. - Magnesium Treatment (EU-6A)					N/A	N/A
Sand Handling (EU-17 through EU-20, EU-23, EU-26, EU-27, EU-37)					N/A	N/A
Scrap Preheater EU-1A					N/A	N/A
Disa Pouring/Casting Line (EU-8)					6.0	0.4322
Disa Cooling Line (EU-8A)						
Casting Shakeout ("A", "B", and "C" shakers EU-16; and Didion shakeout Unit EU-11)						
Hunter 1 pouring/casting line						
Hunter 1 cooling line						
Hunter 1 shake-out unit	Dust Collector DC-2	2.70	2.66	N/A	N/A	
Melting Dept. - Magnesium Treatment (EU-6B)				N/A	N/A	
No. 3 Cleaning Machine (EU-34)				0.17	0.02	0.02
Grinding (EU-32)	0.01	0.0045	0.0045	N/A	N/A	
Finishing (EU-33)	No control	0.01	0.0045	0.0045	N/A	N/A
Shell Core Machines (EU-28)	No control	1.1	1.1	1.1	N/A	N/A

*EU-22 and EU-24 are part of the Sand Handling Operation but are not controlled by DC-1. Therefore the PTE of these units are not included under the PTE of the units controlled by DC-1. EU-22 is controlled by a sock filter system and the EU-24 is uncontrolled.

The emission limit is equivalent to the AP-42 emission factor for cement unloading to elevated storage silo (SCC 3-05-011-08). AP-42 Chapter 11.12, Table 11.12-2.

Appendix A: Emissions Calculations

Modification Summary

Company Name: ID Castings, LLC
 Source Address: 1600 South 8th Street, Noblesville, Indiana 46060
 Permit No.: T057-33889-00002
 Significant Source Modification No.: 057-35618-00002
 Significant Permit Modification No.: 057-35620-00002
 Reviewer: Brandon Miller/Brian Williams

Process Description / Emission Unit		Unlimited Potential to Emit (tons/year)							Hazardous Air Pollutants	
		Criteria Pollutants							Metallic HAPs	Organic HAPs
		PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO		
Metal Melting	EIF Furnace EU-3B	40.21	38.42	38.42	-	-	-	-	1.44	-
Raw Material Handling and Preparation	Melting Dept. - Charge Handling (EU-2B)	26.81	16.08	16.08	-	-	-	-	0.14	-
	Melting Dept. - Magnesium Treatment (EU-6B)	80.42	80.42	80.42	-	-	0.45	-	1.90	-
	Scrap Preheater (EU-1A)	17.87	16.08	15.19	0.04	6.01	0.33	5.05	0.00	0.11
Insignificant Activity	Cooling Tower	0.04	0.04	0.04	-	-	-	-	-	-
Total		165.30	151.00	150.11	0.04	6.01	0.78	5.05	3.48	0.11
									Total HAPs:	3.59

**Appendix A: Emissions Calculations
Ductile Iron Foundries
Metal Melting**

Company Name: ID Castings, LLC
Source Address: 1600 South 8th Street, Noblesville, Indiana 46060
Permit No.: T057-33889-00002
Significant Source Modification No.: 057-35618-00002
Significant Permit Modification No.: 057-35620-00002
Reviewer: Brandon Miller/Brian Williams

Emission Factors

Metal Melting		Emission Unit ID(s)	Maximum Throughput (tons/hr)	Uncontrolled Emission Factors (lb/ton)								
				PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO	Metallic HAPs	Organic HAPs
Electric Induction Furnaces	(SCC-3-04-003-03)	EIF Furnace EU-3A	10.20	0.90	0.86	0.86	-	-	-	-	3.23E-02	-
	(SCC-3-04-003-03)	EIF Furnace EU-3B	10.20	0.90	0.86	0.86	-	-	-	-	3.23E-02	-

Notes

Emission factors from AP-42 Chapter 12.10 Gray Iron Foundries and US EPA Fire Version 6.25, except as otherwise noted

Summary of Emissions (Uncontrolled)

Metal Melting		Uncontrolled Potential to Emit (tons/yr)									
		PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO	Metallic HAPs	Organic HAPs	
Electric Induction Furnaces	EIF Furnace EU-3A	40.21	38.42	38.42	-	-	-	-	1.44	-	
	EIF Furnace EU-3B	40.21	38.42	38.42	-	-	-	-	1.44	-	

Methodology

Uncontrolled PTE (tons/yr) = Maximum Throughput (tons/hr) * Emission Factor (lb/ton) * 8,760 hr/yr * 1 ton/2,000 lbs

Summary of Emissions (Controlled)

Metal Melting		Control Device	Control Efficiency	Controlled Potential to Emit (tons/yr)								
				PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO	Metallic HAPs	Organic HAPs
EIF Furnace EU-3A	Dust Collector DC-1	99.90%	0.04	0.04	0.04	-	-	-	-	0.0014	-	
EIF Furnace EU-3B	Dust Collector DC-2	99.90%	0.04	0.04	0.04	-	-	-	-	0.0014	-	

Methodology

Controlled PTE (tons/yr) = Uncontrolled PTE (tons/yr) * 1-Control Efficiency%

Appendix A: Emissions Calculations
Ductile Iron Foundries
Raw Material Handling and Preparation
Company Name: ID Castings, LLC
Source Address: 1600 South 8th Street, Noblesville, Indiana 46060
Permit No.: T057-33889-00002
Significant Source Modification No.: 057-35618-00002
Significant Permit Modification No.: 057-35620-00002
Reviewer: Brandon Miller/Brian Williams

Emission Factors

Raw Material Handling and Preparation	Emission Unit ID(s)	Maximum Throughput (tons/hr)	Uncontrolled Emission Factors (lb/ton)									
			PM	PM10	PM2.5	SO ₂	NOx	VOC	CO	Metallic HAPs	Organic HAPs	
Scrap and Charge Handling	(SCC 3-04-003-15)	Melting Dept. - Charge Handling (EU-2A)	10.20	0.60	0.36	0.36	-	-	-	-	3.08E-03	-
	(SCC 3-04-003-15)	Melting Dept. - Charge Handling (EU-2B)	10.20	0.60	0.36	0.36	-	-	-	-	3.08E-03	-
Magnesium Treatment	(SCC 3-04-003-21)	Melting Dept. - Magnesium Treatment (EU-6A)	10.20	1.80	1.80	1.80	-	-	0.01	-	4.25E-02	-
	(SCC 3-04-003-21)	Melting Dept. - Magnesium Treatment (EU-6B)	10.2	1.80	1.80	1.80	-	-	0.01	-	4.25E-02	-
Sand Handling	(SCC 3-04-003-50)	Sand Handling (EU-17 through EU-20, EU-23, EU-26, EU-27, EU-37)	100.00	3.60	0.54	0.54	-	-	-	-	-	-
Sand handling (silos not controlled by DC-1)	(SCC 3-05-011-07)*	Outdoor bond silo (EU-22)	0.47	0.73	0.47	0.47	-	-	-	-	-	-
		Outdoor sand storage bin (EU-24)	0.89	0.73	0.47	0.47	-	-	-	-	-	-

Notes

Emission factors from AP-42 Chapter 12.10 Gray Iron Foundries and US EPA Fire Version 6.25, except as otherwise noted.
 *Emission factors for the silos are from AP-42 Section 11.12, Table 11.12-2 for cement unloading to elevated storage silo.
 Max throughput of EU-22 and EU-24 is based on the capacity volume and a worst-case assumption of filling the silo and bin once per week each.

Summary of Emissions (Uncontrolled)

Raw Material Handling and Preparation	Uncontrolled Potential to Emit (tons/yr)								
	PM	PM10	PM2.5	SO ₂	NOx	VOC	CO	Metallic HAPs	Organic HAPs
Melting Dept. - Charge Handling (EU-2A)	26.81	16.08	16.08	-	-	-	-	0.14	-
Melting Dept. - Charge Handling (EU-2B)	26.81	16.08	16.08	-	-	-	-	0.14	-
Melting Dept. - Magnesium Treatment (EU-6A)	80.42	80.42	80.42	-	-	0.45	-	1.90	-
Melting Dept. - Magnesium Treatment (EU-6B)	80.42	80.42	80.42	-	-	0.45	-	1.90	-
Sand Handling (EU-17 through EU-20, EU-23, EU-26, EU-27, EU-37)	1,576.80	24.13	24.13	-	-	-	-	-	-
Outdoor bond silo (EU-22)	1.52	0.98	0.98	-	-	-	-	-	-
Outdoor sand storage bin (EU-24)	2.85	1.83	1.83	-	-	-	-	-	-

Methodology

Uncontrolled PTE (tons/yr) = Maximum Throughput (tons/hr) * Emission Factor (lb/ton) * 8,760 hr/yr * 1 ton/2,000 lbs

Summary of Emissions (Controlled)

Raw Material Handling and Preparation	Control Device	Control Efficiency	Controlled Potential to Emit (tons/yr)								
			PM	PM10	PM2.5	SO ₂	NOx	VOC	CO	Metallic HAPs	Organic HAPs
Melting Dept. - Charge Handling (EU-2A)	Dust Collector DC-1	99.90%	0.03	0.02	0.02	-	-	-	-	0.00	-
Melting Dept. - Charge Handling (EU-2B)	Dust Collector DC-1	99.90%	0.03	0.02	0.02	-	-	-	-	0.00	-
Melting Dept. - Magnesium Treatment (EU-6A)	Sealed Reaction Chambers and Dust Collector DC-1	99.90%	0.08	0.08	0.08	-	-	0.00	-	0.00	-
Melting Dept. - Magnesium Treatment (EU-6B)	Sealed Reaction Chambers and Dust Collector DC-2	99.90%	0.08	0.08	0.08	-	-	0.00	-	0.00	-
Sand Handling (EU-17 through EU-20, EU-22 through EU-24, EU-26, EU-27, EU-37)	Dust Collector DC-1	99.90%	1.58	0.02	0.02	-	-	-	-	-	-
Outdoor bond silo (EU-22)	Sock filter system	99.90%	0.0015	0.0010	0.0010	-	-	-	-	-	-
Outdoor sand bin (EU-24)	No control	NA	NA	NA	NA	-	-	-	-	-	-

Methodology

Controlled PTE (tons/yr) = Uncontrolled PTE (tons/yr) * 1-Control Efficiency%
 Sealed Reaction Chambers is for PM, PM10, PM2.5, VOC, and Metallic HAPs
 Dust Collector DC-1 control is for PM, PM10, PM2.5, and Metallic HAPs
 Dust Collector DC-2 control is for PM, PM10, PM2.5, and Metallic HAPs

**Appendix A: Emissions Calculations
Ductile Iron Foundries**

Scrap Preheating

Company Name: ID Castings, LLC
 Source Address: 1600 South 8th Street, Noblesville, Indiana 46060
 Permit No.: T057-33889-00002
 Significant Source Modification No.: 057-35618-00002
 Significant Permit Modification No.: 057-35620-00002
 Reviewer: Brandon Miller/Brian Williams

Emission Factors

Scrap Metal Pre-Heating		Emission Unit ID(s)	Capacity	Heater Rating	Uncontrolled Emission Factors								
					PM	PM10	PM2.5	SO ₂	NOx	VOC	CO	Metallic HAPs	Organic HAPs
Natural Gas Fired Pre-Heater	(SCC 3-04-003-14)	Scrap Preheater EU-1A	ton/hr	10 ⁶ scf/hr	lb/ton	lb/ton	lb/ton	lb/10 ⁶ scf					
			20.40	1.37E-02	0.2	0.18	0.17	0.600	100.000	5.500	84.000	6.06E-03	1.88

Notes

PM, PM10, and PM2.5 emission factors for preheaters taken from Table 3-8 of, "Emission Estimation Protocol for Iron and Steel Foundries," RTI International. All other emission factors from AP-42 Table 1.4-2.

Summary of Emissions (Uncontrolled)

Scrap Metal Pre-Heating	Emission Unit ID(s)	Uncontrolled Potential to Emit (ton/yr)									
		PM	PM10	PM2.5	SO ₂	NOx	VOC	CO	Metallic HAPs	Organic HAPs	
Natural Gas Fired Pre-Heater	Scrap Preheater EU-1A	17.87	16.08	15.19	0.04	6.01	0.33	5.05	3.64E-04	0.11	

Methodology

Uncontrolled PTE (ton/yr) = Maximum Throughput (ton/hr) * Emission Factor (lb/ton) * 8,760 hr/yr * 1 ton/2,000 lbs
 Uncontrolled PTE (ton/yr) = Maximum Throughput (106 scf/hr) * Emission Factor (lb/106 scf) * 8,760 hr/yr * 1 ton/2,000 lbs

Summary of Emissions (Controlled)

Scrap Metal Pre-Heating	Emission Unit ID(s)	Control Device	Control Efficiency	Controlled Potential to Emit (ton/yr)									
				PM	PM10	PM2.5	SO ₂	NOx	VOC	CO	Metallic HAPs	Organic HAPs	
Natural Gas Fired Pre-Heater	Scrap Preheater EU-1A	Dust Collector DC-1	99.90%	0.02	0.02	0.02	0.04	6.01	0.33	5.05	3.64E-07	0.11	

Methodology

Controlled PTE (ton/yr) = Uncontrolled PTE (ton/yr) * 1-Control Efficiency%

Appendix A: Emissions Calculations
Ductile Iron Foundries
Pouring, Cooling, and Shakeout
Company Name: ID Castings, LLC
Source Address: 1600 South 8th Street, Noblesville, Indiana 46060
Permit No.: T057-33889-00002
Significant Source Modification No.: 057-35618-00002
Significant Permit Modification No.: 057-35620-00002
Reviewer: Brandon Miller/Brian Williams

Emission Factors

Pouring, Cooling, and Shakeout		Emission Unit ID(s)	Maximum Sand Throughput (tons/hr)	Maximum Metal Throughput (tons/hr)	Uncontrolled Emission Factors (lb/ton)								
					PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO ⁽¹⁾	Metallic HAPs ⁽²⁾	Organic HAPs ⁽³⁾
Pouring/Casting	(SCC 3-04-003-20)	Disa Pouring/Casting Line (EU-8)	39.00	3.40	2.80	2.06	2.06	0.02	0.01	0.14	6.00	2.64E-03	0.4322
		Hunter 1 pouring/casting line	42.00	4.00	2.80	2.06	2.06	0.02	0.01	0.14			
		Hunter 2 pouring/casting line	42.00	4.00	2.80	2.06	2.06	0.02	0.01	0.14			
Cooling	(SCC 3-04-003-25)	Disa Cooling Line (EU-8A)	39.00	3.40	1.40	1.40	1.40	-	-	-			
		Hunter 1 cooling line	42.00	4.00	1.40	1.40	1.40	-	-	-			
		Hunter 2 cooling line	42.00	4.00	1.40	1.40	1.40	-	-	-			
Casting Shakeout	(SCC 3-04-003-31)	Casting Shakeout ("A", "B", and "C" shakers EU-16; and Didion shakeout Unit EU-11)	39.00	10.20	3.20	2.24	2.24	-	-	1.20			
		Hunter 1 shake-out unit	42.00	4.00	3.20	2.24	2.24	-	-	1.20			
		Hunter 2 shake-out unit	42.00	4.00	3.20	2.24	2.24	-	-	1.20			

Notes

- Emission factors from AP-42 Chapter 12.10 Gray Iron Foundries and US EPA Fire Version 6.25, except as otherwise noted
 Emission factors are in lb/ton of metal throughput
 (1) CO emission factor based on "CO Emissions Guidelines" notice for CO emissions from pouring, cooling and shakeout operations combined.
 (2) Metallic HAPs emission factor for pouring/cooling and shakeout combined are from Kennedy Valve Engineering Estimate.
 (3) Organic HAPs emission factor for pouring/cooling and shakeout combined are from CERP Study.

Summary of Emissions (Uncontrolled)

Pouring, Cooling, and Shakeout		Uncontrolled Potential to Emit (tons/yr)								
		PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO	Metallic HAPs	Organic HAPs
Pouring/Casting	Disa Pouring/Casting Line (EU-8)	41.70	30.68	30.68	0.30	0.15	2.08	478.30	0.21	34.45
	Hunter 1 pouring/casting line	49.06	36.09	36.09	0.35	0.18	2.45			
	Hunter 2 pouring/casting line	49.06	36.09	36.09	0.35	0.18	2.45			
Cooling	Disa Cooling Line (EU-8A)	20.85	20.85	20.85	-	-	-			
	Hunter 1 cooling line	24.53	24.53	24.53	-	-	-			
	Hunter 2 cooling line	24.53	24.53	24.53	-	-	-			
Casting Shakeout	Casting Shakeout ("A", "B", and "C" shakers EU-16; and Didion shakeout Unit EU-11)	142.96	100.07	100.07	-	-	53.61			
	Hunter 1 shake-out unit	56.06	39.24	39.24	-	-	21.02			
	Hunter 2 shake-out unit	56.06	39.24	39.24	-	-	21.02			

Methodology

Uncontrolled PTE (tons/yr) = Maximum Throughput (tons/hr) * Emission Factor (lb/ton) * 8,760 hr/yr * 1 ton/2,000 lbs

Summary of Emissions (Controlled)

Pouring, Cooling, and Shakeout			Controlled Potential to Emit (tons/yr)								
			PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO	Metallic HAPs	Organic HAPs
Disa Pouring/Casting Line (EU-8)	Dust Collector DC-1	99.90%	0.04	0.03	0.03	0.30	0.15	2.08	478.30	0.21	34.45
	Hunter 1 pouring/casting line	99.90%	0.05	0.04	0.04	0.35	0.18	2.45			
	Hunter 2 pouring/casting line	99.90%	0.05	0.04	0.04	0.35	0.18	2.45			
Disa Cooling Line (EU-8A)	Dust Collector DC-1	99.90%	0.02	0.02	0.02	-	-	-			
	Hunter 1 cooling line	99.90%	0.02	0.02	0.02	-	-	-			
	Hunter 2 cooling line	99.90%	0.02	0.02	0.02	-	-	-			
Casting Shakeout ("A", "B", and "C" shakers EU-16; and Didion shakeout Unit EU-11)	Dust Collector DC-1	99.90%	0.14	0.10	0.10	-	-	53.61			
	Hunter 1 shake-out unit	99.90%	0.06	0.04	0.04	-	-	21.02			
	Hunter 2 shake-out unit	99.90%	0.06	0.04	0.04	-	-	21.02			

Methodology

Controlled PTE (tons/yr) = Uncontrolled PTE (tons/yr) * 1-Control Efficiency%

Appendix A: Emissions Calculations
Ductile Iron Foundries
Cleaning & Finishing
Company Name: ID Castings, LLC
Source Address: 1600 South 8th Street, Noblesville, Indiana 46060
Permit No.: T057-33889-00002
Significant Source Modification No.: 057-35618-00002
Significant Permit Modification No.: 057-35620-00002
Reviewer: Brandon Miller/Brian Williams

Emission Factors

Cleaning & Finishing			Emission Unit ID(s)	Maximum Throughput (tons/hr)	Uncontrolled Emission Factors (lb/ton)							
					PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO	Metallic HAPs
Cleaning	(SCC 3-04-003-40)	No. 3 Cleaning Machine (EU-34)	5.60	17.00	1.70	1.70	-	-	-	-	2.63E-02	-
Castings Finishing	(SCC 3-04-003-60)	Grinding (EU-32)	5.60	0.01	0.0045	0.0045	-	-	-	-	0.01	-
Castings Finishing	(SCC 3-04-003-60)	Finishing (EU-33)	5.60	0.01	0.0045	0.0045	-	-	-	-	0.01	-

Notes

Emission factors from AP-42 Chapter 12.10 Gray Iron Foundries and US EPA Fire Version 6.25, except as otherwise noted

Summary of Emissions (Uncontrolled)

Cleaning & Finishing	Uncontrolled Potential to Emit (tons/yr)									
	PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO	Metallic HAPs	Organic HAPs	
No. 3 Cleaning Machine (EU-34)	416.98	41.70	41.70	-	-	-	-	0.65	-	
Grinding (EU-32)	0.25	0.11	0.11	-	-	-	-	0.25	-	
Finishing (EU-33)	0.25	0.11	0.11	-	-	-	-	0.25	-	

Methodology

Uncontrolled PTE (tons/yr) = Maximum Throughput (tons/hr) * Emission Factor (lb/ton) * 8,760 hr/yr * 1 ton/2,000 lbs

Summary of Emissions (Controlled)

Cleaning & Finishing	Control Device	Control Efficiency	Controlled Potential to Emit (tons/yr)								
			PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO	Metallic HAPs	Organic HAPs
No. 3 Cleaning Machine (EU-34)	Baghouse BH-2	80.00%	83.40	8.34	8.34	-	-	-	-	0.13	-
Grinding (EU-32)	Baghouse BH-1	99.00%	0.002	0.001	0.001	-	-	-	-	0.002	-
Finishing (EU-33)	No control	0.00%	0.25	0.11	0.11	-	-	-	-	0.25	-

Methodology

Controlled PTE (tons/yr) = Uncontrolled PTE (tons/yr) * 1-Control Efficiency%
 Baghouse BH-1 and BH-2 controls are for PM, PM10, PM2.5, and Metallic HAPs

**Appendix A: Emission Calculations
LPG-Propane - Industrial Boilers
(Heat input capacity: > 10 MMBtu/hr and < 100 MMBtu/hr)**

Company Name: ID Castings, LLC
Source Address: 1600 South 8th Street, Noblesville, Indiana 46060
Permit No.: T057-33889-00002
Significant Source Modification No.: 057-35618-00002
Significant Permit Modification No.: 057-35620-00002
Reviewer: Brandon Miller/Brian Williams

Emission unit	MMBtu/hr	Potential Throughput kgals/year	SO2 Emission factor = 0.10 x S S = Sulfur Content =
Core machine	2.09		10.90 grains/100ft ³
Core machine	2.09	639.53	
heating ladle torches	1.00		
core drying conveyor heating torch	0.50		
auto pour torches	1.00		
Total	6.68		

	Pollutant						
	PM*	PM10*	direct PM2.5**	SO2	NOx	VOC**	CO
Emission Factor in lb/kgal	0.2	0.7	0.7	1.1	13.0	1.0	7.5
Potential Emission in tons/yr	0.1	0.2	0.2	0.3	4.2	0.3	2.4

*PM emission factor is filterable PM only. PM emissions are stated to be all less than 10 microns in aerodynamic equivalent diameter, footnote in Table 1.5-1, therefore PM10 is based on the filterable and condensable PM emission factors.

** No direct PM2.5 emission factor was given. Direct PM2.5 is a subset of PM10. If one assumes all PM10 to be all direct PM2.5, then a worst case assumption of direct PM2.5 can be made.

**The VOC value given is TOC. The methane emission factor is 0.2 lb/kgal.

Methodology

1 gallon of LPG has a heating value of 94,000 Btu

1 gallon of propane has a heating value of 91,500 Btu (use this to convert emission factors to an energy basis for propane)

(Source - AP-42 (Supplement B 10/96) page 1.5-1)

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 kgal per 1000 gallon x 1 gal per 0.0915 MMBtu

Emission Factors are from AP42 (7/08), Table 1.5-1 (SCC #1-02-010-02)

Propane Emission Factors shown. Please see AP-42 for butane.

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

Emission Factors are from AP 42 (7/08), Table 1.5-1 (SCC #1-02-010-02)

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

Appendix A: Emissions Calculations

Ductile Iron Foundries

Cooling Tower

Company Name: ID Castings, LLC
 Source Address: 1600 South 8th Street, Noblesville, Indiana 46060
 Permit No.: T057-33889-00002
 Significant Source Modification No.: 057-35618-00002
 Significant Permit Modification No.: 057-35620-00002
 Reviewer: Brandon Miller/Brian Williams

Emission Unit: Non-Contact Water Cooling Tower
Source description: Potential emissions due to release of dissolved solids in total drift from water recirculation stream.

OPERATION/PRODUCTION RELATED INFORMATION PER COOLING TOWER

Parameter	value	units	Reference
Total circulating flow rate	2.64	gal/min	equipment design specification
	158.3	gal/hr	
Cooling tower drift (pct of recirculation flow)	0.300	percent	Assumed worst case
Total cooling tower drift	0.47	gal/hr	calculated value
	4.0	lbs/hr	calc value (density = 8.345 lbs/gal)

EMISSION RELATED INFORMATION AND CALCULATION METHODOLOGY

PM/PM₁₀ emissions calculated based on the total dissolved solids (TDS) content of recirculating water and resulting drift. Calculation method taken from AP-42, Section 13.4.

Pollutant	value	units	Reference
TDS content of water used in cooling tower	2,170	ppm	max TDS expected from water source after being concentrated at 5 cycles

POTENTIAL EMISSION CALCULATIONS - calculated at 8,760 hrs/yr

Pollutant	Total Potential Emissions	
	lbs/hr	tpy
PM/PM ₁₀	0.009	0.038

Methodology

Assumed PM = PM10 = PM2.5

Total circulating flow rate (gal/hr) = total circulating flow rate (gal/min) * 60 min/1 hr

Total Cooling tower drift (gal/hr) = (Cooling tower drift (pct of recirculation flow)/100) * Total circulating flow rate (gal/hr)

Total Cooling tower drift (lbs/hr) = Total Cooling tower drift (gal/hr) * density of water

Potential Emission Calculations (lbs/hr) = total cooling tower drift (lbs/hr) * (TDS content of water used in cooling tower (ppm)/1,000,000)

Appendix A: Emissions Calculations
Ductile Iron Foundries
Fugitives from Paved & Unpaved Roads
Company Name: ID Castings, LLC
Source Address: 1600 South 8th Street, Noblesville, Indiana 46060
Permit No.: T057-33889-00002
Significant Source Modification No.: 057-35618-00002
Significant Permit Modification No.: 057-35620-00002
Reviewer: Brandon Miller/Brian Williams

VEHICLE TRAFFIC ON PAVED AND UNPAVED ROADS

Estimated Regulated Criteria Air Pollutant Emission Rate

Air Emission Source	Total VMT	PM Emissions		PM ₁₀ Emissions		PM _{2.5} Emissions	
		Emission Factor (lb/VMT)	Emissions (tons/yr)	Emission Factor (lb/VMT)	Emissions (tons/yr)	Emission Factor (lb/VMT)	Emissions (tons/yr)
In-Plant Paved Roads	152.08	10.19	0.77	1.99	0.15	0.30	0.02

Methodology:

1100 ft per trip X 2 trips per round trip ÷ 5280 ft per mile = 0.4167 VMT/round trip
 0.4167 VMT per round trip X 1 round trip per day X 365 days per year = 152.08 VMT/year

AP-42, Section 13.2.1 - Paved Roads

$$\text{lbs/VMT: } E = \{ [k \cdot (sL/2)^{0.65} \cdot (W/3)^{1.5}] - C \} \cdot (1 - P/4N)$$

Where:

E = Particulate Matter Emission Factor

k (for PM) = Particle Size Number 0.082 lb/VMT (Table 13.2.1-1)

k (for PM10) = Particle Size Number 0.016 lb/VMT (Table 13.2.1-1)

k (for PM2.5) = Particle Size Number 0.0024 lb/VMT (Table 13.2.1-1)

sL = Road Surface Silt Loading 9.7 g/m² (Table 13.2.1-4)

W = Average Vehicle Weight 40 tons

C (for PM) = Exhaust Emission Factor 0.00047 lb/VMT (Table 13.2.1-2)

C (for PM10) = Exhaust Emission Factor 0.00047 lb/VMT (Table 13.2.1-2)

C (for PM2.5) = Exhaust Emission Factor 0.00036 lb/VMT (Table 13.2.1-2)

P = Number of "wet" days during an averaging period 125 days (Figure 13.2.1-2)

N = number of days in averaging 365 days

Notes:

PM/PM10/PM2.5, tons/yr = Total VMT * EF, lb/VMT * ton/2000 lbs

**Appendix A: Emissions Calculations
Compliance with 326 IAC 6-3-2 PM Limitations**

Company Name: ID Castings, LLC
Source Address: 1600 South 8th Street, Noblesville, Indiana 46060
Permit No.: T057-33889-00002
Significant Source Modification No.: 057-35618-00002
Significant Permit Modification No.: 057-35620-00002
Reviewer: Brandon Miller/Brian Williams

	Emission Units	Control Device	Process Weight Rate (tons/hr)	Unlimited PM (lb/hr)	Controlled PM (lb/hr)	PM Limit (lb/hr)	Able to Comply?
Metal Melting	EIF Furnace EU-3A	Dust Collector DC-1	10.20	9.18	0.00918	19.43	Y - without control
	EIF Furnace EU-3B	Dust Collector DC-2	10.20	9.18	0.00918	19.43	Y - without control
Raw Material Handling and Preparation	Melting Dept. - Charge Handling (EU-2A)	Dust Collector DC-1	10.20	6.12	0.01	19.43	Y - without control
	Melting Dept. - Charge Handling (EU-2B)	Dust Collector DC-1	10.20	6.12	0.01	19.43	Y - without control
	Melting Dept. - Magnesium Treatment (EU-6A)	Sealed Reaction Chambers and Dust Collector DC-1	10.20	18.36	0.02	19.43	Y - without control
	Melting Dept. - Magnesium Treatment (EU-6B)	Sealed Reaction Chambers and Dust Collector DC-2	10.20	18.36	0.02	19.43	Y - without control
	Sand Handling (EU-16 through EU-20, EU-22 through EU-24, EU-26, EU-27, EU-37)	Dust Collector DC-1	100.00	360.00	0.36	51.28	Y - with control
	Scrap Preheater (EU-1A)	Dust Collector DC-1	20.40	4.08	0.00408	36.63	Y - without control
Pouring, Cooling, and Shakeout	Disa Pouring/Casting Line (EU-8)	Dust Collector DC-1	42.40	9.52	0.01	43.06	Y - without control
	Hunter 1 pouring/casting line	Dust Collector DC-1	46.00	11.20	0.01	43.80	Y - without control
	Hunter 2 pouring/casting line	Dust Collector DC-1	46.00	11.20	0.01	43.80	Y - without control
	Disa Cooling Line (EU-8A)	Dust Collector DC-1	42.40	4.76	0.00	43.06	Y - without control
	Hunter 1 cooling line	Dust Collector DC-1	46.00	5.60	0.01	43.80	Y - without control
	Hunter 2 cooling line	Dust Collector DC-1	46.00	5.60	0.01	43.80	Y - without control
	Casting Shakeout ("A", "B", and "C" shakers EU-16; and Didion shakeout Unit EU-11)	Dust Collector DC-1	49.20	32.64	0.03	44.43	Y - without control
	Hunter 1 shake-out unit	Dust Collector DC-1	46.00	12.80	0.01	43.80	Y - without control
Cleaning & Finishing	No. 3 Cleaning Machine (EU-34)*	Baghouse BH-2	20.60	95.20	19.04	31.12	Y - with control
	Grinding (EU-32)	Baghouse BH-1	5.60	0.06	0.001	13.00	Y - without control
	Finishing (EU-33)	No control	5.60	0.06	0.06	13.00	Y - without control
Core Making	Shell Core Machines (EU-28)	No control	#REF!	#REF!	#REF!	#REF!	Y - without control

*Process weight rate includes the weight of the steel shot plus the weight of the castings

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

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

and interpolation and extrapolation of the data for process weight rates in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 * P^{0.11} - 40$$

Where:

E=Rate of emission in pounds per hour.
P=Process weight rate in tons per hour.



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

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

TO: Tony Stein
ID Castings LLC
1600 S 8th St PO Box 1146
Noblesville, IN 46060

DATE: August 10, 2015

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

SUBJECT: Final Decision
Title V SSM
057-35618-00002

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:
Kathy Moore
OAQ Permits Branch Interested Parties List

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

Final Applicant Cover letter.dot 6/13/2013



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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

August 10, 2015

TO: Hamilton East Public Library

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

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

Applicant Name: Id Castings LLC
Permit Number: 057-35618-00002

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 6/13/2013

Mail Code 61-53

IDEM Staff	CDENNY 8/10/2015 ID Castings LLC 057-35618-00002 (final)		Type of Mail: CERTIFICATE OF MAILING ONLY	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		

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing 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		Tony Stein ID Castings LLC 1600 S 8th St PO Box 1146 Noblesville IN 46060 (Source CAATS)										
2		Jack Kruse Plant Mgr ID Castings LLC 1600 S 8th St PO Box 1146 Noblesville IN 46060 (RO CAATS)										
3		Noblesville City Council and Mayors Office 16 S. 10th St. Noblesville IN 46060 (Local Official)										
4		Hamilton County Health Department 18030 Foundation Dr. #A Noblesville IN 46060-5405 (Health Department)										
5		Hamilton County Board of Commissioners One Hamilton County Square, Suite 157 Noblesville IN 46064 (Local Official)										
6		Mrs. Kathy Moore KERAMIDA Environmental, Inc. 401 North College Indianapolis IN 46202 (Consultant)										
7		Hamilton East Public Library - Fishers Branch 5 Municipal Drive Fishers In 46038 (Library)										
8		Glidden Fence Co. 17804 Spring Mill Rd Westfield IN 46074 (Affected Party)										
9		Environmental Field Services, Inc. 40 SR 32 W Westfield IN 46074 (Affected Party)										
10		Soil Stabilization, Inc. 15530 Stoney Creek Way Noblesville IN 46060 (Affected Party)										
11												
12												
13												
14												
15												

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