INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

To:	Interested Parties
Date:	October 1, 2014
From:	Matthew Stuckey, Chief Permits Branch Office of Air Quality
Source Name:	Innovative Casting Technologies, Inc.
Permit Level:	Minor Source Operating Permit (MSOP) Significant Permit Revision
Permit Number:	081-34423-00066
Source Location:	401 Blue Chip Court, Franklin, Inciana
Type of Action Taken:	Revisions to permit requirements Changes that are administrative in nature

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 34423.

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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Jack Laugle, President
Innovative Casting Technologies, Inc.
401 Blue Chip Court
Franklin, IN 46131-8825

October 1, 2014

Re: 081-34423-00066
Significant Revision to
M081-30955-00066

Dear Mr. Laugle:

Innovative Casting Technologies, Inc. was issued a Minor Source Operating Permit (MSOP) No. M081-30955-00066 on August 22, 2012 for a stationary gray and ductile iron, and clean charge aluminum foundry located at 401 Blue Chip Court, Franklin, IN 46131-8825.

On April 14, 2014, the Office of Air Quality (OAQ) received an application from the source requesting the following changes:

1. update the pressure drop range for the Donaldson Torit Dust Collector, identified as DT, and used to control particulate matter for the casting cleaning and finishing operation.

2. remove the opacity monitoring requirement contained in NSPS Subpart UUU - NSPS for Calciners and Dryers in Mineral Industries because the source has submitted documentation which indicates its potential to emit of PM is below the applicable threshold.

3. change the PM limit for the Thermal Sand Reclamation System (TSR1), controlled by Baghouse SS4

The attached Technical Support Document (TSD) provides additional explanation of the changes to this permit.

Pursuant to the provisions of 326 IAC 2-6.1-6, these changes to the permit are required to be reviewed in accordance with the Significant Permit Revision (SPR) procedures of 326 IAC 2-6.1-6(i). Pursuant to the provisions of 326 IAC 2-6.1-6, a significant permit revision to this permit is hereby approved as described in the attached Technical Support Document (TSD).

Pursuant to 326 IAC 2-6.1-6, this permit shall be revised by incorporating the significant permit revision into the permit.

All other conditions of the permit shall remain unchanged and in effect. Please find the entire MSOP as revised. The permit references the below listed attachments. Since these attachments have been provided in previously issued approvals for this source, IDEM OAQ has not included a copy of these attachments with this revision:

Attachment A: 40 CFR 63, Subpart ZZZZZ, National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries Area Sources

Attachment B: 40 CFR 60, Subpart UUU New Source Performance Standards for Calciners and Dryers in Mineral Industries

Previously issued approvals for this source containing these attachments are available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/.

Federal rules under Title 40 of United States Code of Federal Regulations may also be found on the U.S. Government Printing Office's Electronic Code of Federal Regulations (eCFR) website, located on the Internet at: http://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title40/40tab_02.tpl.

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 Deborah Cole of my staff at 317-234-5377 or 1-800-451-6027, ext. 4-5377.

Sincerely,

Iryn Calilung, Section Chief
Permits Branch
Office of Air Quality

Attachments: Technical Support Document, revised permit and revised calculations

IC/dac

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

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New Source Construction and Minor Source Operating Permit OFFICE OF AIR QUALITY

Innovative Casting Technologies, Inc.
401 Blue Chip Court,
Franklin, Indiana 46131

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

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-5.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation, or standard, except for the requirement to obtain a MSOP under 326 IAC 2-6.1.

Operation Permit No.: M081-30955-00066	
Issued by: Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Issuance Date: August 22, 2012 Expiration Date: August 22, 2017

Significant Permit Revision No.: 081-33097-00066 issued July 26, 2013

Significant Permit Revision No.: 081-34423-00066	
Issued by: Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Issuance Date: October 1, 2014 Expiration Date: August 22, 2017

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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 and A.2 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 2-5.1-3(c)][326 IAC 2-6.1-4(a)]

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

Source Address:	401 Blue Chip Court,, Franklin, Indiana 46131
General Source Phone Number:	(317) 738-5966
SIC Code:	3321 (Gray and Ductile Iron Foundries), and 3365 (Aluminum Foundries)
County Location:	Johnson
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Minor Source 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

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

(a) ***Grey & Ductile Iron Foundry***, consisting of the following:

(1) One (1) manual charge handling operation, identified as CH1, constructed in 2008, with a maximum throughput capacity of 0.523 tons of iron per hour, uncontrolled and exhausting inside the building;

(2) Two (2) Inductotherm electric induction melting furnaces, identified as IND1 and IND2, constructed in 2008, and having a maximum throughput capacity of 0.523 tons of gray iron or 0.48 tons of ductile iron per hour, respectively, with operation limited by a single power supply (only one furnace can operate at any time), uncontrolled and exhausting inside the building;

Under NESHAP ZZZZZ (5Z), the two (2) electric induction melting furnaces, identified as IND1 and IND2, are each considered an affected small foundry.

(3) One (1) magnesium treatment operation for the production of ductile iron, identified as DT1, constructed in 2008, with a maximum throughput capacity of 0.48 tons of iron per hour, uncontrolled and exhausting inside the building. The magnesium treatment is only used to form ductile iron;

(4) One (1) pouring and casting operation, identified as PC1, constructed in 2008, with a maximum throughput capacity of 0.523 tons of iron per hour, uncontrolled and exhausting inside the building;

(5) One (1) castings cooling operation, identified as CC1, constructed in 2008, with a maximum throughput capacity of 0.523 tons of iron castings per hour, uncontrolled and exhausting inside the building;

(6) One (1) castings shakeout operation, identified as CS1, constructed in 2008, with a maximum throughput capacity of 0.523 tons of iron castings per hour, with particulate emissions controlled by the SS1 baghouse, and exhausting to Stack # S3; and

Note: The SS1 Baghouse is a common control to the castings shakeout operation (CS1) and the units in the shared sand system (SS), as follows:

Iron Foundry castings shakeout operation	CS1
Sand System, consisting of:	SS
Outside Sand storage silo	SS2
Inside Sand storage silo	SS4
Outside Sand storage silo	SS5
Outside Sand storage silo	SS6
Outside Sand storage silo	SS7
Sand handling operations	SS3
Mechanical sand reclamation unit	MSR
Sand mixing operation #1	MX1
Sand mixing operation #2	MX2
Core mixing operation	CMX

(7) One (1) core making line, identified as CB1, constructed in 2008, with a maximum throughput capacity of 0.523 tons of iron per hour, and a maximum throughput capacity of 0.15 tons of sand per hour, using an ester phenolic no-bake binder system, uncontrolled and exhausting inside the building. Note: no catalyst gas is utilized in the binder system.

Note: The maximum throughput capacity of the two (2) Inductotherm electric induction melting furnaces is limited by a single power supply such that only one (1) furnace can operate at a time. Additionally, the maximum throughput capacities of the manual charge handling, electric induction melting furnaces, pouring and casting, castings cooling, and core making line are each dependent on the maximum capacity of the grey iron and ductile iron castings shakeout operation (CS1), which is a bottleneck for all of these processes.

(b) ***Clean Charge Aluminum Foundry***, consisting of the following:

(1) One (1) manual charge handling operation, identified as CH2, constructed in 2008, with a maximum throughput capacity of 0.36 tons of clean charge aluminum ingots per hour, uncontrolled and exhausting inside the building;

(2) Two (2) Thermtronix electric induction melting furnaces, identified as TH1 and TH2, constructed in 2008, having a maximum throughput capacity of 0.18 tons of clean charge aluminum (including aluminum t-bar, sow, ingot, and/or internal runarounds) per hour, each, or 0.36 tons per hour combined, uncontrolled and exhausting inside the building. No flux is used in this operation;

(3) One (1) pouring and casting operation, identified as PC2, constructed in 2008, with a maximum throughput capacity of 0.36 tons of clean charge aluminum per hour, uncontrolled and exhausting inside the building;

(4) One (1) castings cooling operation, identified as CC2, constructed in 2008, with a maximum throughput capacity of 0.36 tons of clean charge aluminum castings per hour, uncontrolled and exhausting inside the building; and

(5) One (1) castings shakeout operation, identified as CS2, constructed in 2008, with a maximum throughput capacity of 0.36 tons of clean charge aluminum castings per hour, uncontrolled, and exhausting inside the building; and

(6) One (1) core making line, identified as CB2, constructed in 2008, with a maximum throughput capacity of 0.36 tons of clean charge aluminum castings per hour, and a maximum throughput capacity of 0.265 tons of sand per hour, using an ester phenolic no-bake binder system, uncontrolled and exhausting inside the building. Note: no catalyst gas is utilized in the binder system.

Note: The maximum throughput capacity of the manual charge handling, pouring and casting, castings cooling, castings shakeout operations, and core making line are dependent on the combined maximum metal melt capacity of the two (2) Thermtronix electric induction melting furnaces.

(c) ***Sand System:***

One (1) Sand System, identified as SS, constructed in 2008 and approved for modification in 2013, serving both the Grey & Ductile Iron Foundry and the Clean Charge Aluminum Foundry, and consisting of the following:

(1) Five (5) sand storage silos with a combined maximum throughput of 48,180 tons of sand per year, equipped with one (1) baghouse, identified as SS1, for particulate control, exhausting to Stack #S3 as follows:

(i) One (1) outside sand storage silo, identified as SS2, having a maximum storage capacity of 50 tons.

(ii) One (1) inside sand storage silo, identified as SS4, having a maximum storage capacity of 15 tons.

(iii) One (1) outside sand storage silo, identified as SS5, having a maximum storage capacity of 60 tons.

(iv) One (1) outside sand storage silo, identified as SS6, having a maximum storage capacity of 70 tons.

(v) One (1) outside sand storage silo, identified as SS7, having a maximum storage capacity of 80 tons.

(2) Sand handling operations, identified as SS3, with a maximum throughput capacity of 5.5 tons of sand per hour, equipped with one (1) baghouse, identified as SS1, for particulate control, exhausting to Stack # S3;

(3) One (1) mechanical sand reclamation unit, identified as MSR, with a maximum throughput capacity of 5.5 tons of sand per hour, equipped with one (1) baghouse, identified as SS1, for particulate control, exhausting to Stack # S3;

(4) One (1) natural gas-fired thermal sand reclamation system, identified as TSR1, approved for construction in 2013, with a maximum heat input capacity of 3.0 MMBtu/hr and maximum sand throughput of 2.0 tons per hour, equipped with one (1) baghouse, identified as SS4, for particulate control, and exhausting to stack # S4.

Under 40 CFR 60, Subpart UUU, the natural gas-fired thermal sand reclamation system is an affected facility.

(5) Sand mixing operations #1 and #2, identified as MX1 and MX2, with a maximum throughput capacity of 5.08 tons of sand per hour, combined, and using a maximum of 0.85% ester phenolic no-bake binder, equipped with one (1) baghouse, identified as SS1, for particulate control, exhausting to Stack # S3; and

(6) One (1) core mixing operation, identified as CMX, with a maximum throughput capacity of 0.42 tons of sand per hour and using a maximum of 0.85% ester phenolic no-bake binder, equipped with one (1) baghouse, identified as SS1, for particulate control, exhausting to Stack # S3.

Note: the SS1 Baghouse is a common control to the Grey & Ductile Iron Foundry castings shakeout operation (CS1) and the units in the shared sand system (SS), as follows:

Iron Foundry castings shakeout operation	CS1
Sand System, consisting of:	SS
Outside Sand storage silo	SS2
Inside Sand storage silo	SS4
Outside Sand storage silo	SS5
Outside Sand storage silo	SS6
Outside Sand storage silo	SS7
Sand handling operations	SS3
Mechanical sand reclamation unit	MSR
Sand mixing operation #1	MX1
Sand mixing operation #2	MX2
Core mixing operation	CMX

(d) ***Castings cleaning and finishing operations,*** consisting of the following:

(1) One (1) Gibson steel shot table blast machine for castings cleaning & finishing, identified as TB, constructed in 2008 and approved for modification in 2013, with a maximum throughput capacity of 0.5 tons of iron or aluminum castings per hour, equipped with a Donaldson Torit dust collector, identified as DT, for particulate control, and exhausting inside the building.

(2) One (1) Diso Goff steel shot blast machine for castings cleaning & finishing, identified as SB, constructed in 2008 and approved for modification in 2013, with a maximum throughput capacity of 0.5 tons of iron or aluminum castings per hour, equipped with a Donaldson Torit dust collector, identified as DT, for particulate control, and exhausting inside the building.

(3) One (1) Grinding Room, identified as GD, constructed in 2008 and approved for modification in 2013, with a maximum throughput capacity of 0.25 tons of iron or aluminum castings per hour, equipped with a Donaldson Torit dust collector, identified as DT, for particulate control, exhausting inside the building, and consisting of the following:

(1) Three (3) double wheel 14 inch pedestal grinders; and

(2) Six (6) belt grinders.

(4) One (1) table saw, identified as SW, constructed in 2009, with a maximum capacity of 0.523 tons of iron or aluminum per hour, equipped with a Donaldson Torit dust collector, identified as DT, for particulate control, and exhausting inside the building.

Note: The table blast machine (TB), shot blast machine (SB), grinding room (GD), and table saw (SW) are controlled by the same dust collector and serve both the Grey & Ductile Iron Foundry and the Clean Charge Aluminum Foundry. The maximum throughput capacity of the table blast machine, shot blast machine, and grinding room is dictated by the maximum throughput capacity of the equipment. The maximum throughput capacity of the table saw (SW) is limited by the maximum throughput capacity of the grey iron and ductile iron castings shakeout operation (CS1).

(e) ***Mold Making Operations:***

Molding Making Operations, serving both the Grey & Ductile Iron Foundry and the Clean Charge Aluminum Foundry, consisting of the following:

(1) Two (2) ester phenolic no-bake binder molding lines, identified as ML1 and ML2, constructed in 2008, utilizing an ester phenolic no-bake binder system, with a maximum throughput capacity of 0.523 tons of iron and/or aluminum per hour combined, and a maximum throughput capacity of 5.5 tons of sand per hour combined, uncontrolled and exhausting inside the building;

Note: The combined maximum throughput capacity of the molding lines are limited by the grey iron and ductile iron castings shakeout operation (CS1), which is a bottleneck for these processes.

(f) Two (2) 1.0 MMBtu/hr natural gas-fired heated parts washers, identified as W1 and W2, constructed in 2008, using a maximum of 2,802.51 gallons of HAP-free solvent per year, uncontrolled and exhausting inside the building.

(g) Woodworking activities in the pattern shop include sawing, cutting, routing, and planing, for the construction of forms for use in the casting operations. [326 IAC 6-3-2]

(1) Six (6) CNC vertical mills, collectively identified as VM, with a maximum capacity of 10.0 pounds of wood per hour, uncontrolled and exhausting inside the building;

(2) One (1) table saw, identified as CO Saw, with a maximum capacity of 30.0 pounds of wood per hour, using a vacuum system to remove the chips, and exhausting inside the building.

(h) The following equipment related to maintenance activities and not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, and welding equipment.

(i) Mold release agents using low volatile products (vapor pressure less than or equal to 2 kiloPascals measured at 38 ºC).

(j) Cleaners and solvents characterized as follows:

(1) Having a vapor pressure equal to or less than 2 kiloPascals; 15 millimeters of mercury; or 0.3 pounds per square inch measured at 38 ºC (100 ºF) or;

(2) Having a vapor pressure equal to or less than 0.7 kiloPascals; 5 millimeters of mercury; or 0.1 pounds per square inch measured at 20 ºC (68 ºF); the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months.

(k) The following VOC and HAP storage containers:

(1) storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons;

(2) vessels storing lubricating oil, hydraulic oils, machining oils, and machining fluids.

(l) Application of oils, greases lubricants or other nonvolatile materials applied as temporary protective coatings.

(m) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.

(n) Paved and unpaved roads and parking lots with public access. [326 IAC 6-4]

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-1.1-1]

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 2-1.1-1) shall prevail.

B.2 Revocation of Permits [326 IAC 2-1.1-9(5)]

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this permit 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.

B.3 Affidavit of Construction [326 IAC 2-5.1-3(h)] [326 IAC 2-5.1-4]

This document shall also become the approval to operate pursuant to 326 IAC 2-5.1-4 when the following requirements are met:

(a) The attached Affidavit of Construction shall be submitted to the Office of Air Quality (OAQ), verifying that the emission units were constructed as described in the application or the permit. The emission units covered in this permit may continue operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM if constructed as described.

(b) If actual construction of the emission units differs from the construction described in the application, the source may not continue operation until the permit has been revised pursuant to 326 IAC 2 and an Operation Permit Validation Letter is issued.

(c) The Permittee shall attach the Operation Permit Validation Letter received from the Office of Air Quality (OAQ) to this permit.

B.4 Permit Term [326 IAC 2-6.1-7(a)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]

(a) This permit, M081-30955-00066, 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, until the renewal permit has been issued or denied.

B.5 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.6 Enforceability

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.7 Severability

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.8 Property Rights or Exclusive Privilege

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

B.9 Duty to Provide Information

(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.10 Annual Notification [326 IAC 2-6.1-5(a)(5)]

(a) An annual notification shall be submitted by an authorized individual to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.

(b) The annual notice shall be submitted in the format attached no later than March 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

(c) The notification 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.

B.11 Preventive Maintenance Plan [326 IAC 1-6-3]

(a) If required by specific condition(s) in Section D of this permit, 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 Permittee shall implement the PMPs.

(b) 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.

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

B.12 Prior Permits Superseded [326 IAC 2-1.1-9.5]

(a) All terms and conditions of permits established prior to M081-30955-00066 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

(2) revised, or

(3) deleted.

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

B.13 Termination of Right to Operate [326 IAC 2-6.1-7(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 one hundred twenty (120) days prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-6.1-7.

B.14 Permit Renewal [326 IAC 2-6.1-7]

(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 2-6.1-7. Such information shall be included in the application for each emission unit at this source. The renewal application does require an affirmation that the statements in the application are true and complete by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

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

(b) A timely renewal application is one that is:

(1) Submitted at least one hundred twenty (120) days 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 2-6.1 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 2-6.1-4(b), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.15 Permit Amendment or Revision [326 IAC 2-5.1-3(e)(3)][326 IAC 2-6.1-6]

(a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-6.1-6 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

(c) The Permittee shall notify the OAQ no later than thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

B.16 Source Modification Requirement

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

B.17 Inspection and Entry
[326 IAC 2-5.1-3(e)(4)(B)][326 IAC 2-6.1-5(a)(4)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]

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

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

(b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

(c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

(d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.18 Transfer of Ownership or Operational Control [326 IAC 2-6.1-6]

(a) The Permittee must comply with the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

(b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new Permittee. The application shall be submitted to:

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

The application which shall be submitted by the Permittee does require an affirmation that the statements in the application are true and complete by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) The Permittee may implement notice-only changes addressed in the request for a notice-only change immediately upon submittal of the request. [326 IAC 2-6.1-6(d)(3)]

B.19 Annual Fee Payment [326 IAC 2-1.1-7]

(a) The Permittee shall pay annual fees due no later than thirty (30) calendar days of receipt of a bill from IDEM, OAQ,

(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.20 Credible Evidence [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 2-6.1-5(a)(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 Permit Revocation [326 IAC 2-1.1-9]

Pursuant to 326 IAC 2-1.1-9 (Revocation of Permits), this permit to construct and operate may be revoked for any of the following causes:

(a) Violation of any conditions of this permit.

(b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.

(c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.

(d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.

(e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of this article.

C.3 Opacity [326 IAC 5-1]

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

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

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

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

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

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

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

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

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

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

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

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

(a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

(b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

(1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

(2) If there is a change in the following:

(A) Asbestos removal or demolitions 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.

(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 2-6.1-5(a)(2)]

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

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

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

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

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

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

Compliance Requirements [326 IAC 2-1.1-11]

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

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

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

C.11 Compliance Monitoring [326 IAC 2-1.1-11]

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. All monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

C.12 Instrument Specifications [326 IAC 2-1.1-11]

(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

C.13 Response to Excursions or Exceedances

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

(a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.

(b) The response shall include minimizing the period of any startup, shutdown, or malfunction. The response may include, but is not limited to, the following:

(1) initial inspection and evaluation;

(2) recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system); or

(3) any necessary follow-up actions to return operation to normal or usual manner of operation.

(c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:

(1) monitoring results;

(2) review of operation and maintenance procedures and records; and/or

(3) inspection of the control device, associated capture system, and the process.

(d) Failure to take reasonable response steps shall be considered a deviation from the permit.

(e) The Permittee shall record the reasonable response steps taken.

C.14 Actions Related to Noncompliance Demonstrated by a Stack Test

(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.

Record Keeping and Reporting Requirements [326 IAC 2-6.1-5(a)(2)]

C.15 Malfunctions Report [326 IAC 1-6-2]

Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

(a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) or appointed representative upon request.

(b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAQ, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.

(c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).

(d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

C.16 General Record Keeping Requirements [326 IAC 2-6.1-5]

(a) Records of all required monitoring data, reports, and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. 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 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

(a) Reports required by conditions in Section D of 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

(b) 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.

(c) The first report shall cover the period commencing on the date of issuance of this permit or the date of initial start-up, whichever is later, and ending on the last day of the reporting period. 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.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emission Unit Description: Iron Foundry, Table Blast, & Sand System

(a) ***Grey & Ductile Iron Foundry***, consisting of the following:

(1) One (1) manual charge handling operation, identified as CH1, constructed in 2008, with a maximum throughput capacity of 0.523 tons of iron per hour, uncontrolled and exhausting inside the building;

(2) Two (2) Inductotherm electric induction melting furnaces, identified as IND1 and IND2, constructed in 2008, and having a maximum throughput capacity of 0.523 tons of gray iron or 0.48 tons of ductile iron per hour, respectively, with operation limited by a single power supply (only one furnace can operate at any time), uncontrolled and exhausting inside the building;

Under NESHAP ZZZZZ (5Z), the two (2) electric induction melting furnaces, identified as IND1 and IND2, are each considered an affected small foundry.

(3) One (1) magnesium treatment operation for the production of ductile iron, identified as DT1, constructed in 2008, with a maximum throughput capacity of 0.48 tons of iron per hour, uncontrolled and exhausting inside the building. The magnesium treatment is only used to form ductile iron;

(4) One (1) pouring and casting operation, identified as PC1, constructed in 2008, with a maximum throughput capacity of 0.523 tons of iron per hour, uncontrolled and exhausting inside the building;

(5) One (1) castings cooling operation, identified as CC1, constructed in 2008, with a maximum throughput capacity of 0.523 tons of iron castings per hour, uncontrolled and exhausting inside the building;

(6) One (1) castings shakeout operation, identified as CS1, constructed in 2008, with a maximum throughput capacity of 0.523 tons of iron castings per hour, with particulate emissions controlled by the SS1 baghouse, and exhausting to Stack # S3; and

Note: The SS1 Baghouse is a common control to the castings shakeout operation (CS1) and the units in the shared sand system (SS), as follows:

Iron Foundry castings shakeout operation	CS1
Sand System, consisting of:	SS
Outside Sand storage silo	SS2
Inside Sand storage silo	SS4
Outside Sand storage silo	SS5
Outside Sand storage silo	SS6
Outside Sand storage silo	SS7
Sand handling operations	SS3
Mechanical sand reclamation unit	MSR
Sand mixing operation #1	MX1
Sand mixing operation #2	MX2
Core mixing operation	CMX

(7) One (1) core making line, identified as CB1, constructed in 2008, with a maximum throughput capacity of 0.523 tons of iron per hour, and a maximum throughput capacity of 0.15 tons of sand per hour, using an ester phenolic no-bake binder system,

uncontrolled and exhausting inside the building. Note: no catalyst gas is utilized in the binder system.

Note: The maximum throughput capacity of the two (2) Inductotherm electric induction melting furnaces is limited by a single power supply such that only one (1) furnace can operate at a time. Additionally, the maximum throughput capacities of the manual charge handling, electric induction melting furnaces, pouring and casting, castings cooling, and core making line are each dependent on the maximum capacity of the grey iron and ductile iron castings shakeout operation (CS1), which is a bottleneck for all of these processes.

(c) ***Sand System:***

One (1) Sand System, identified as SS, constructed in 2008 and approved for modification in 2013, serving both the Grey & Ductile Iron Foundry and the Clean Charge Aluminum Foundry, and consisting of the following:

(1) Five (5) sand storage silos with a combined maximum throughput of 48,180 tons of sand per year, equipped with one (1) baghouse, identified as SS1, for particulate control, exhausting to Stack #S3 as follows:

(i) One (1) outside sand storage silo, identified as SS2, having a maximum storage capacity of 50 tons.

(ii) One (1) inside sand storage silo, identified as SS4, having a maximum storage capacity of 15 tons.

(iii) One (1) outside sand storage silo, identified as SS5, having a maximum storage capacity of 60 tons.

(iv) One (1) outside sand storage silo, identified as SS6, having a maximum storage capacity of 70 tons.

(v) One (1) outside sand storage silo, identified as SS7, having a maximum storage capacity of 80 tons.

(2) Sand handling operations, identified as SS3, with a maximum throughput capacity of 5.5 tons of sand per hour, equipped with one (1) baghouse, identified as SS1, for particulate control, exhausting to Stack # S3;

(3) One (1) mechanical sand reclamation unit, identified as MSR, with a maximum throughput capacity of 5.5 tons of sand per hour, equipped with one (1) baghouse, identified as SS1, for particulate control, exhausting to Stack # S3;

(4) One (1) natural gas-fired thermal sand reclamation system, identified as TSR1, approved for construction in 2013, with a maximum heat input capacity of 3.0 MMBtu/hr and maximum sand throughput of 2.0 tons per hour, equipped with one (1) baghouse, identified as SS4, for particulate control, and exhausting to stack # S4.

Under 40 CFR 60, Subpart UUU, the natural gas-fired thermal sand reclamation system is an affected facility.

(5) Sand mixing operations #1 and #2, identified as MX1 and MX2, with a maximum throughput capacity of 5.08 tons of sand per hour, combined, and using a maximum of 0.85% ester phenolic no-bake binder, equipped with one (1) baghouse, identified as SS1, for particulate control, exhausting to Stack # S3; and

(6) One (1) core mixing operation, identified as CMX, with a maximum throughput capacity of 042 tons of sand per hour and using a maximum of 0.85% ester phenolic no-bake binder, equipped with one (1) baghouse, identified as SS1, for particulate control, exhausting to Stack # S3.

Note: the SS1 Baghouse is a common control to the Grey & Ductile Iron Foundry castings shakeout operation (CS1) and the units in the shared sand system (SS), as follows:

Iron Foundry castings shakeout operation	CS1
Sand System, consisting of:	SS
Outside Sand storage silo	SS2
Inside Sand storage silo	SS4
Outside Sand storage silo	SS5
Outside Sand storage silo	SS6
Outside Sand storage silo	SS7
Sand handling operations	SS3
Mechanical sand reclamation unit	MSR
Sand mixing operation #1	MX1
Sand mixing operation #2	MX2
Core mixing operation	CMX

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

Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

D.1.1 PSD Minor Limits [326 IAC 2-2]

In order to render 326 IAC 2-2 not applicable, PM emissions from the following emission unit(s) shall not exceed the pound per hour (lb/hr) emission limits listed in the table below:

Unit ID	Unit Description	Control Device	PM Emission Limit (lbs/hr)
CS1	Castings shakeout (Iron foundry)	SS1 Baghouse	5.14
SS	Sand System (shared)		
TSR1	Thermal sand reclamation system	SS4 Baghouse	2.49

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

D.1.2 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e) (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from each of the units in Grey & Ductile Iron Foundry shall not exceed the corresponding pound per hour limitations listed in the table below:

Unit ID	Emission Unit	Process Weight Rate (tons/hr)	326 IAC 6-3 Allowable Emission Rate (lbs/hour)
DT1	Magnesium treatment	0.48	2.51
PC1	Pouring and casting	6.17	13.88
CC1	Castings cooling	6.17	13.88
CS1	Castings shakeout	6.17	13.88
SS	Sand System		
SS2	Outside Sand Silo	5.50	12.85
SS4	Inside Sand Silo	5.50	12.85
SS5	Outside Sand Silo	5.50	12.85
SS6	Outside Sand Silo	5.50	12.85
SS7	Outside Sand Silo	5.50	12.85
SS3	Sand Handling Operations	5.50	12.85
MSR	Mechanical Sand Reclamation Unit	5.50	12.85
MX1	Sand Mixing Operation #1	5.08	12.18
MX2	Sand Mixing Operation #2	5.08	12.18
CMX	Core Mixing Operation	0.42	2.29
TSR1	Thermal sand reclamation system	2.0	6.52

The above-listed limitations were calculated as follows:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour, or thirty (30) tons per hour, shall be accomplished by use of the equation:

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

D.1.3 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan is required for the Grey & Ductile Iron Foundry castings shakeout process (CS1), the Sand System (SS), the thermal sand reclamation system (TSR1), and the associated control devices (SS1 and SS4 Baghouses). Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements

D.1.4 Particulate Control

(a) In order to comply with Conditions D.1.1, and D.1.2, the SS1 and SS4 baghouses for particulate control shall be in operation and control emissions from the Grey & Ductile Iron Foundry castings shakeout process (CS1), the Sand System (SS), and the thermal reclamation system (TSR1), at all times that any of these processes are in operation.

(b) In the event that bag failure is observed in a multi-compartment baghouse/dust collector, 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.1.5 Testing Requirements [326 IAC 2-6.1-5(b)(2)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Conditions D.1.1 and D.1.2, the Permittee shall perform PM testing of the baghouse (SS1), serving the Grey & Ductile Iron Foundry castings shakeout process (CS1) and the Sand System (SS), not later than 180 days after the issuance of this MSOP, No.: F081-30955-00066, utilizing methods approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. 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.

(b) In order to demonstrate compliance with Conditions D.1.1 and D.1.2, the Permittee shall perform PM testing of the baghouse (SS4), serving the thermal sand reclamation system (TSR1), not later than sixty (60) days after achieving maximum capacity, but not later than one hundred and eighty (180) days after initial startup, utilizing methods approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. 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.

Compliance Monitoring Requirements [326 IAC 2-6.1-5(b)(2)]

D.1.6 Visible Emissions Notations

(a) Daily visible emission notations of the baghouse (SS1) stack exhaust (stack # S3) shall be performed during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed, the Permittee shall take a reasonable response. Section C – Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

D.1.7 Parametric Monitoring

(a) The Permittee shall record the pressure drop across each baghouse (SS1 and SS4) used in conjunction with the Grey & Ductile Iron Foundry castings shakeout process (CS1), the Sand System (SS), and the thermal sand reclamation system (TSR1), at least once per day when the Grey & Ductile Iron Foundry castings shakeout process (CS1), and/or the Sand System (SS), and/or the thermal sand reclamation system is in operation. When, for any one reading, the pressure drop across either baghouse (SS1 and SS4) is outside of the normal range, the Permittee shall take a reasonable response. The normal range for baghouse (SS1) is a pressure drop between 3.0 and 5.0 inches of water, unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. The normal range for baghouse (SS4) is a pressure drop 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 latest stack test. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above-mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

(b) 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 or replaced at least once every six (6) months.

D.1.8 Broken or Failed Bag Detection

In the event that bag failure has been observed:

(a) For a single compartment baghouse/dust collector 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/dust collector 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 emissions unit. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

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

Record Keeping and Reporting Requirement [326 IAC 2-6.1-5(b)(2)]

D.1.9 Record Keeping Requirements

(a) Pursuant to 326 IAC 2-6.1-5(a), the grey iron throughput of 4,581 tons per year and sand throughput of 48,180 tons per year was determined to be the maximum capacity of the grey and ductile iron foundry. The Permittee shall maintain records of the total amount of grey iron and sand processed through the entire source, per twelve (12) consecutive month period with compliance determined at the end of each month. This information shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) or appointed representative upon request.

(b) To document the compliance status with Condition D.1.6(a), the Permittee shall maintain daily records of the visible emission notations of the SS1 baghouse stack exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of a visible emission notation, (i.e. the process did not operate that day).

(c) To document the compliance status with Condition D.1.7(a), the Permittee shall maintain daily records of the SS1 and SS4 baghouses pressure drop during normal operation. The Permittee shall include in its daily record when the pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g., the process did not operate that day).

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

SECTION D.2 EMISSION UNIT OPERATION CONDITIONS

Emission Unit Description: Aluminum Foundry

(b) ***Clean Charge Aluminum Foundry***, consisting of the following:

(1) One (1) manual charge handling operation, identified as CH2, constructed in 2008, with a maximum throughput capacity of 0.55 tons of clean charge aluminum ingots per hour, uncontrolled and exhausting inside the building;

(2) Two (2) Thermtronix electric induction melting furnaces, identified as TH1 and TH2, constructed in 2008, having a maximum throughput capacity of 0.18 tons of clean charge aluminum (including aluminum t-bar, sow, ingot, and/or internal runarounds) per hour, each, or 0.36 tons per hour combined, uncontrolled and exhausting inside the building. No flux is used in this operation;

(3) One (1) pouring and casting operation, identified as PC2, constructed in 2008, with a maximum throughput capacity of 0.36 tons of clean charge aluminum per hour, uncontrolled and exhausting inside the building;

(4) One (1) castings cooling operation, identified as CC2, constructed in 2008, with a maximum throughput capacity of 0.36 tons of clean charge aluminum castings per hour, uncontrolled and exhausting inside the building; and

(5) One (1) castings shakeout operation, identified as CS2, constructed in 2008, with a maximum throughput capacity of 0.36 tons of clean charge aluminum castings per hour, uncontrolled, and exhausting inside the building; and

(6) One (1) core making line, identified as CB2, constructed in 2008, with a maximum throughput capacity of 0.36 tons of clean charge aluminum castings per hour, and a maximum throughput capacity of 0.265 tons of sand per hour, using an ester phenolic no-bake binder system, uncontrolled and exhausting inside the building. Note: no catalyst gas is utilized in the binder system.

Note: The maximum throughput capacity of the manual charge handling, pouring and casting, castings cooling, castings shakeout operations, and core making line are dependent on the combined maximum metal melt capacity of the two (2) Thermtronix electric induction melting furnaces.

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

Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

D.2.1 Clean Charge Aluminum [40 CFR 63, Subpart RRR] [326 IAC 20-70] [326 IAC 2-2]

In order to render 40 CFR 63, Subpart RRR (National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Secondary Aluminum Production), incorporated by reference as 326 IAC 20-70, not applicable, the Permittee shall only melt clean charge, or internal scrap, in each of the electric induction furnaces, identified as TH1 and TH2.

Clean charge shall be defined as furnace charge materials, including molten aluminum; T-bar; sow; ingot; billet; pig; aluminum scrap known by the owner or operator to be entirely free of paints, coatings, and lubricants; uncoated/unpainted aluminum chips that have been thermally dried or treated by a centrifugal cleaner; aluminum scrap dried at 343 °C (650°F) or higher; aluminum scrap delacquered/decoated at 482 °C (900 °F) or higher, and runaround scrap.

Compliance with this limit shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), 326 IAC 20-70 (Incorporation by Reference of Federal Standards for Secondary Aluminum), and 40 CFR 63, Subpart RRR (National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Secondary Aluminum Production) not applicable.

D.2.2 Aluminum Foundry Limitation [40 CFR 63, Subpart ZZZZZZ] [326 IAC 2-2]

In order to render 40 CFR 63, Subpart ZZZZZZ (6Z) (National Emission Standards for Hazardous Air Pollutants (NESHAPs): Area Source Standards for Aluminum, Copper, and Other Nonferrous Foundries) not applicable, the total combined metal melt throughput of the Clean Charge Aluminum Foundry, including the scrap and charge handling (CH2), the two (2) electric induction furnaces (TH1 and TH2), pouring and casting (PC2), castings cooling (CC2), castings shakeout (CS2), and core making line (CB2), shall be less than 600 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with these limit shall render the requirements of 40 CFR 63, Subpart ZZZZZZ (6Z) (National Emission Standards for Hazardous Air Pollutants (NESHAPs): Area Source Standards for Aluminum, Copper, and Other Nonferrous Foundries), and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), not applicable.

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

Pursuant to 326 IAC 6-3-2(e) (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from each of the units in Clean Charge Aluminum Foundry shall not exceed the corresponding pound per hour limitations listed in the table below:

Unit ID	Emission Unit	Process Weight Rate (tons/hr)	326 IAC 6-3 Allowable Emission Rate (lbs/hour)
PC2	Pouring and casting	6.12	13.81
CS2	Castings shakeout	6.12	13.81

The above-listed limitations were calculated as follows:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour, or thirty (30) tons per hour, shall be accomplished by use of the equation:

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

Compliance Determination Requirements

D.2.4 Aluminum Charge Materials Content

The Permittee shall demonstrate compliance with the clean charge aluminum requirement established in Condition D.2.1, by providing a vendor analysis of each aluminum charge materials delivery, accompanied by a vendor certification.

Record Keeping and Reporting Requirements [326 IAC 2-6.1-5(a)(2)]

D.2.5 Record Keeping Requirements

(a) To document the compliance status with Condition D.2.1, the Permittee shall maintain records in accordance with (1) through (3) below. Records maintained for (1) through (3) below shall be taken monthly and shall be complete and sufficient to establish compliance with the requirement established in Condition D.2.1.

(1) Calendar dates covered in the compliance determination period;

(2) A certification, signed by the owner or operator, that the records of the aluminum supplier certifications represent all of the aluminum charge materials melted during the period; and

(3) If supplier certification is used to demonstrate compliance, the following as a minimum, shall be maintained:

(i) Aluminum supplier certifications;

(ii) The name of the aluminum supplier; and

(iii) A statement from the aluminum supplier that certifies the content of the aluminum charge materials.

Records that may be used to document the information included in (1) through (3) may include delivery tickets, manufacturer's data, material safety data sheets (MSDS), and other documents necessary to verify the type and amount used.

(b) To document the compliance status with Condition D.2.2, the Permittee shall keep monthly records of the total combined metal melt throughput of the Clean Charge Aluminum Foundry, including the scrap and charge handling (CH2), the two (2) electric induction furnaces (TH1 and TH2), pouring and casting (PC2), castings cooling (CC2), castings shakeout (CS2), and core making line (CB2).

D.2.6 Reporting Requirements

A quarterly summary of the information to document compliance status with Condition D.2.2 shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition.

SECTION D.3 EMISSION UNIT OPERATION CONDITIONS

Emission Unit Description: Castings Cleaning & Finishing Operations

(d) ***Castings cleaning and finishing operations***, consisting of the following:

(1) One (1) Gibson steel shot table blast machine for castings cleaning & finishing, identified as TB, constructed in 2008 and approved for modification in 2013, with a maximum throughput capacity of 0.5 tons of iron or aluminum castings per hour, equipped with a Donaldson Torit dust collector, identified as DT, for particulate control, and exhausting inside the building.

(2) One (1) Diso Goff steel shot blast machine for castings cleaning & finishing, identified as SB, constructed in 2008 and approved for modification in 2013, with a maximum throughput capacity of 0.5 tons of iron or aluminum castings per hour, equipped with a Donaldson Torit dust collector, identified as DT, for particulate control, and exhausting inside the building.

(3) One (1) Grinding Room, identified as GD, constructed in 2008 and approved for modification in 2013, with a maximum throughput capacity of 0.25 tons of iron or aluminum castings per hour, equipped with a Donaldson Torit dust collector, identified as DT, for particulate control, exhausting inside the building, and consisting of the following:

(1) Three (3) double wheel 14 inch pedestal grinders; and

(2) Six (6) belt grinders.

(4) One (1) table saw, identified as SW, constructed in 2009, with a maximum capacity of 0.523 tons of iron or aluminum per hour, equipped with a Donaldson Torit dust collector, identified as DT, for particulate control, and exhausting inside the building.

Note: The table blast machine (TB), shot blast machine (SB), grinding room (GD), and table saw (SW) are controlled by the same dust collector and serve both the Grey & Ductile Iron Foundry and the Clean Charge Aluminum Foundry. The maximum throughput capacity of the table blast machine, shot blast machine, and grinding room is dictated by the maximum throughput capacity of the equipment. The maximum throughput capacity of the table saw (SW) is limited by the maximum throughput capacity of the grey iron and ductile iron castings shakeout operation (CS1).

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

Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

D.3.1 PSD Minor Limits [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, PM emissions from the following emission unit(s) shall not exceed the pound per hour (lb/hr) emission limits listed in the table below:

Unit ID	Unit Description	Control Device	PM Emission Limit (lbs/hr)
TB	Castings cleaning & finishing (Table blasting) (shared)	Donaldson Torit dust collector (DT)	2.15
SB	Castings cleaning & finishing (Shotblasting) (shared)		
GD	Grinding Room (shared)		
SW	Table Saw (shared)		

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

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

Pursuant to 326 IAC 6-3-2(e) (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from each of the units in the Castings Cleaning and Finishing Operations shall not exceed the corresponding pound per hour limitations listed in the table below:

Unit ID	Unit Description	Process Weight Rate (tons/hr)	6-3 Allowable Emission Rate (lbs/hour)
TB	Castings Cleaning and Finishing (Table blasting) (shared)	0.50	2.58
SB	Castings cleaning & finishing (Shotblasting) (shared)	0.50	2.58
GD	Grinding Room (shared)	0.25	1.62

The pound per hour limitation was calculated with the following equation:

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

D.3.3 Preventive Maintenance Plan [326 IAC 1-6-3]

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

Compliance Determination Requirements

D.3.4 Particulate Control

(a) In order to comply with Conditions D.3.1, and D.3.2, the Donaldson Torit dust collector for particulate control shall be in operation and control emissions from the Gibson steel shot table blast machine, Diso Goff steel shot blast machine, Grinding Room, and Table Saw at all times these processes are in operation.

(b) In the event that bag failure is observed in a multi-compartment baghouse, 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.3.5 Testing Requirements [326 IAC 2-6.1-5(b)(2)] [326 IAC 2-1.1-11]

In order to demonstrate compliance with Conditions D.3.1 and D.3.2, the Permittee shall perform PM testing of the Donaldson Torit dust collector (DT) while the table blast machine (TB), shot blast machine (SB), grinding room (GD), and table saw (SW) are in operation at the same time and operating at maximum capacity, utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. 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.

Compliance Monitoring Requirements [326 IAC 2-6.1-5(b)(2)]

D.3.6 Parametric Monitoring

(a) The Permittee shall record the pressure drop across the Donaldson Torit dust collector, used in conjunction with the Gibson steel shot table blast machine, Diso Goff steel shot blast machine, Grinding Room, and Table Saw, at least once per day when these processes are in operation. When, for any one reading, the pressure drop across the dust collector is outside of the normal range, the Permittee shall take a reasonable response. The normal range for this unit is a pressure drop 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 latest stack test. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above-mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

(b) 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 or replaced at least once every six (6) months.

D.3.7 Broken or Failed Bag/Filter Detection

In the event that bag/filter failure has been observed:

(a) For a single compartment baghouse/dust collector 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/dust collector 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 emissions unit. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

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

Record Keeping and Reporting Requirement [326 IAC 2-6.1-5(b)(2)]

D.3.8 Record Keeping Requirements

(a) To document the compliance status with Condition D.3.6, the Permittee shall maintain daily records of the Donaldson Torit dust collector pressure drop during normal operation. The Permittee shall include in its daily record when the 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).

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

SECTION D.4 EMISSION UNIT OPERATION CONDITIONS

Emission Unit Description: Solvent Cleaning

(f) Two (2) 1.0 MMBtu/hr natural gas-fired heated parts washers, identified as W1 and W2, constructed in 2008, using a maximum of 2,802.51 gallons of HAP-free solvent per year, uncontrolled and exhausting inside the building. [326 IAC 6-2-4 and 326 IAC 8-3-3]

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

Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

D.4.1 Particulate Emission Limits [326 IAC 6-2]

Pursuant to 326 IAC 6-2-4, the particulate emissions from the two (2) heated parts washers, identified as W1 and W2, each, shall not exceed six tenths (0.6) pounds of particulate matter per MMBtu heat input.

D.4.2 Volatile Organic Compounds (VOC) [326 IAC 8-3-3]

(a) Pursuant to 326 IAC 8-3-3(a) (Open Top Vapor Degreasing Operation), for open top vapor degreasing operations constructed after January 1, 1980, the Permittee shall ensure the following control equipment and operating requirements are met:

(1) Equip the vapor degreaser with a cover that can be opened and closed easily without disturbing the vapor zone.

(2) Keep the cover closed at all times except when processing workloads through the degreaser.

(3) Minimize solvent carryout by:

(A) racking parts to allow complete drainage;

(B) moving parts in and out of the degreaser at less than three and three-tenths (3.3) meters per minute (eleven (11) feet per minute);

(C) degreasing the workload in the vapor zone at least thirty (30) seconds or until condensation ceases;

(D) tipping out any pools of solvent on the cleaned parts before removal; and

(E) allowing parts to dry within the degreaser for at least fifteen (15) seconds or until visually dry.

(4) Prohibit the entrance into the degreaser of porous or absorbent materials, such as cloth, leather, wood, or rope.

(5) Prohibit occupation of more than one-half (1/2) of the degreaser's open top area with the workload.

(6) Prohibit the loading of the degreaser in a manner that causes the vapor level to drop more than fifty percent (50%) of the vapor depth when the workload is removed.

(7) Prohibit solvent spraying above the vapor level.

(8) Repair solvent leaks immediately, or shut down the degreaser if leaks cannot be repaired immediately.

(9) Store waste solvent only in closed containers.

(10) Prohibit the disposal or transfer of waste solvent in a manner that could allow greater than twenty percent (20%) of the waste solvent (by weight) to evaporate into the atmosphere.

(11) Prohibit the use of workplace fans near the degreaser opening.

(12) Prohibit visually detectable water in the solvent exiting the water separator.

(13) Provide the degreaser with a permanent, conspicuous label that lists the operating requirements in subdivisions (2) through (12).

(b) Pursuant to 326 IAC 8-3-3(b) (Open Top Vapor Degreasing Operation), the Permittee shall ensure the following additional control equipment and operating requirements are met:

(1) Equip the degreaser with the following switches:

(A) A condenser flow switch and thermostat that shuts off sump heat if condenser coolant stops circulating or becomes too warm.

(B) A spray safety switch that shuts off spray pump if the vapor level drops more than ten (10) centimeters (four (4) inches).

(2) Equip the degreaser with one (1) of the following control devices:

(A) A freeboard ratio of seventy-five hundredths (0.75) or greater and a powered cover if the degreaser opening is greater than one (1) square meter (ten and eight-tenths (10.8) square feet).

(B) A refrigerated chiller.

(C) An enclosed design in which the cover opens only when the article is actually entering or exiting the degreaser.

(D) A carbon adsorption system with ventilation that, with the cover open, achieves a ventilation rate of greater than or equal to fifteen (15) cubic meters per minute per square meter (fifty (50) cubic feet per minute per square foot) of air-to-vapor interface area and an average of less than twenty-five (25) parts per million of solvent is exhausted over one (1) complete adsorption cycle.

(E) An alternative system of demonstrated equivalent or better control as those outlined in clauses (A) through (D) that is approved by the department. An alternative system shall be submitted to the U.S. EPA as a SIP revision.

(3) Prohibit the loading of the degreaser to the point where the vapor level would drop more than ten (10) centimeters (four (4) inches) when the workload is removed.

(4) Prohibit the exhaust ventilation rate from exceeding twenty (20) cubic meters per minute per square meter (sixty-five (65) cubic feet per minute per square foot) of degreaser open area unless a greater ventilation rate is necessary to meet Occupational Safety and Health Administration requirements.

(5) Ensure that the label required under subsection (a)(13) includes the additional operating requirements listed in subdivisions (3) and (4).

SECTION E.1 NESHAP REQUIREMENTS

Emissions Unit Description: Gray and Ductile Iron Foundry Operations

(a) ***Grey & Ductile Iron Foundry***, consisting of the following:

(1) One (1) manual charge handling operation, identified as CH1, constructed in 2008, with a maximum throughput capacity of 0.523 tons of iron per hour, uncontrolled and exhausting inside the building;

(2) Two (2) Inductotherm electric induction melting furnaces, identified as IND1 and IND2, constructed in 2008, and having a maximum throughput capacity of 0.523 tons of gray iron or 0.48 tons of ductile iron per hour, respectively, with operation limited by a single power supply (only one furnace can operate at any time), uncontrolled and exhausting inside the building;

Under NESHAP ZZZZZ (5Z), the two (2) electric induction melting furnaces, identified as IND1 and IND2, are each considered an affected small foundry.

(3) One (1) magnesium treatment operation for the production of ductile iron, identified as DT1, constructed in 2008, with a maximum throughput capacity of 0.48 tons of iron per hour, uncontrolled and exhausting inside the building. The magnesium treatment is only used to form ductile iron;

(4) One (1) pouring and casting operation, identified as PC1, constructed in 2008, with a maximum throughput capacity of 0.523 tons of iron per hour, uncontrolled and exhausting inside the building;

(5) One (1) castings cooling operation, identified as CC1, constructed in 2008, with a maximum throughput capacity of 0.523 tons of iron castings per hour, uncontrolled and exhausting inside the building;

(6) One (1) castings shakeout operation, identified as CS1, constructed in 2008, with a maximum throughput capacity of 0.523 tons of iron castings per hour, with particulate emissions controlled by the SS1 baghouse, and exhausting to Stack # S3; and

Note: The SS1 Baghouse is a common control to the castings shakeout operation (CS1) and the units in the shared sand system (SS), as follows:

Iron Foundry castings shakeout operation	CS1
Sand System, consisting of:	SS
Outside Sand storage silo	SS2
Inside Sand storage silo	SS4
Outside Sand storage silo	SS5
Outside Sand storage silo	SS6
Outside Sand storage silo	SS7
Sand handling operations	SS3
Mechanical sand reclamation unit	MSR
Sand mixing operation #1	MX1
Sand mixing operation #2	MX2
Core mixing operation	CMX

(7) One (1) core making line, identified as CB1, constructed in 2008, with a maximum throughput capacity of 0.523 tons of iron per hour, and a maximum throughput capacity of 0.15 tons of sand per hour, using an ester phenolic no-bake binder system,

uncontrolled and exhausting inside the building. Note: no catalyst gas is utilized in the binder system.

Note: The maximum throughput capacity of the two (2) Inductotherm electric induction melting furnaces is limited by a single power supply such that only one (1) furnace can operate at a time. Additionally, the maximum throughput capacities of the manual charge handling, electric induction melting furnaces, pouring and casting, castings cooling, and core making line are each dependent on the maximum capacity of the grey iron and ductile iron castings shakeout operation (CS1), which is a bottleneck for all of these processes.

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

National Emission Standards for Hazardous Air Pollutants (NESHAPs) Requirements [326 IAC 20-1]

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

(a) Pursuant to §63.10900, 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 Table 3 of 40 CFR Part 63, Subpart ZZZZZ.

(b) Pursuant to 40 CFR 63.12, the Permittee shall submit all required notifications and reports to:

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

E.1.2 National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries Area Sources [40 CFR 63, Subpart ZZZZZ (5Z)] [326 IAC 20]

The Permittee, that owns or operates a new iron and steel foundry, as defined in 40 CFR 63.10906, that is an area source of hazardous air pollutant (HAP) emissions, as defined in §63.2, shall comply with the following provisions of 40 CFR Part 63, Subpart ZZZZZ (included as Attachment A of this permit), when processing grey and/or ductile iron:

(1) 40 CFR 63.10880(a), (b)(2), (c), (e), and (g)
(2) 40 CFR 63.10881(c) and (e)
(3) 40 CFR 63.10885
(4) 40 CFR 63.10886
(5) 40 CFR 63.10890
(6) 40 CFR 63.10905
(7) 40 CFR 63.10906

SECTION E.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(c) ***Sand System****:*

One (1) Sand System, identified as SS, constructed in 2008 and approved for modification in 2013, serving both the Grey & Ductile Iron Foundry and the Clean Charge Aluminum Foundry, and consisting of the following:

(4) One (1) natural gas-fired thermal sand reclamation system, identified as TSR1, approved for construction in 2013, with a maximum heat input capacity of 3.0 MMBtu/hr and maximum sand throughput of 2.0 tons per hour, equipped with one (1) baghouse, identified as SS4, for particulate control, and exhausting to stack # S4

Under 40 CFR 60, Subpart UUU, the natural gas-fired thermal sand reclamation system is an affected facility.

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

New Source Performance Standards (NSPS) Requirements [326 IAC 12-1]

E.2.1 General Provisions Relating to NSPS [326 IAC 12-1] [40 CFR 60, Subpart A]

(a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the applicable provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference as 326 IAC 12-1, except as otherwise specified in 40 CFR 60, Subpart UUU.

(b) Pursuant to 40 CFR 60.10, the Permittee shall submit all required notifications and reports to:

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

E.2.2 New Source Performance Standards (NSPS) for Calciners and Dryers in Mineral Industries [40 CFR Part 60, Subpart UUU] [326 IAC 12]

The Permittee shall comply with the applicable provisions of 40 CFR Part 60, Subpart UUU (included as Attachment B of this permit), which are incorporated by reference as 326 IAC 12, except as otherwise specified in 40 CFR Part 60, Subpart UUU:

(a) 40 CFR 60.730(a) and (c)
(b) 40 CFR 60.731
(c) 40 CFR 60.732
(d) 40 CFR 60.733
(e) 40 CFR 60.734(a), (c) and (d)
(f) 40 CFR 60.735(a), (c)(1) and (2), and (d)
(g) 40 CFR 60.736(a) and (b)
(h) 40 CFR 60.737

Compliance with Condition D.1.1 (PSD Minor Limits) for the thermal sand reclamation system, identified as TSR1, shall also render the opacity monitoring requirements contained in 40 CFR 60.734 not applicable.

E.2.3 Testing Requirements [326 IAC 2-6.1-5(b)(2)] [326 IAC 2-1.1-11]

The Permittee shall perform the stack testing required under 40 CFR Part 60, Subpart UUU, utilizing methods as approved by the Commissioner to document compliance with Condition E.2.2. These tests shall be repeated at least once every five (5) years from the date of the last valid compliance demonstration. 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.

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

MINOR SOURCE OPERATING PERMIT
ANNUAL NOTIFICATION

This form should be used to comply with the notification requirements under 326 IAC 2-6.1-5(a)(5).

Company Name:	Innovative Casting Technologies, Inc.
Address:	401 Blue Chip Court,
City:	Franklin, Indiana 46131
Phone #:	(317) 738-5966
MSOP #:	M081-30955-00066

I hereby certify that Innovative Casting Technologies, Inc. is : ☐ still in operation.
☐ no longer in operation.

I hereby certify that Innovative Casting Technologies, Inc. is : ☐ in compliance with the requirements of MSOP M081-30955-00066.
☐ not in compliance with the requirements of MSOP M081-30955-00066.

Authorized Individual (typed):
Title:
Signature:
Date:

If there are any conditions or requirements for which the source is not in compliance, provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be achieved.

Noncompliance:

MALFUNCTION REPORT

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
FAX NUMBER: (317) 233-6865

This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE IT HAS POTENTIAL TO EMIT 25 TONS/YEAR PARTICULATE MATTER ?_____, 25 TONS/YEAR SULFUR DIOXIDE ?_____, 25 TONS/YEAR NITROGEN OXIDES?_____, 25 TONS/YEAR VOC ?_____, 25 TONS/YEAR HYDROGEN SULFIDE ?_____, 25 TONS/YEAR TOTAL REDUCED SULFUR ?_____, 25 TONS/YEAR REDUCED SULFUR COMPOUNDS ?_____, 25 TONS/YEAR FLUORIDES ?_____, 100 TONS/YEAR CARBON MONOXIDE ?_____, 10 TONS/YEAR ANY SINGLE HAZARDOUS AIR POLLUTANT ?_____, 25 TONS/YEAR ANY COMBINATION HAZARDOUS AIR POLLUTANT ?_____, 1 TON/YEAR LEAD OR LEAD COMPOUNDS MEASURED AS ELEMENTAL LEAD ?_____, OR IS A SOURCE LISTED UNDER 326 IAC 2-5.1-3(2) ?_____. EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION _____.

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC _____ OR, PERMIT CONDITION # _____ AND/OR PERMIT LIMIT OF _____

THIS INCIDENT MEETS THE DEFINITION OF "MALFUNCTION" AS LISTED ON REVERSE SIDE ? Y N

THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ? Y N

COMPANY:_____PHONE NO. ( )_____
LOCATION: (CITY AND COUNTY)_____
PERMIT NO. _____ AFS PLANT ID: _____ AFS POINT ID: _____ INSP:_____
CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON:_____
_____

DATE/TIME MALFUNCTION STARTED: _____/_____/ 20____ _____ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: _____

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE_____/_____/ 20____ _____ AM/PM

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO2, VOC, OTHER:_____

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____
_____

MEASURES TAKEN TO MINIMIZE EMISSIONS:_____
_____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL* SERVICES:_____
CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS:_____
CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT:_____
INTERIM CONTROL MEASURES: (IF APPLICABLE)_____
_____
_____

MALFUNCTION REPORTED BY:_____TITLE:_____
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY:_____DATE:_____TIME:_____
*SEE PAGE 2

Please note - This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

326 IAC 1-6-1 Applicability of rule

Sec. 1. This rule applies to the owner or operator of any facility required to obtain a permit under 326 IAC 2-5.1 or 326 IAC 2-6.1.

326 IAC 1-2-39 "Malfunction" definition

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner.

***Essential services** are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

_____
_____

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

QUARTERLY REPORT

Source Name: Innovative Casting Technologies, Inc
Source Address: 401 Blue Chip Court, Franklin, Indiana 46131
FESOP Permit No.: M081-30955-00066
Facility: Clean Charge Aluminum Foundry
Parameter: **Total Combined Metal Melt Throughput**
Limit: The total combined metal melt throughput of the Clean Charge Aluminum Foundry, including the scrap and charge handling (CH2), the two (2) electric induction furnaces (TH1 and TH2), pouring and casting (PC2), castings cooling (CC2), castings shakeout (CS2), and core making line (CB2), shall be less than 600 tons 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
	Metal Melt Throughput This Month (tons)	Metal Melt Throughput Previous 11 Months (tons)	12 Month Total Metal Melt Throughput (tons)
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

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

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

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Significant Permit Revision to a Minor Source Operating Permit (MSOP)

Source Description and Location

Source Name:	**Innovative Casting Technology, Inc.**
Source Location:	**401 Blue Chip Court, Franklin, IN 46131-8825**
County:	**Johnson County**
SIC Code:	**3321 (Gray and Ductile Iron Foundries), and 3365 (Aluminum Foundries)**
Operation Permit No.:	**081-30955-00066**
Operation Permit Issuance Date:	**August 22, 2012**
Significant Permit Revision No.:	**081-34423-00066**
Permit Reviewer:	**Deborah Cole**

On April 14, 2014, the Office of Air Quality (OAQ) received an application from Innovative Casting Technologies, Inc. related to a modification to an existing stationary gray and ductile iron, and clean charge aluminum foundry.

Existing Approvals

The source was issued MSOP 081-30955-00066 on August 22nd, 2012. The source has since received Significant Permit Revision No. 081-33097-00066, issued on July 26, 2013.

County Attainment Status

The source is located in Johnson 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 2009 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.
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.

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

(a) Ozone Standards

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

(b) $PM_{2.5}$
U.S. EPA, in the Federal Register Notice 70 FR 943 dated January 5, 2005, has designated Johnson County as nonattainment for $PM_{2.5}$. On March 7, 2005 the Indiana Attorney General's Office, on behalf of IDEM, filed a lawsuit with the Court of Appeals for the District of Columbia Circuit challenging U.S. EPA's designation of nonattainment areas without sufficient data. However, in order to ensure that sources are not potentially liable for a violation of the Clean Air Act, the OAQ is following the U.S. EPA's New Source Review Rule for $PM_{2.5}$ promulgated on May 8, 2008. These rules became effective on July 15, 2008. Therefore, direct $PM_{2.5}$ and SO_2 emissions were reviewed pursuant to the requirements of Nonattainment New Source Review, 326 IAC 2-1.1-5. See the State Rule Applicability – Entire Source section.

(c) Other Criteria Pollutants
Johnson 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

(a) The fugitive emissions of criteria pollutants, hazardous air pollutants, and greenhouse gases are counted toward the determination of 326 IAC 2-6.1 (Minor Source Operating Permits) applicability.

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

Status of the Existing Source

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

This PTE table is from the TSD for M081-33097-00066, issued on July 26, 2013.

Process/ Emission Unit	Potential To Emit of the Entire Source Before Issuance of Revision (tons/year)									
	PM	PM10*	PM2.5	SO_2	NOx	VOC	CO	GHGs as CO_2e**	Total HAPs	Worst Single HAP
Grey & Ductile Iron Foundry										
Scrap & charge handling, heating	1.37	0.82	0.82	0	0	0	0	0	$7.06E^{-03}$	$5.27E^{-03}$ (lead)
Melting	2.06	1.97	1.97	0	0	0	0	0	0.07	0.05 (manganese)
Magnesium Treatment	3.78	3.78	3.78	0	0	$1.05E^{-02}$	0	0	0.09	0.09 (lead)
Pouring and casting	9.63	4.72	4.72	0.05	0.02	0.32	13.74	0	0.05	0.04 (lead)
Castings Cooling	3.21	3.21	3.21	0	0	0	0	0	0	NA
Castings Shakeout (Baghouse SS1)	22.51 (1)	5.13	5.13	0	0	2.75	0	0	0.04	0.03 (lead)
Sand System (Baghouse SS1)		13.01	13.01	0	0	0	0	0	0	NA
Thermal Sand Reclamation System (TSR1) (3)	3.20	4.73	4.73	0	0	0	0	0	0	NA
Core Making (Ovens)	2.06	2.06	2.06	0	1.15	0.20	0	0	1.42	0.72 (MDI)
Clean Charge Aluminum Foundry										
Scrap & charge handling, heating (2)	0.18	0.11	0.11	0	0	0	0	0	$9.23E^{-04}$	$6.89E^{-04}$ (lead)
Melting (2)	0.27	0.26	0.26	0	0	0	0	0	$9.68E^{-03}$	$6.74E^{-03}$ (manganese)
Pouring and casting (2)	1.26	0.62	0.62	$5.99E^{-03}$	$3.00E^{-03}$	0.04	1.80	0	$6.46E^{-03}$	$4.85E^{-03}$ (lead)
Castings Cooling (2)	0.42	0.42	0.42	0	0	0	0	0	0	NA
Castings Shakeout (2)	0.96	0.67	0.67	0	0	0.36	0	0	$4.92E^{-03}$	$3.69E^{-03}$ (lead)
Core Making (Ovens) (2)	0.27	0.27	0.27	0	0.15	0.20	0	0	1.42	0.72 (MDI)

Process/ Emission Unit	Potential To Emit of the Entire Source Before Issuance of Revision (tons/year)									
	PM	PM10*	PM2.5	SO_2	NOx	VOC	CO	GHGs as CO_2e**	Total HAPs	Worst Single HAP
Mold Making	2.06	2.06	2.06	0	1.15	0	0	0	0	NA
Castings Cleaning & Finishing (TB, SB, & GD) (Donaldson Torit) (4)	9.42 (1)	9.15	9.15	0	0	0	0	0	0.14	0.06 (nickel)
Solvent Cleaning	0.61	0.61	0.61	0	0	1.22	0	0	0	NA
Woodworking	5.00	5.00	5.00	0	0	0	0	0	0	NA
Natural Gas Combustion (Parts Washer & TSR1)	0.04	0.17	0.17	0.01	2.19	0.12	1.84	2,644	0.04	0.04 (hexane)
Paved Roads	0.30	0.06	0.01	0	0	0	0	0	0	NA
Total PTE of Entire Source	**68.61**	**58.82**	**58.78**	**0.06**	**4.66**	**5.23**	**17.38**	**2,644**	**3.31**	**1.44 (MDI)**
Title V Major Source Thresholds**	NA	100	100	100	100	100	100	100,000	25	10
PSD Major Source Thresholds**	100	100	NA	100	100	100	100	100,000	NA	NA
Emission Offset/ Nonattainment NSR Major Source Thresholds	NA	NA	100	NA	NA	NA	NA	NA	NA	NA

negl. = negligible NA = not applicable MDI = Methylene bis(phenylisocyanate)
*Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".
**The 100,000 CO2e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.
(1) Limited PTE based upon a lb/hr emission limitation to comply with 326 IAC 2-2 (PSD)
(2) Limited PTE based on 40 CFR 63, Subpart ZZZZZZ, ton per year avoidance limit.
(3)The thermal sand reclamation system is part of the sand system, which serves both the gray and ductile iron foundry and the aluminum foundry.
(4)The table blast machine (TB), shot blast machine (SB), grinding room (GD), table saw (SW) are controlled by one dust collector. Therefore, the existing PM emission limits for these processes have been revised.

Description of Proposed Revision

The Office of Air Quality (OAQ) has reviewed an application, submitted by Innovative Casting Technologies, Inc. on April 14, 2014, requesting the following modifications to its existing permit, M081-30955-00066:

1. A change to the pressure drop range for the Donaldson Torit dust collector, identified as DT, which controls particulate matter for the castings, cleaning and finishing operations, from 3.0 and 5.0 to 2.0 and 8.0 inches of water. The change in pressure drop range will not change the potential to emit for the process or the overall potential to emit.

2. A change of the limited PM emission rate for the thermal sand reclamation system (TSR1), controlled by Baghouse (SS4) from 0.73 pounds per hour to 2.49 pounds per hour. This PM limit is being increased as a result of a non-compliant stack test done at the source in February 28, 2014.

3. The source is subject to 40 CFR Part, 60 Subpart UUU for the sand reclamation system, identified as TSR1, and is required to have a certified visible emissions observer measure and record three 6-minute averages of the opacity of visible to the atmosphere each day of operation and in accordance with Method 9 of Appendix A of Part 60.

   The source performed a stack test at the facility on February 28, 2014 to determine PM emissions for the thermal sand reclamation system (TSR1) and baghouse (SS4). The results of the stack test indicated that the emissions were 2.10 pounds of PM per hour which is equivalent to 9.198 tons per year. In addition, the revised PM limit of 2.49 pounds per hour (10.91 tons/year) shows that the limited PTE is less than 11 tons/year.

The source is requesting that the opacity monitoring requirement for NSPS Subpart UUU be removed from the permit because the sand reclamation process does not exceed eleven (11) tons per year of PM emissions.

To support this claim, the source provided a copy of the document from the U.S. Environmental Protection Agency's Applicability Determination Index dated January 5, 2000. Based on this EPA memo, the US EPA determined that owners and operators of calciners or dryers that emit less than eleven (11) tons of particulate matter per year are exempt from all opacity monitoring requirements contained in 40 CFR, Section 60.734. Pursuant to § 60.734(c) contains a list of the type of calciners and dryers that are specifically exempt from opacity monitoring because their particulate emissions rates were known to be less. EPA continued by saying that it was not necessary to make a case-by-case determination granting an opacity monitoring exemption to each facility subject to Subpart UUU if it can demonstrate that it emits less than eleven (11) tons of particulate per year.

Innovative Casting Technologies, Inc. submitted the results of the stack test performed in February 2014 as proof that the sand reclamation system does not emit greater than eleven (11) tons per year of particulate matter.

Enforcement Issues

There are no pending enforcement actions related to this revision.

Emission Calculations

See Appendix A of this TSD for detailed emission calculations.

Permit Level Determination – MSOP Revision

The following table is used to determine the appropriate permit level under 326 IAC 2-6.1-6. This table reflects the PTE before controls of the proposed revision. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Process/ Emission Unit	PTE of Proposed Revision (tons/year)									
	PM	PM10	PM2.5	SO_2	NOx	VOC	CO	GHGs as CO_2e	Total HAPs	Worst Single HAP
Thermal Sand Reclamation System (TSR1)*	3.20	-	-	-	-	-	-	-	-	-
Thermal Sand Reclamation System (TSR1)**	10.91	-	-	-	-	-	-	-	-	-
Total PTE of Proposed Revision* **	**7.71**	-	-	-	-	-	-	-	-	-

* Emissions based on the existing limit of 0.73 lbs/per hour.
** Emissions based on new limit of 2.49 lbs/hour.
***Difference in emissions from the existing limit and the new limit.

There is no change in the PM10 or PM2.5 limits.

Pursuant to 326 IAC 2-6.1 this MSOP is being revised through an MSOP Significant Permit Revision because the proposed revision is not an Administrative Amendment or Minor Permit Revision and the proposed revision involves a revision of the PSD PM emission rate.

Pursuant to 326 IAC 2-6.1-6(i)(1)(I), this MSOP is revised through Significant Permit Revision because the proposed revision is not an Administrative Amendment or Minor Permit Revision and the proposed revision removes or reduces the compliance monitoring, testing, record keeping, reporting, or its frequency unless the modification is a result of a change in applicability under 326 IAC 2-6.1-6(d)(5).

PTE of the Entire Source After Issuance of the MSOP Revision

The table below summarizes the potential to emit of the entire source, with updated emissions shown as **bold** values and previous emissions shown as ~~strikethrough~~ values.

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of Revision (tons/year)									
	PM	PM10*	PM2.5	SO_2	NOx	VOC	CO	GHGs as CO_2e**	Total HAPs	Worst Single HAP
Grey & Ductile Iron Foundry										
Scrap & charge handling, heating	1.37	0.82	0.82	0	0	0	0	0	$7.06E^{-03}$	$5.27E^{-03}$ (lead)
Melting	2.06	1.97	1.97	0	0	0	0	0	0.07	0.05 (manganese)
Magnesium Treatment	3.78	3.78	3.78	0	0	$1.05E^{-02}$	0	0	0.09	0.09 (lead)
Pouring and casting	9.63	4.72	4.72	0.05	0.02	0.32	13.74	0	0.05	0.04 (lead)
Castings Cooling	3.21	3.21	3.21	0	0	0	0	0	0	NA
Castings Shakeout (Baghouse SS1)	22.51 (1)	5.13	5.13	0	0	2.75	0	0	0.04	0.03 (lead)
Sand System (Baghouse SS1)		13.01	13.01	0	0	0	0	0	0	NA
Thermal Sand Reclamation System (TSR1) (3)	~~3.20~~ **10.91**	4.73	4.73	0	0	0	0	0	0	NA
Core Making (Ovens)	2.06	2.06	2.06	0	1.15	0.20	0	0	1.42	0.72 (MDI)
Clean Charge Aluminum Foundry										
Scrap & charge handling, heating (2)	0.18	0.11	0.11	0	0	0	0	0	$9.23E^{-04}$	$6.89E^{-04}$ (lead)
Melting (2)	0.27	0.26	0.26	0	0	0	0	0	$9.68E^{-03}$	$6.74E^{-03}$ (manganese)
Pouring and casting (2)	1.26	0.62	0.62	$5.99E^{-03}$	$3.00E^{-03}$	0.04	1.80	0	$6.46E^{-03}$	$4.85E^{-03}$ (lead)
Castings Cooling (2)	0.42	0.42	0.42	0	0	0	0	0	0	NA
Castings Shakeout (2)	0.96	0.67	0.67	0	0	0.36	0	0	$4.92E^{-03}$	$3.69E^{-03}$ (lead)
Core Making (Ovens) (2)	0.27	0.27	0.27	0	0.15	0.20	0	0	1.42	0.72 (MDI)
Mold Making	2.06	2.06	2.06	0	1.15	0	0	0	0	NA
Castings Cleaning & Finishing (TB, SB, & GD) (Donaldson Torit) (4)	9.42 (1)	9.15	9.15	0	0	0	0	0	0.14	0.06 (nickel)
Solvent Cleaning	0.61	0.61	0.61	0	0	1.22	0	0	0	NA
Woodworking	5.00	5.00	5.00	0	0	0	0	0	0	NA
Natural Gas Combustion (Parts Washer & TSR1)	0.04	0.17	0.17	0.01	2.19	0.12	1.84	2,644	0.04	0.04 (hexane)
Paved Roads	0.30	0.06	0.01	0	0	0	0	0	0	NA
Total PTE of Entire Source	**~~68.61~~ 76.32**	**58.82**	**58.78**	**0.06**	**4.66**	**5.23**	**17.38**	**2,644**	**3.31**	**1.44 (MDI)**
Title V Major Source Thresholds**	NA	100	100	100	100	100	100	100,000	25	10
PSD Major Source Thresholds**	100	100	NA	100	100	100	100	100,000	NA	NA
Emission Offset/ Nonattainment NSR Major Source Thresholds	NA	NA	100	NA	NA	NA	NA	NA	NA	NA

negl. = negligible NA = not applicable MDI = Methylene bis(phenylisocyanate)
*Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".
**The 100,000 CO2e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.
(1) Limited PTE based upon a lb/hr emission limitation to comply with 326 IAC 2-2 (PSD)
(2) Limited PTE based on 40 CFR 63, Subpart ZZZZZZ, ton per year avoidance limit.
(3)The thermal sand reclamation system is part of the sand system, which serves both the gray and ductile iron foundry and the aluminum foundry.

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of Revision (tons/year)									
	PM	PM10*	PM2.5	SO_2	NOx	VOC	CO	GHGs as CO_2e**	Total HAPs	Worst Single HAP
(4)The table blast machine (TB), shot blast machine (SB), grinding room (GD), table saw (SW) are controlled by one dust collector. Therefore, the existing PM emission limits for these processes have been revised.										

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

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of Revision (tons/year)									
	PM	PM10*	PM2.5	SO_2	NOx	VOC	CO	GHGs as CO_2e**	Total HAPs	Worst Single HAP
Grey & Ductile Iron Foundry										
Scrap & charge handling, heating	1.37	0.82	0.82	0	0	0	0	0	$7.06E^{-03}$	$5.27E^{-03}$ (lead)
Melting	2.06	1.97	1.97	0	0	0	0	0	0.07	0.05 (manganese)
Magnesium Treatment	3.78	3.78	3.78	0	0	$1.05E^{-02}$	0	0	0.09	0.09 (lead)
Pouring and casting	9.63	4.72	4.72	0.05	0.02	0.32	13.74	0	0.05	0.04 (lead)
Castings Cooling	3.21	3.21	3.21	0	0	0	0	0	0	NA
Castings Shakeout (Baghouse SS1)	22.51 (1)	5.13	5.13	0	0	2.75	0	0	0.04	0.03 (lead)
Sand System (Baghouse SS1)		13.01	13.01	0	0	0	0	0	0	NA
Thermal Sand Reclamation System (TSR1) (3)	10.91	4.73	4.73	0	0	0	0	0	0	NA
Core Making (Ovens)	2.06	2.06	2.06	0	1.15	0.20	0	0	1.42	0.72 (MDI)
Clean Charge Aluminum Foundry										
Scrap & charge handling, heating (2)	0.18	0.11	0.11	0	0	0	0	0	$9.23E^{-04}$	$6.89E^{-04}$ (lead)
Melting (2)	0.27	0.26	0.26	0	0	0	0	0	$9.68E^{-03}$	$6.74E^{-03}$ (manganese)
Pouring and casting (2)	1.26	0.62	0.62	$5.99E^{-03}$	$3.00E^{-03}$	0.04	1.80	0	$6.46E^{-03}$	$4.85E^{-03}$ (lead)
Castings Cooling (2)	0.42	0.42	0.42	0	0	0	0	0	0	NA
Castings Shakeout (2)	0.96	0.67	0.67	0	0	0.36	0	0	$4.92E^{-03}$	$3.69E^{-03}$ (lead)
Core Making (Ovens) (2)	0.27	0.27	0.27	0	0.15	0.20	0	0	1.42	0.72 (MDI)
Mold Making	2.06	2.06	2.06	0	1.15	0	0	0	0	NA
Castings Cleaning & Finishing (TB, SB, & GD) (Donaldson Torit) (4)	9.42 (1)	9.15	9.15	0	0	0	0	0	0.14	0.06 (nickel)
Solvent Cleaning	0.61	0.61	0.61	0	0	1.22	0	0	0	NA
Woodworking	5.00	5.00	5.00	0	0	0	0	0	0	NA
Natural Gas Combustion (Parts Washer & TSR1)	0.04	0.17	0.17	0.01	2.19	0.12	1.84	2,644	0.04	0.04 (hexane)
Paved Roads	0.30	0.06	0.01	0	0	0	0	0	0	NA
Total PTE of Entire Source	**76.32**	**58.82**	**58.78**	**0.06**	**4.66**	**5.23**	**17.38**	**2,644**	**3.31**	**1.44 (MDI)**
Title V Major Source Thresholds**	NA	100	100	100	100	100	100	100,000	25	10
PSD Major Source Thresholds**	100	100	NA	100	100	100	100	100,000	NA	NA
Emission Offset/ Nonattainment NSR Major Source Thresholds	NA	NA	100	NA	NA	NA	NA	NA	NA	NA

negl. = negligible NA = not applicable MDI = Methylene bis(phenylisocyanate)
*Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".
**The 100,000 CO2e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of Revision (tons/year)									
	PM	PM10*	PM2.5	SO_2	NOx	VOC	CO	GHGs as CO_2e**	Total HAPs	Worst Single HAP
(1) Limited PTE based upon a lb/hr emission limitation to comply with 326 IAC 2-2 (PSD) (2) Limited PTE based on 40 CFR 63, Subpart ZZZZZZ, ton per year avoidance limit. (3)The thermal sand reclamation system is part of the sand system, which serves both the gray and ductile iron foundry and the aluminum foundry. (4)The table blast machine (TB), shot blast machine (SB), grinding room (GD), table saw (SW) are controlled by one dust collector. Therefore, the existing PM emission limits for these processes have been revised.										

MSOP Status

(a) This revision to an existing Title V minor stationary source will not change the minor status, because the uncontrolled/unlimited potential to emit criteria pollutants from the entire source will still be less than the Title V major source threshold levels. Therefore, the source will still be subject to the provisions of 326 IAC 2-6.1 (MSOP).

(b) This revision will not change the minor status of the source, because the uncontrolled/unlimited potential to emit of any single HAP will still be less than ten (10) tons per year and the PTE of a combination of HAPs will still be less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-7.

(c) This revision will not change the minor status of the source, because the uncontrolled/unlimited potential to emit greenhouse gases (GHGs) will still be less than the Title V subject to regulation threshold of one hundred thousand (100,000) tons of CO_2 equivalent emissions (CO_2e) per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.

Federal Rule Applicability Determination

New Source Performance Standards (NSPS)

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

National Emission Standards for Hazardous Air Pollutants (NESHAP)

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

Compliance Assurance Monitoring (CAM)

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

State Rule Applicability Determination

The following state rules are applicable to the proposed revision:

(a) 326 IAC 2-6.1 (Minor Source Operating Permits (MSOP))
MSOP applicability is discussed under the Permit Level Determination – MSOP section above.

(b) 326 IAC 2-2 (Prevention of Significant Deterioration(PSD))
This modification to an existing PSD minor stationary source will not change the PSD minor status of the entire source, because the potential to emit of all attainment regulated pollutants from the entire source will continue to be less than the PSD major source threshold levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply. See PTE of the Entire Source After Issuance of the MSOP Revision Section above.

(c) 326 IAC 2-3 (Emission Offset) 326 IAC 2-1.1-5 (Nonattainment New Source Review)
This modification to an existing Emission Offset minor stationary source will not change the Emission Offset minor status, because the potential to emit of all nonattainment regulated pollutants from the entire source will continue to be less than 100 tons per year. Therefore, pursuant to 326 IAC 2-3, the Emission Offset requirements do not apply. See PTE of the Entire Source After Issuance of the MSOP Revision Section above.

This modification to an existing minor stationary source under 326 IAC 2-1.1-5 (Nonattainment New Source Review) will not change the minor status, because the potential to emit of PM2.5 from the entire source will continue to be less than 100 tons per year. Therefore, pursuant to 326 IAC 2-1.1-5, the Nonattainment New Source Review requirements do not apply. See PTE of the Entire Source After Issuance of the MSOP Revision Section above.

(d) 326 IAC 2-6 (Emission Reporting)
Pursuant to 326 IAC 2-6-1, this source is not subject to this rule, because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not located in Lake, Porter, or LaPorte County, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, 326 IAC 2-6 does not apply.

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

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

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

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

Compliance Determination

The existing compliance requirements will not change as a result of this revision. The source shall continue to comply with the applicable requirements and permit conditions as contained in MSOP No: 081-30955-00066, issued on August 22, 2012

Proposed Changes

The following changes listed below are due to the proposed revision. Deleted language appears as ~~strikethrough~~ text and new language appears as **bold** text:

SECTION D.3 EMISSION UNIT OPERATION CONDITIONS

...

Compliance Monitoring Requirements [326 IAC 2-6.1-5(b)(2)]

D.3.6 Parametric Monitoring

(a) The Permittee shall record the pressure drop across the Donaldson Torit dust collector, used in conjunction with the Gibson steel shot table blast machine, Diso Goff steel shot blast machine, Grinding Room, and Table Saw, at least once per day when these processes are in operation. When, for any one reading, the pressure drop across the dust collector is outside of the normal range, the Permittee shall take a reasonable response. The normal range for this unit is a pressure drop between ~~3.0 and 5.0~~ **2.0 and 8.0** inches of water, unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above-mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

(b) 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 or replaced at least once every six (6) months

...

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

D.1.1 PSD Minor Limits [326 IAC 2-2]

In order to render 326 IAC 2-2 not applicable, PM emissions from the following emission unit(s) shall not exceed the pound per hour (lb/hr) emission limits listed in the table below:

Unit ID	Unit Description	Control Device	PM Emission Limit (lbs/hr)
CS1	Castings shakeout (Iron foundry)	SS1 Baghouse	5.14
SS	Sand System (shared)		
TSR1	Thermal sand reclamation system	SS4 Baghouse	~~0.73~~ **2.49**

...

SECTION E.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(c) ***Sand System****:*

One (1) Sand System, identified as SS, constructed in 2008 and approved for modification in 2013, serving both the Grey & Ductile Iron Foundry and the Clean Charge Aluminum Foundry, and consisting of the following:

(4) One (1) natural gas-fired thermal sand reclamation system, identified as TSR1, approved for construction in 2013, with a maximum heat input capacity of 3.0 MMBtu/hr and maximum sand throughput of 2.0 tons per hour, equipped with one (1) baghouse, identified as SS4, for particulate control, and exhausting to stack # S4

Under 40 CFR 60, Subpart UUU, the natural gas-fired thermal sand reclamation system is an affected facility.

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

New Source Performance Standards (NSPS) Requirements [326 IAC 12-1]

E.2.1 General Provisions Relating to NSPS [326 IAC 12-1] [40 CFR 60, Subpart A]

(a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the applicable provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference as 326 IAC 12-1, except as otherwise specified in 40 CFR 60, Subpart UUU.

(b) Pursuant to 40 CFR 60.10, the Permittee shall submit all required notifications and reports to:

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

E.2.2 New Source Performance Standards (NSPS) for Calciners and Dryers in Mineral Industries [40 CFR Part 60, Subpart UUU] [326 IAC 12]

The Permittee shall comply with the applicable provisions of 40 CFR Part 60, Subpart UUU (included as Attachment B of this permit), which are incorporated by reference as 326 IAC 12, except as otherwise specified in 40 CFR Part 60, Subpart UUU:

(a) 40 CFR 60.730(a) and (c)
(b) 40 CFR 60.731
(c) 40 CFR 60.732
(d) 40 CFR 60.733
(e) 40 CFR 60.734(a), (c) and (d)
(f) 40 CFR 60.735(a), (c)(1) and (2), and (d)
(g) 40 CFR 60.736(a) and (b)
(h) 40 CFR 60.737

Compliance with Condition D.1.1 (PSD Minor Limits) for the thermal sand reclamation system, identified as TSR1, shall also render the opacity monitoring requirements contained in 40 CFR 60.734 not applicable.

Conclusion and Recommendation

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant. An application for the purposes of this review was received on April 14, 2014.

The construction and operation of this proposed revision shall be subject to the conditions of the attached proposed MSOP Significant Permit Revision No. 081-34423-00066. The staff recommends to the Commissioner that this MSOP Significant Permit Revision be approved.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to Deborah Cole 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) 234-5377 or toll free at 1-800-451-6027 extension 4-5377.

(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
Emission Summary of Modification

Company Name: Innovative Casting Technologies, Inc.
Address City IN Zip: 401 Blue Chip Court, Franklin, IN 46131-8825
Permit No.: 081-33097-00066
Significant Permit Revision: 081-34423-00066
Reviewer: Deborah Cole

Unlimited Potential to Emit of Modification (tons/year)										
Process	**PM**	**PM10**	**PM2.5**	**SO2**	**NOx**	**VOC**	**CO**	**GHGs as CO2e**	**Total HAP**	**Worst Single HAP**
Thermal Sand Reclamation System (TSR1)	108.62	0.00	0.00	0	0	0	0	0	0	0
Total	**108.62**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0**	**0.00**	**0.00**

Appendix A: Emissions Calculations
Emission Summary

Company Name: Innovative Casting Technologies, Inc.
Address City IN Zip: 401 Blue Chip Court, Franklin, IN 46131-8825
Permit No.: 081-33097-00066
Significant Permit Revision: 081-34423-00066
Reviewer: Deborah Cole

Unlimited/Uncontrolled Potential to Emit of the Entire Source (tons/year)

Emission Unit	PM	PM10	PM2.5	SO2	NOx	VOC	CO	GHGs as CO2e	Total HAPs	Worst Single HAP	
Iron Foundry											
Scrap & charge handling, heating	1.37	0.82	0.82	0	0	0	0	0	7.06E-03	5.27E-03	(lead)
Melting	2.06	1.97	1.97	0	0	0	0	0	0.07	0.05	(manganese)
Magnesium Treatment	3.78	3.78	3.78	0	0	0.01	0	0	0.09	0.09	(lead)
Pouring/Casting	9.62	4.72	4.72	0.05	0.02	0.32	13.74	0	0.05	0.04	(lead)
Castings Cooling	3.21	3.21	3.21	0	0	0	0	0	0	NA	
Castings Shakeout	7.33	5.13	5.13	0	0	2.75	0	0	0.04	0.03	(lead)
Sand System (shared)	86.72	13.01	13.01	0	0	0	0	0	0	NA	
Thermal Sand Reclamation System (TSR1)	108.62	4.73	4.73	0	0	0	0	0	0	NA	
Core Making (Ovens)	2.06	2.06	2.06	0	1.15	0.20	0	0	1.42	0.72	(MDI)
Aluminum Foundry											
Scrap & charge handling, heating	0.95	0.57	0.57	0	0	0	0	0	4.86E-03	3.63E-03	(lead)
Melting	1.42	1.36	1.36	0	0	0	0	0	0.05	0.04	(manganese)
Pouring/Casting	6.62	3.25	3.25	0.03	0.02	0.22	9.46	0	0.03	0.03	(lead)
Castings Cooling	2.21	2.21	2.21	0	0	0	0	0	0	NA	
Castings Shakeout	5.05	3.53	3.53	0	0	1.89	0	0	0.03	0.02	(lead)
Core Making (Ovens)	1.42	1.42	1.42	0	0.79	0.20	0	0	1.42	0.72	(MDI)
Mold Making	2.06	2.06	2.06	0	1.15	0	0	0	0	NA	
Castings Cleaning & Finishing (TB, SB, & GD)	93.08	9.15	9.15	0	0	0	0	0	0.14	0.06	(nickel)
Solvent Cleaning	0.61	0.61	0.61	0	0	1.22	0	0	0	NA	
Woodworking*	5.00	5.00	5.00	0	0	0	0	0	0	NA	
Natural Gas Combustion (Parts Washers and TSR1)	0.04	0.17	0.17	0.01	2.19	0.12	1.84	2,644	0.04	0.04	(hexane)
Paved Roads	0.30	0.06	0.01	0	0	0	0	0	0	NA	
Total	**343.54**	**68.81**	**68.76**	**0.09**	**5.31**	**6.94**	**25.04**	**2,644**	**3.40**	**1.44**	**(MDI)**

Total emissions based on rated capacity at 8,760 hours/year.

* Woodworking activities in the pattern shop include sawing, cutting, routing, and planing, for the construction of forms for use in the casting operation. Based on information submitted by the source, potential emissions are estimated at 5.0 tons of PM per year. To form a conservative estimate, it is assumed that PM10 and PM2.5 emissions are equal to PM emissions.

Potential To Emit of the Entire Source after Issuance of the MSOP (tons/year)

Emission Unit	PM	PM10	PM2.5	SO2	NOx	VOC	CO	GHGs as CO2e	Total HAPs	Worst Single HAP	
Grey & Ductile Iron Foundry											
Scrap & charge handling, heating	1.37	0.82	0.82	0	0	0	0	0	7.06E-03	5.27E-03	(lead)
Melting	2.06	1.97	1.97	0	0	0	0	0	0.07	0.05	(manganese)
Magnesium Treatment	3.78	3.78	3.78	0	0	1.05E-02	0	0	0.09	0.09	(lead)
Pouring/Casting	9.62	4.72	4.72	0.05	0.02	0.32	13.74	0	0.05	0.04	(lead)
Castings Cooling	3.21	3.21	3.21	0	0	0	0	0	0	NA	
Castings Shakeout [1]	22.51	5.13	5.13	0	0	2.75	0	0	0.04	0.03	(lead)
Sand System (shared) [1]		13.01	13.01	0	0	0	0	0	0	NA	
Thermal Sand Reclamation System (TSR1)[1]	10.91	4.73	4.73	0	0	0	0	0	0	NA	
Core Making (Ovens)	2.06	2.06	2.06	0	1.15	0.20	0	0	1.42	0.72	(MDI)
Aluminum Foundry											
Scrap & charge handling, heating [2]	0.18	0.11	0.11	0	0	0	0	0	9.23E-04	6.89E-04	(lead)
Melting [2]	0.27	0.26	0.26	0	0	0	0	0	9.68E-03	6.74E-03	(manganese)
Pouring/Casting [2]	1.26	0.62	0.62	5.99E-03	3.00E-03	0.04	1.80	0	6.46E-03	4.85E-03	(lead)
Castings Cooling [2]	0.42	0.42	0.42	0	0	0	0	0	0	NA	
Castings Shakeout [2]	0.96	0.67	0.67	0	0	0.36	0	0	4.92E-03	3.69E-03	(lead)
Core Making (Ovens) [2]	0.27	0.27	0.27	0	0.15	0.20	0	0	1.42	0.72	(MDI)
Mold Making	2.06	2.06	2.06	0	1.15	0	0	0	0	NA	
Castings Cleaning & Finishing (TB, SB, GD, and SW) [1]	9.42	9.15	9.15	0	0	0	0	0	0.14	0.06	(nickel)
Solvent Cleaning	0.61	0.61	0.61	0	0	1.22	0	0	0	NA	
Woodworking [3]	5.00	5.00	5.00	0	0	0	0	0	0	NA	
Natural Gas Combustion (Parts Washers and TSR1)	0.04	0.17	0.17	0.01	2.19	0.12	1.84	2,644	0.04	0.04	(hexane)
Paved Roads	0.30	0.06	0.01	0	0	0	0	0	0	NA	
Total	**76.32**	**58.82**	**58.78**	**0.06**	**4.66**	**5.23**	**17.38**	**2,644**	**3.31**	**1.44**	**(MDI)**

Total emissions based on rated capacity at 8,760 hours/year.

(1) Limited PM PTE based on lb/hr emission limitations to comply with 326 IAC 2-2 (PSD) (see page 5 and 11 of this appendix for more details). All other emission units reflect the unlimited/uncontrolled potential to emit.

(2) Limited PTE based on 40 CFR 63, Subpart ZZZZZZ, ton per year avoidance limit.

(3) Woodworking activities in the pattern shop include sawing, cutting, routing, and planing, for the construction of forms for use in the casting operation. Based on information submitted by the source, potential emissions are estimated at 5.0 tons of PM per year. To form a conservative estimate, it is assumed that PM10 and PM2.5 emissions are equal to PM emissions.

Appendix A: Emission Calculations
Grey Iron Foundry Process Emissions from the
Grey & Ductile Iron Foundry

Company Name: Innovative Casting Technologies, Inc.
Address City IN Zip: 401 Blue Chip Court, Franklin, IN 46131-8825
Permit No.: 081-33097-00066
Significant Permit Revision: 081-34423-00066
Reviewer: Deborah Cole

	Maximum Annual Melt Throughput (ton/yr)
	4,581

Process: CH1 (Inductotherm 1 & 2)	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Scrap and charge handling, heating	0.523	PM	0.60	1.37	none	n/a	1.37
Source of Criteria Pollutant Factors:	*Bottlenecked by Iron Casting Shakeout capacity.*	PM-10	0.36	0.82	none	n/a	0.82
SCC# 3-04-003-15		SO2	0	0	none	n/a	0
FIRE 6.01		NOx	0	0	none	n/a	0
AP-42 Ch. 12.10		VOC	0	0	none	n/a	0
Fifth edition 1995		CO	0	0	none	n/a	0
		arsenic	8.0E-05	1.83E-04	none	n/a	1.83E-04
		cadmium	4.0E-05	9.16E-05	none	n/a	9.16E-05
		chromium	2.3E-04	5.27E-04	none	n/a	5.27E-04
		cobalt	2.0E-05	4.58E-05	none	n/a	4.58E-05
		lead	2.3E-03	5.27E-03	none	n/a	5.27E-03
		manganese	negl.	negl.	none	n/a	negl.
		nickel	4.0E-04	9.16E-04	none	n/a	9.16E-04
		selenium	1.0E-05	2.29E-05	none	n/a	2.29E-05

Process: IND1 & IND2 (Inductotherm 1 & 2)	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Melting - Electric Induction Furnace	0.523	PM	0.90	2.06	none	n/a	2.06
Source of Criteria Pollutant Factors:	*Bottlenecked by Iron Casting Shakeout capacity.*	PM-10	0.86	1.97	none	n/a	1.97
EPA SCC# 3-04-003-03		SO2	0	0	none	n/a	0
FIRE 6.01		NOx	0	0	none	n/a	0
AP-42 Ch. 12.10		VOC	0	0	none	n/a	0
Fifth edition 1995		CO	0	0	none	n/a	0
		arsenic	8.00E-05	1.83E-04	none	n/a	1.83E-04
		cadmium	4.00E-05	9.16E-05	none	n/a	9.16E-05
		chromium	2.30E-04	5.27E-04	none	n/a	5.27E-04
		cobalt	2.00E-05	4.58E-05	none	n/a	4.58E-05
		lead	9.00E-03	0.02	none	n/a	0.02
	FIRE 6.01	manganese	2.25E-02	0.05	none	n/a	0.05
		nickel	4.00E-04	9.16E-04	none	n/a	9.16E-04
	FIRE 6.01	selenium	1.00E-05	2.29E-05	none	n/a	2.29E-05

Process: DT1 (Inductotherm 1 & 2)	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Magnesium Treatment	0.480	PM	1.80	3.78	none	n/a	3.78
Source of Criteria		PM-10	1.80	3.78	none	n/a	3.78
Pollutant Factors:	*Dependent on max furnace capacity for ductile iron*	SO2	0	0	none	n/a	0
FIRE 6.01		NOx	0	0	none	n/a	0
SCC# 3-04-003-21		VOC	5.00E-03	0.01	none	n/a	0.01
AP-42 Ch 12.10		CO	0	0	none	n/a	0
Fifth edition 1995		lead	0.04	0.09	none	n/a	0.09

Allowable Emissions:
The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than 30 tons per hour:

P= 0.48 tons/hr
limit = 4.1 x (0.48 ^0.67) = 2.51 lb/hr (allowable)

with potential:
3.78 tons/yr x 2000 lb/ton / 8760 hr/yr = 0.86 lb/hr (will comply)

Process: PC1	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Pouring/Casting	0.523	PM	4.20	9.62	none	n/a	9.62
Source of Criteria		PM-10	2.06	4.72	none	n/a	4.72
Pollutant Factors:	FIRE 5.0	SO2	0.02	0.05	none	n/a	0.05
FIRE 6.01	FIRE 5.0	NOx	0.01	0.02	none	n/a	0.02
SCC# 3-04-003-18	FIRE 5.0	VOC	0.14	0.32	none	n/a	0.32
(except as noted)		CO**	6.00	13.74	none	n/a	13.74
	Bottlenecked by Iron Casting Shakeout capacity.	arsenic	5.50E-04	0.00	none	n/a	1.26E-03
		cadmium	2.50E-04	0.00	none	n/a	5.73E-04
		chromium	1.60E-03	0.00	none	n/a	3.67E-03
		cobalt	1.30E-04	2.98E-04	none	n/a	2.98E-04
		lead	1.62E-02	0.04	none	n/a	0.04
		manganese	negl.	negl.	none	n/a	negl.
		nickel	2.81E-03	0.01	none	n/a	0.01
		selenium	4.00E-05	9.16E-05	none	n/a	9.16E-05

** The August 11, 2006 Indiana Cast Metals Association memo contained the CO emission factor of 6.0 lbs/ton of metal poured for the combined pouring, cooling, and shakeout processes.

Allowable Emissions:
The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than 30 tons per hour:

P= 6.17 tons/hr
limit = 4.1 x (6.17 ^0.67) = 13.88 lb/hr (allowable)

with potential:
9.62 tons/yr x 2000 lb/ton / 8760 hr/yr = 2.20 lb/hr (will comply)

Process: **CC1**	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Castings Cooling	0.523	PM	1.40	3.21	none	n/a	3.21
Source of Criteria		PM-10	1.40	3.21	none	n/a	3.21
Pollutant Factors:	**Bottlenecked by*	SO2	0	0	none	n/a	0
FIRE 6.01	*Iron Casting*	NOx	0	0	none	n/a	0
SCC# 3-04-003-25	*Shakeout capacity.*	VOC	0	0	none	n/a	0
		CO**	---	0	none	n/a	0
		Lead	---	0	none	n/a	0

** See Pouring and Casting for CO emissions

Allowable Emissions:
The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than 30 tons per hour:

P= 6.17 tons/hr
limit = 4.1 x (6.17 ^0.67) = 13.88 lb/hr (allowable)

with potential:
3.21 tons/yr x 2000 lb/ton / 8760 hr/yr = 0.73 lb/hr (will comply)

Process: **CS1**	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Castings Shakeout	0.523	PM	3.20	7.33	baghouse	99%	0.07
Source of Criteria		PM-10	2.24	5.13	baghouse	99%	0.05
Pollutant Factors:	**This process*	SO2	0	0	none	n/a	0
FIRE 6.01	*bottlenecks all*	NOx	0	0	none	n/a	0
SCC# 3-04-003-31	*up and downstream*	VOC	1.20	2.75	none	n/a	2.75
AP-42 Ch. 12.10	processes	CO**	---	0	none	n/a	0
Fifth edition 1995		arsenic	4.20E-04	0.00	baghouse	99%	9.62E-06
		cadmium	1.90E-04	4.35E-04	baghouse	99%	4.35E-06
		chromium	1.22E-03	0.00	baghouse	99%	2.79E-05
		cobalt	1.00E-04	2.29E-04	baghouse	99%	2.29E-06
		lead	1.23E-02	0.03	baghouse	99%	2.82E-04
		manganese	negl.	negl.	baghouse	99%	negl.
		nickel	2.14E-03	0.00	baghouse	99%	4.90E-05
		selenium	3.00E-05	6.87E-05	baghouse	99%	6.87E-07

*Note: See the MSOP and PSD Limitations Section below.
** See Pouring and Casting for CO emissions

Allowable Emissions:
The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than 30 tons per hour:

P= 6.17 tons/hr
limit = 4.1 x (6.17 ^0.67) = 13.88 lb/hr (allowable)

with potential:
7.33 tons/yr x 2000 lb/ton / 8760 hr/yr = 1.67 lb/hr (will comply)

Process: **CB1**	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Core Making (ovens)	0.523	PM	0.90	2.06	none	n/a	2.06
Source of Criteria		PM-10	0.90	2.06	none	n/a	2.06
Pollutant Factors:	**Bottlenecked by*	SO2	0	0	none	n/a	0
FIRE 6.01	*Iron Casting*	NOx	0.50	1.15	none	n/a	1.15
SCC# 3-04-003-53	*Shakeout capacity.*	VOC	---	---	none	n/a	---
		CO	---	---	none	n/a	---
		lead	---	---	none	n/a	---

Notes:
*This line is capable of processing either gray and/or ductile iron. Therefore, since this line is limited by a single power supply, for operational flexibility purposes the emissions from this line are based on the worst-case scenario where only gray iron is processed.
Ef = Emission factor
1 ton = 2000 lbs
In the absence of valid AP 42 emission factors, it is assumed that PM2.5 emissions = PM10 emissions.

Methodology:
Maximum Annual Melt Throughput (ton/yr) = [Rate (tons grey iron/hr) * 8760 hrs/yr]
Ebc = Potential Emissions before controls = Rate (units/hr) x Ef(lbs/unit) x 8760 hrs/yr / 2000 lbs/hr
Eac = Potential Emissions after controls = (1-efficiency/100) x Ebc

Maximum Annual Sand Throughput (ton/yr)
48,180

Process: **SS** (Sand System)	Rate (tons sand/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Sand Handling	5.50	PM	3.6	86.72	baghouse	99%	0.87
Source of Criteria		PM-10	0.54	13.01	baghouse	99%	0.13
Pollutant Factors:	**Bottlenecked by*	SO2	---	---	none	n/a	---
FIRE 6.01	*Iron Casting*	NOx	---	---	none	n/a	---
	Shakeout capacity.	VOC	---	---	none	n/a	---
EPA SCC# 3-04-003-50		CO	---	---	none	n/a	---

*Note: See the PSD Limitations Section below.

The sand system is comprised of the sand handling, mechanical sand reclamation, and sand mixing (including both core and mold mixing) operations, and is common to both foundry lines.

Allowable Emissions:
The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than 30 tons per hour:

P= 5.50 tons/hr

limit = 4.1 x (5.5 ^0.67) = 12.85 lb/hr (allowable)

with potential:
86.72 tons/yr x 2000 lb/ton / 8760 hr/yr = 19.80 lb/hr (will not comply)

with controlled:
0.87 tons/yr x 2000 lb/ton / 8760 hr/yr = 0.20 lb/hr (will comply)

Notes:
Ef = Emission factor
1 ton = 2000 lbs
In the absence of valid AP 42 emission factors, it is assumed that PM2.5 emissions = PM10 emissions.

Methodology:
Maximum Annual Sand Throughput (ton/yr) = [Rate (tons sand/hr) * 8760 hrs/yr]
Ebc = Potential Emissions before controls = Rate (units/hr) x Ef(lbs/unit) x 8760 hrs/yr / 2000 lbs/hr
Eac = Potential Emissions after controls = (1-efficiency/100) x Ebc

Process: **TSR1** (Sand System)	Rate (tons sand/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Thermal Sand Reclamation System	2.00	PM	12.40	108.62	baghouse	90%	10.86
Source of Criteria		PM-10	0.54	4.73	baghouse	90%	0.47
Pollutant Factors:		SO2	---	---	none	n/a	---
FIRE 6.01		NOx	---	---	none	n/a	---
		VOC	---	---	none	n/a	---
EPA SCC# 3-04-003-50		CO	---	---	none	n/a	---

*Note: See the PSD Limitations Section below.

Notes:

PM Emission Factor based off of most recent stack test on February 28, 2014. Method 5 mass emissions were 0.025 gr/dscf or 1.048 lb/hr.

40 CFR 63 Subpart UUU limit = 0.040 gr/dscf or 3.31 lb/hr

40 CFR 63 Subpart UUU hourly limit = (0.040 gr/dscf) x (9682.28 dscf/min) x (1 lb/7,000 grains) x (60 minutes/hour) = 3.31 lb/hr

PM increase with requested limit = 5.256 tpy - 3.15 tpy = 2.106 tpy

Allowable Emissions:
The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than 30 tons per hour:

P= 2.00 tons/hr

limit = 4.1 x (2 ^0.67) = 6.52 lb/hr (allowable)

with potential:
108.62 tons/yr x 2000 lb/ton / 8760 hr/yr = 24.80 lb/hr (will not comply)

with controlled:
10.86 tons/yr x 2000 lb/ton / 8760 hr/yr = 2.48 lb/hr (will comply)

Notes:
Ef = Emission factor
1 ton = 2000 lbs
In the absence of valid AP 42 emission factors, it is assumed that PM2.5 emissions = PM10 emissions.
Rate provided by manufacturer

Methodology:
Maximum Annual Sand Throughput (ton/yr) = [Rate (tons sand/hr) * 8760 hrs/yr]
Ebc = Potential Emissions before controls = Rate (units/hr) x Ef(lbs/unit) x 8760 hrs/yr / 2000 lbs/hr
Eac = Potential Emissions after controls = (1-efficiency/100) x Ebc

PSD Limitations

Process:	Control Device	Stack	Limited PM Emission Rate (lb/hr)	Limited PM Emissions (ton/yr)	Minimum Control Efficiency required for compliance (%)	Controlled PM Emissions (ton/yr)
Line 1 Castings Shakeout (CS1)*	Baghouse (SS1)	S3	5.14	22.51	76.1%	0.94
Sand System (SS)*						
Thermal Sand Reclamation System (TSR1)**	Baghouse (SS4)	S4	2.49	10.91	90.0%	10.86

Notes:
*A control efficiency of at least 76.1% is required for the source to comply with the PSD limitation. Therefore, testing is required to confirm proper operation of the device and to ensure compliance with the limit.
*A control efficiency of at least 89.9% is required for the source to comply with the PSD limitation. Therefore, testing is required to confirm proper operation of the device and to ensure compliance with the limit.

Methodology:
Limited Emission Rate (lbs/hr) provided by the source.
Limited Emissions = Σ (Limited Emission Rate (lb/hr) x 8760 hrs/yr / 2000 lbs/ton)
Controlled Emissions = Σ [(Unlimited Emission Rate (lb/hr) x 8760 hrs/yr / 2000 lbs/ton) * (1 - Control Efficiency (%))]

Company Name: **Innovative Casting Technologies, Inc.**
Address City IN Zip: **401 Blue Chip Court, Franklin, IN 46131-8825**
Permit No.: **081-33097-00066**
Significant Permit Revision: **081-34423-00066**
Reviewer: **Deborah Cole**

Pollutant	Method 5 Mass Emisson Results	Air Flow	Ebc	Eac	Requested PM Limit	Requested PM Limit
	(gr/dscf)	(dscf/minute)	(lb/hr)	(lb/hr)	(lb/hr)	(tons/yr)
PM	0.03	9682.27	20.75	2.07	2.49	10.91
PM10	-	-	3.112	0.311	-	-

Notes:
gr/dscf = grains per dry standard cubic foot
dscf/min = dry standard cubic feet per minute
lb/hr = pound per hour
tons/yr = tons per year
1 year = 8760 hours
1 lb = 7000 grains
1 ton = 2000 lbs
Ebc = Estimated emissions before controls
Eac = Estimated emissions after control
Baghouse control efficiency = 90%
It is assumed that PM2.5 = PM10 emissions.
Ebc & Eac PM10 emissions calculated by taking the ratio of the PM10:PM emissions in Permit No. 081-33097-00066.

Methodology:
Method 5 Mass Emission Results and Air Flow obtained from stack test conducted on February 28, 2014.
PM 10 Ebc = Eac / (1-efficiency) = 2.075 lb/hr / (1-.90) = 20.748 lb/hr
PM10 Eac = 0.025 gr/dscf x 9682.28 dscf/min x 1 lb/7000 grains x 60 minutes/1 hour = 2.075 lb/hr
Requested PM Limit (lb/hr) = Eac x (Eac + 20% Safety Factor) = 2.074774 + (2.074774 x 20%) = 2.490
Requested PM Limit (ton/yr) = Requested PM Limit (lb/hr) x 8760 hr/yr x 1 ton/2000 lb = 10.905 ton/yr
PM10 Ebc = PM Ebc x 15%
PM10 Eac = PM Eac x 15%

Allowable Emissions:
PM compliance with 326 IAC 6-3-2 = 6.52 lb/hr allowable
NSPS Subpart UUU Limit = 0.040 gr/dscf = 3.31 lb/hr

PM Increase with requested limit = 10.905 - 3.15 = 7.775 tons/yr

Process: TSR1 (Sand System)	Rate (tons sand/hr)	Pollutant	EF (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Thermal Sand Reclamation System	2.00	PM	12.5	109.06	baghouse	90%	10.91
		PM-10	1.868	16.359	baghouse	90%	1.636
		SO2	-				
		NOx	-				
		VOC	-				
		CO	-				

Notes:
PM Emission Factor based off of most recent stack test on February 28, 2014. Method 5 mass emissions were 0.025 gr/dscf or 2.07 lb/hr.
40 CFR 63 Subpart UUU limit = 0.040 gr/dscf or 3.31 lb/hr
40 CFR 63 Subpart UUU hourly limit = (0.040 gr/dscf) x (9682.28 dscf/min) x (1 lb/7,000 grains) x (60 minutes/hour) = 3.31 lb/hr

PM increase with requested limit = 10.91 tpy - 3.15 tpy = 7.76 tpy

Allowable Emissions:
The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than 30 tons per hour:
P = 2.00 tons/hour
Limit = 4.1 x (2^0.67)= 6.52 lb/hr (allowable)
With Potential: 109.06 tons/yr x 2000 lb/ton / 8760 hr/yr = 24.9 lb/hr and will not comply
With Controlled: 10.9 tons/yr x 2000 lb/ton / 8760 hr/yr = 2.5 lb/hr and will comply

Ef = Emission Factor
1 ton = 2000 lbs
It is assumed that PM2.5 = PM10 emissions.

Methodology:
Maximum Annual Sand Throughput (ton/yr) = [Rate (tons sand/hr) x 8760 hrs/yr]
Ebc = Potential Emissions before controls = Rate (units/hr) x 8760 hrs/yr / 2000 lbs/hr
Eac = Potential Emissions after controls = (1-effiency/100) x Ebc

Emission Factor Determination:
Ebc = Rate x Emission Factor x 8760 hours/year / 2000 lbs/hr
109.5 tons/yr = 2.0 tons/hr x Emission Factor x 8760 hr/yr / 2000 lb/ton
12.5 lb ton = Emission Factor

Company Name: **Innovative Casting Technologies, Inc.**
Address City IN Zip: **401 Blue Chip Court, Franklin, IN 46131-8825**
Permit No.: **081-33097-00066**
Significant Permit Revision: **081-34423-00066**
Reviewer: **Deborah Cole**

							Maximum Annual Melt Throughput (ton/yr) 3,154	Limited Annual Melt Throughput for Subpart ZZZZZZ Avoidance (ton/yr) 599
Process: **CH2** (Thermtronix 1 & 2)	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)	Limited Emissions (ton/yr)
Scrap and charge handling, heating	0.36	PM	0.60	0.95	none	n/a	0.95	0.18
		PM-10	0.36	0.57	none	n/a	0.57	0.11
Source of Criteria Pollutant Factors:	*Dependent on max furnace capacity*	SO2	0	0	none	n/a	0	0
		NOx	0	0	none	n/a	0	0
SCC# 3-04-003-15		VOC	0	0	none	n/a	0	0
FIRE 6.01		CO	0	0	none	n/a	0	0
AP-42 Ch. 12.10		arsenic	8.0E-05	1.26E-04	none	n/a	1.26E-04	2.40E-05
Fifth edition 1995		cadmium	4.0E-05	6.31E-05	none	n/a	6.31E-05	1.20E-05
		chromium	2.3E-04	3.63E-04	none	n/a	3.63E-04	6.89E-05
		cobalt	2.0E-05	3.15E-05	none	n/a	3.15E-05	5.99E-06
		lead	2.3E-03	3.63E-03	none	n/a	3.63E-03	6.89E-04
		manganese	negl.	negl.	none	n/a	negl.	0
		nickel	4.0E-04	6.31E-04	none	n/a	6.31E-04	1.20E-04
		selenium	1.0E-05	1.58E-05	none	n/a	1.58E-05	3.00E-06

Process: **TH1 & TH2** (Thermtronix 1 & 2)	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)	Limited Emissions (ton/yr)
Melting - Electric Induction Furnace	0.36	`	0.90	1.42	none	n/a	1.42	0.27
	2 ovens @ 0.18 tph each	PM-10	0.86	1.36	none	n/a	1.36	0.26
Source of Criteria Pollutant Factors:		SO2	0	0	none	n/a	0	0
		NOx	0	0	none	n/a	0	0
EPA SCC# 3-04-003-03		VOC	0	0	none	n/a	0	0
FIRE 6.01		CO	0	0	none	n/a	0	0
AP-42 Ch. 12.10		arsenic	8.0E-05	1.26E-04	none	n/a	1.26E-04	2.40E-05
Fifth edition 1995		cadmium	4.0E-05	6.31E-05	none	n/a	6.31E-05	1.20E-05
		chromium	2.3E-04	3.63E-04	none	n/a	3.63E-04	6.89E-05
		cobalt	2.0E-05	3.15E-05	none	n/a	3.15E-05	5.99E-06
		lead	9.0E-03	0.01	none	n/a	0.01	2.70E-03
	FIRE 6.01	manganese	2.3E-02	0.04	none	n/a	0.04	6.74E-03
		nickel	4.0E-04	6.31E-04	none	n/a	6.31E-04	1.20E-04
	FIRE 6.01	selenium	1.0E-05	1.58E-05	none	n/a	1.58E-05	3.00E-06

Process: **PC2**	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)	Limited Emissions (ton/yr)
Pouring/Casting	0.36	PM	4.20	6.62	none	n/a	6.62	1.26
Source of Criteria Pollutant Factors:		PM-10	2.06	3.25	none	n/a	3.25	0.62
	FIRE 5.0	SO2	0.02	0.03	none	n/a	0.03	5.99E-03
FIRE 6.01	FIRE 5.0	NOx	0.01	0.02	none	n/a	0.02	3.00E-03
SCC# 3-04-003-18 (except as noted)	FIRE 5.0	VOC	0.14	0.22	none	n/a	0.22	0.04
		CO**	6.00	9.46	none	n/a	9.46	1.80
	Dependent on max furnace capacity	arsenic	5.50E-04	8.67E-04	none	n/a	8.67E-04	1.65E-04
		cadmium	2.50E-04	3.94E-04	none	n/a	3.94E-04	7.49E-05
		chromium	1.60E-03	2.52E-03	none	n/a	2.52E-03	4.80E-04
		cobalt	1.30E-04	2.05E-04	none	n/a	2.05E-04	3.90E-05
		lead	1.62E-02	0.03	none	n/a	0.03	4.85E-03
		manganese	negl.	negl.	none	n/a	negl.	0
		nickel	2.81E-03	4.43E-03	none	n/a	4.43E-03	8.42E-04
		selenium	4.00E-05	6.31E-05	none	n/a	6.31E-05	1.20E-05

** The August 11, 2006 Indiana Cast Metals Association memo contained the CO emission factor of 6.0 lbs/ton of metal poured for the combined pouring, cooling, and shakeout processes.

Allowable Emissions:

The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than 30 tons per hour:

P= 6.12 tons/hr

limit = 4.1 x (6.1246 ^0.67) = 13.81 lb/hr (allowable)

with potential:

6.62 tons/yr x 2000 lb/ton / 8760 hr/yr = 1.51 lb/hr (will comply)

Process: **CC2**	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)	Limited Emissions (ton/yr)
Castings Cooling	0.36	PM	1.40	2.21	none	n/a	2.21	0.42
Source of Criteria		PM-10	1.40	2.21	none	n/a	2.21	0.42
Pollutant Factors:	*Dependent on*	SO2	0	0	none	n/a	0	0
FIRE 6.01	*max furnace*	NOx	0	0	none	n/a	0	0
SCC# 3-04-003-25	*capacity*	VOC	0	0	none	n/a	0	0
		CO**	---	0	none	n/a	0	0
		lead	---	0	none	n/a	0	0

** See Pouring and Casting for CO emissions

Process: **CS2**	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)	Limited Emissions (ton/yr)
Castings Shakeout	0.36	PM	3.20	5.05	none	n/a	5.05	0.96
Source of Criteria		PM-10	2.24	3.53	none	n/a	3.53	0.67
Pollutant Factors:	*Dependent on*	SO2	0	0	none	n/a	0	0
FIRE 6.01	*max furnace*	NOx	0	0	none	n/a	0	0
SCC# 3-04-003-31	*capacity*	VOC	1.20	1.89	none	n/a	1.89	0.36
AP-42 Ch. 12.10		CO**	---	0	none	n/a	0	0
Fifth edition 1995		arsenic	4.20E-04	6.62E-04	none	n/a	6.62E-04	1.26E-04
		cadmium	1.90E-04	3.00E-04	none	n/a	3.00E-04	5.70E-05
		chromium	1.22E-03	1.92E-03	none	n/a	1.92E-03	3.66E-04
		cobalt	1.00E-04	1.58E-04	none	n/a	1.58E-04	3.00E-05
		lead	1.23E-02	0.02	none	n/a	0.02	3.69E-03
		manganese	negl.	negl.	none	n/a	negl.	0
		nickel	2.14E-03	3.37E-03	none	n/a	3.37E-03	6.41E-04
		selenium	3.00E-05	4.73E-05	none	n/a	4.73E-05	8.99E-06

** See Pouring and Casting for CO emissions

Allowable Emissions:

The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than 30 tons per hour:

P= 6.12 tons/hr

limit = 4.1 x (6.1246 ^0.67) = 13.81 lb/hr (allowable)

with potential:

5.05 tons/yr x 2000 lb/ton / 8760 hr/yr = 1.15 lb/hr (will comply)

Process: **CB2**	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)	Limited Emissions (ton/yr)
Core Making (ovens)	0.36	PM	0.90	1.42	none	n/a	1.42	0.27
Source of Criteria		PM-10	0.90	1.42	none	n/a	1.42	0.27
Pollutant Factors:		SO2	0	0	none	n/a	0	0
FIRE 6.01		NOx	0.50	0.79	none	n/a	0.79	0.15
SCC# 3-04-003-53		VOC	---	---	none	n/a	---	---
		CO	---	---	none	n/a	---	---
		lead	---	---	none	n/a	---	---

Notes:

This line only processes clean charge aluminum.
Ef = Emission factor
1 ton = 2000 lbs
In the absence of valid AP 42 emission factors, it is assumed that PM2.5 emissions = PM10 emissions.

Methodology:

Maximum Annual Melt Throughput (ton/yr) = [Rate (tons sand/hr) * 8760 hrs/yr]
Ebc = Potential Emissions before controls = Rate (units/hr) x Ef(lbs/unit) x 8760 hrs/yr / 2000 lbs/hr
Eac = Potential Emissions after controls = (1-efficiency/100) x Ebc

Appendix A: Emission Calculations
Grey Iron Foundry Emissions from the
No-Bake Mold Making Processes

Company Name: **Innovative Casting Technologies, Inc.**
Address City IN Zip: **401 Blue Chip Court, Franklin, IN 46131-8825**
Permit No.: **081-33097-00066**
Significant Permit Revision: **081-34423-00066**
Reviewer: **Deborah Cole**

Process: **ML1 and ML2** (molding line 1 and 2)	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Mold Making	0.523	PM	0.90	2.06	none	n/a	2.06
Source of Criteria		PM-10	0.90	2.06	none	n/a	2.06
Pollutant Factors:	**Bottlenecked by*	SO2	0	0	none	n/a	0
FIRE 6.01	*Iron Casting*	NOx	0.50	1.15	none	n/a	1.15
SCC# 3-04-003-53	*Shakeout capacity.*	VOC	---	---	none	n/a	---
		CO	---	---	none	n/a	---
		lead	---	---	none	n/a	---

Allowable Emissions:

The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than 30 tons per hour:

P= 5.08 tons/hr

limit = 4.1 x (5.1 ^0.67) = 12.18 lb/hr (allowable)

with potential:

2.06 tons/yr x 2000 lb/ton / 8760 hr/yr = 0.47 lb/hr (will comply)

Notes:

*The mold making operation serves both the gray and ductile iron foundry and the aluminum foundry.
Ef = Emission factor
1 ton = 2000 lbs
In the absence of valid AP 42 emission factors, it is assumed that PM2.5 emissions = PM10 emissions.

Methodology:

Maximum Annual Melt Throughput (ton/yr) = [Rate (tons grey iron/hr + tons aluminum/hr) * 8760 hrs/yr]
Ebc = Potential Emissions before controls = Rate (units/hr) x Ef(lbs/unit) x 8760 hrs/yr / 2000 lbs/hr
Eac = Potential Emissions after controls = (1-efficiency/100) x Ebc

Appendix A: Emission Calculations
Grey Iron Foundry Emissions
Volatile Organic Compound (VOC) and Hazardous Air Pollutant (HAP) Emissions
for the Iron and Aluminum Foundries, Combined, from the
No-Bake Mold and Core Making Processes

Company Name: **Innovative Casting Technologies, Inc.**
Address City IN Zip: **401 Blue Chip Court, Franklin, IN 46131-8825**
Permit No.: **081-33097-00066**
Significant Permit Revision: **081-34423-00066**
Reviewer: **Deborah Cole**

Volatile Organic Compound (VOC)

Material	Density (lbs/gal)	Potential Usage (gal/yr)	Weight % VOC	Maximum VOC (lb/yr)	Potential VOC (tons/yr)
Phenolic Resin	10.02	409.5	99.3%	406.46	0.20

Notes:
The phenolic resin binder usage is 0.85% of the sand usage, or 0.0085 lbs of binder per lb of sand.
To form a conservative estimate, the weight % VOC is assumed to be the SUM(Weight % HAPS) plus the Weight % solvents in the resin.

Methodology:
Potential Usage (gal/yr) = [Potential Sand Throughput Rate (tons/hr) * 8760 hrs/yr * ratio of binder to sand (0.85/100)]
Potential VOC (lb/yr) = [Lbs VOC/Gal of coating * Potential Usage (Gal/yr)]
Potential VOC (tons/yr) = [Lbs VOC/Gal of coating * Potential Usage (Gal/yr) * 1 ton/ 2000 lbs]

Hazardous Air Pollutant (HAP) Emissions

Material	Density (lbs/gal)	Potential Usage (gal/yr)	Weight % Cumene	Weight % MDI	Weight % Napthalene	Weight % Phenol	Weight % Xylenes	Cumene Emissions (tons/yr)	MDI Emissions (tons/yr)	Napthalene Emissions (tons/yr)	Phenol Emissions (tons/yr)	Xylene Emissions (tons/yr)
Phenolic Resin	10.02	409.5	5.0%	35.0%	16.0%	6.5%	6.8%	0.10	0.72	0.33	0.13	0.14

Total HAPs	1.42	tons/yr

Notes:
MDI = Methylene bis(phenylisocyanate)
The phenolic resin binder usage is 0.85% of the sand usage, or 0.0085 lbs of binder per lb of sand.
The data listed here is a composite of the worst-case characteristics of all the resins used at the source, and was taken from MSDSs provided by the source.
According to 40 CFR 63, Table 1. Default Organic HAP Mass Fraction for Solvents and Solvent Blends, the aromatic petroleum distillate (CAS 64742-94-5) contains 10% Napthalene.
According to 40 CFR 63, Table 1. Default Organic HAP Mass Fraction for Solvents and Solvent Blends, the aromatic petroleum distillate (CAS 64742-95-6) contains 5% Xylenes.

Methodology:
Potential Usage (gal/yr) = [Potential Sand Throughput Rate (tons/hr) * 8760 hrs/yr * ratio of binder to sand (0.85/100)]
HAP Emissions (tons/yr) = [Density (Lb/Gal) * Potential Usage (Gal/yr) * Weight % HAP]

Appendix A: Emission Calculations
Process Emissions from the Castings Cleaning and Finishing Operations
common to the Iron and Aluminum Foundries, combined.

Company Name: Innovative Casting Technologies, Inc.
Address City IN Zip: 401 Blue Chip Court, Franklin, IN 46131-8825
Permit No.: 081-33097-00066
Significant Permit Revision: 081-34423-00066
Reviewer: Deborah Cole

Process: **TB** (Tableblasting)	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Castings Cleaning	0.50	PM	17.00	37.23	baghouse	90.0%	3.72
and Finishing		PM-10	1.70	3.72	baghouse	90.0%	0.37
Source of Criteria		SO2	0	0.00	none	n/a	0
Pollutant Factors:		NOx	0	0.00	none	n/a	0
FIRE 6.01		VOC	0	0.00	none	n/a	0
SCC# 3-04-003-40		CO	0	0.00	none	n/a	0
AP-42 Ch. 12.10		arsenic	2.21E-03	0.00	baghouse	90.0%	4.84E-04
Fifth edition 1995		cadmium	1.02E-03	0.00	baghouse	90.0%	2.23E-04
		chromium	6.46E-03	0.01	baghouse	90.0%	1.41E-03
		cobalt	5.10E-04	1.12E-03	baghouse	90.0%	1.12E-04
		lead	4.50E-03	0.01	baghouse	90.0%	9.86E-04
		manganese	negl.	negl.	baghouse	90.0%	negl.
		nickel	1.14E-02	0.02	baghouse	90.0%	2.49E-03
		selenium	1.70E-04	3.72E-04	baghouse	90.0%	3.72E-05

*Note: See the PSD Limitations Section below.

Allowable Emissions:
The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than 30 tons per hour:

0.50 tons/hr
4.1 x (0.50 ^0.67) = 2.58 lb/hr (allowable)

with potential:
37.23 tons/yr x 2000 lb/ton / 8760 hr/yr = 8.50 lb/hr (will not comply)

with controlled:
3.72 tons/yr x 2000 lb/ton / 8760 hr/yr = 0.85 lb/hr (will comply)

Process: **SB** (Shotblast)	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Castings Cleaning	0.50	PM	17.00	37.23	baghouse	90.0%	3.72
and Finishing		PM-10	1.70	3.72	baghouse	90.0%	0.37
Source of Criteria		SO2	0	0	none	n/a	0
Pollutant Factors:		NOx	0	0	none	n/a	0
FIRE 6.01		VOC	0	0	none	n/a	0
SCC# 3-04-003-40		CO	0	0	none	n/a	0
AP-42 Ch. 12.10		arsenic	2.21E-03	0.00	baghouse	90.0%	4.84E-04
Fifth edition 1995		cadmium	1.02E-03	0.00	baghouse	90.0%	2.23E-04
		chromium	6.46E-03	0.01	baghouse	90.0%	1.41E-03
		cobalt	5.10E-04	1.12E-03	baghouse	90.0%	1.12E-04
		lead	4.50E-03	0.01	baghouse	90.0%	9.86E-04
		manganese	negl.	negl.	baghouse	90.0%	negl.
		nickel	1.14E-02	0.02	baghouse	90.0%	2.49E-03
		selenium	1.70E-04	3.72E-04	baghouse	90.0%	3.72E-05

*Note: See the PSD Limitations Section below.

Allowable Emissions:
The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than 30 tons per hour:

0.50 tons/hr
4.1 x (0.5 ^0.67) = 2.58 lb/hr (allowable)

with potential:
37.23 tons/yr x 2000 lb/ton / 8760 hr/yr = 8.50 lb/hr (will not comply)

with controlled:
3.72 tons/yr x 2000 lb/ton / 8760 hr/yr = 0.85 lb/hr (will comply)

Process: **GD** (Grinding Room)	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Castings Cleaning and Finishing *Source of Criteria Pollutant Factors: FIRE 6.01 SCC# 3-04-003-40 AP-42 Ch. 12.10 Fifth edition 1995*	0.25	PM	17.00	18.62	baghouse	90.0%	1.86
		PM-10	1.70	1.86	baghouse	90.0%	0.19
		SO2	0	0	none	n/a	0
		NOx	0	0	none	n/a	0
		VOC	0	0	none	n/a	0
		CO	0	0	none	n/a	0
		arsenic	2.21E-03	0.00	baghouse	90.0%	2.42E-04
		cadmium	1.02E-03	0.00	baghouse	90.0%	1.12E-04
		chromium	6.46E-03	0.01	baghouse	90.0%	7.07E-04
		cobalt	5.10E-04	5.58E-04	baghouse	90.0%	5.58E-05
		lead	4.50E-03	0.00	baghouse	90.0%	4.93E-04
		manganese	negl.	negl.	baghouse	90.0%	negl.
		nickel	1.14E-02	0.01	baghouse	90.0%	1.25E-03
		selenium	1.70E-04	1.86E-04	baghouse	90.0%	1.86E-05

*Note: See the PSD Limitations Section below.

Allowable Emissions:

The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than 30 tons per hour:

0.25 tons/hr

4.1 x (0.25 ^0.67) = 1.62 lb/hr (allowable)

with potential:

18.62 tons/yr x 2000 lb/ton / 8760 hr/yr = 4.25 lb/hr (will not comply)

with controlled:

1.86 tons/yr x 2000 lb/ton / 8760 hr/yr = 0.43 lb/hr (will comply)

Process: **SW** (Table Saw)	Rate (tons iron/hr)	Pollutant	Ef (lb/ton produced)	Ebc (ton/yr)	Type of control	Control Efficiency (%)	Eac (ton/yr)
Castings Finishing	0.523	PM	0.35	0.38	baghouse	90.0%	0.04
		PM-10	0.35	0.38	baghouse	90.0%	0.04
Source of Criteria Pollutant Factors: FIRE 6.01 SCC# 3-07-008-02	**Bottlenecked by Iron Casting Shakeout capacity.*	SO2	0	0	none	n/a	0
		NOx	0	0	none	n/a	0
		VOC	0	0	none	n/a	0
		CO	0	0	none	n/a	0
		arsenic	0	0	baghouse	n/a	0
		cadmium	0	0	baghouse	n/a	0
		chromium	0	0	baghouse	n/a	0
		cobalt	0	0	baghouse	n/a	0
		lead	0	0	baghouse	n/a	0
		manganese	0	0	baghouse	n/a	0
		nickel	0	0	baghouse	n/a	0
		selenium	0	0	baghouse	n/a	0

*Note: See the PSD Limitations Section below.

**No emission factors are available for metal sawing. SCC 3-07-008-02 (WebFire) for log sawing was used to approximate emissions from this activity.

Allowable Emissions:

The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than 30 tons per hour:

0.52 tons/hr

4.1 x (0.52 ^0.67) = 2.66 lb/hr (allowable)

with potential:

0.38 tons/yr x 2000 lb/ton / 8760 hr/yr = 0.09 lb/hr (will comply)

with controlled:

0.04 tons/yr x 2000 lb/ton / 8760 hr/yr = 0.01 lb/hr (will comply)

Notes:

The table blast machine (TB), shot blast machine (SB), grinding room (GD), and table saw (SW) are controlled by one donaldson torit dust collector, which exhausts inside the building.
Ef = Emission factor
1 ton = 2000 lbs

In the absence of valid AP 42 emission factors, it is assumed that PM2.5 emissions = PM10 emissions.

Methodology:

Maximum Annual Throughput (ton/yr) = [Rate (tons iron/hr) * 8760 hrs/yr]
Ebc = Potential Emissions before controls = Rate (units/hr) x Ef(lbs/unit) x 8760 hrs/yr / 2000 lbs/hr
Eac = Potential Emissions after controls = (1-efficiency/100) x Ebc

PSD Limitations

Process:	Control Device	Limited PM Emission Rate (lb/hr)	Limited PM Emissions (ton/yr)	Minimum Control Efficiency required for compliance (%)	Controlled PM Emissions (ton/yr)
Table blasting (TB)	Donaldson Torit Dust Collector	2.15	9.42	89.9%	9.31
Shotblasting (SB)					
Grinding Room (GD)					
Cutoff Saw (SW)					
		Total:	**9.42**		**9.31**

Notes:

The table blast machine (TB), shot blast machine (SB), grinding room (GD), and table saw (SW) are controlled by one donaldson torit dust collector, which exhausts inside the building.
A control efficiency of at least 89.9% is required for the source to comply with the PSD limitations. Therefore, testing is required to confirm proper operation of each device and to ensure compliance with the limit.

Methodology:

Limited Emission Rate (lbs/hr) = provided by the source.
Limited Emissions = Limited Emission Rate (lb/hr) x 8760 hrs/yr / 2000 lbs/ton

Appendix A: Emission Calculations
Grey Iron Foundry Emissions
Volatile Organic Compound (VOC) and Hazardous Air Pollutant (HAP) Emissions
from the production related use of surface coatings and solvents

Company Name: **Innovative Casting Technologies, Inc.**
Address City IN Zip: **401 Blue Chip Court, Franklin, IN 46131-8825**
Permit No.: **081-33097-00066**
Significant Permit Revision: **081-34423-00066**
Reviewer: **Deborah Cole**

Material	Unit ID	Density (Lb/Gal)	Weight % Organics	Lbs VOC/Gal of coating	Potential Usage (Gal/yr)	Potential VOC (lb/yr)	Potential VOC (tons/yr)	Potential Particulate (tons/yr)
Kleen-Eze 115	W1 & W2	8.68	10%	0.87	2,802.51	2,438.18	1.22	0.61
						TOTAL	**1.22**	**0.61**

Notes:
PM = PM10 = PM2.5
The transfer efficiency is assumed 75%.
Potential Usage (Gal/yr) provided by the source.
According to the MSDS submitted by the source, the Kleen-Eze is HAP-free.

Methodology:
Potential VOC (lb/yr) = [Lbs VOC/Gal of coating * Potential Usage (Gal/yr)]
Potential VOC (tons/yr) = [Lbs VOC/Gal of coating * Potential Usage (Gal/yr) * 1 ton/ 2000 lbs]
Potential Particulate (tons/yr) = [Density (lbs/gal) * Potential Usage (gal/yr) * (1- Weight % Volatiles) * (1-Transfer efficiency) * (1 ton/2000 lbs)]

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
for the two (2) heated wash units

Company Name: **Innovative Casting Technologies, Inc.**
Address City IN Zip: **401 Blue Chip Court, Franklin, IN 46131-8825**
Permit No.: **081-33097-00066**
Significant Permit Revision: **081-34423-00066**
Reviewer: **Deborah Cole**

Heat Input Capacity	HHV*	Potential Throughput
MMBtu/hr	mmBtu	MMCF/yr
(2 @ 1.0 MMBtu/hr each)	mmscf	
2.0	1000	17.5

	Pollutant						
	PM*	PM10*	PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.017	0.067	0.067	0.005	0.88	0.048	0.74

Notes:
* HHV = default high heat value of the fuel.
**PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
PM2.5 emission factor is filterable and condensable PM2.5 combined.
***Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	1.840E-05	1.051E-05	6.570E-04	0.016	2.978E-05

	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	4.380E-06	9.636E-06	1.226E-05	3.329E-06	1.840E-05

Total HAPs	0.017	tons/yr

Notes:
The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Methodology:
All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	1,051	0.0	0.0
Summed Potential Emissions in tons/yr	1,051		
CO2e Total in tons/yr	**1,058**		

Methodology:
The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
for the thermal sand reclamation system (TSR1)

Company Name: **Innovative Casting Technologies, Inc.**
Address City IN Zip: **401 Blue Chip Court, Franklin, IN 46131-8825**
Permit No.: **081-33097-00066**
Significant Permit Revision: **081-34423-00066**
Reviewer: **Deborah Cole**

Heat Input Capacity MMBtu/hr	HHV* mmBtu/mmscf	Potential Throughput MMCF/yr
3.0	1000	26.3

	Pollutant						
	PM*	PM10*	PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.025	0.100	0.100	0.008	1.31	0.072	1.10

Notes:
* HHV = default high heat value of the fuel.
**PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
PM2.5 emission factor is filterable and condensable PM2.5 combined.
***Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	2.759E-05	1.577E-05	9.855E-04	0.024	4.468E-05

	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	6.570E-06	1.445E-05	1.840E-05	4.993E-06	2.759E-05

Total HAPs	0.025	tons/yr

Notes:
The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Methodology:
All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	1,577	0.0	0.0
Summed Potential Emissions in tons/yr	1,577		
CO2e Total in tons/yr	**1,586**		

Methodology:
The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Appendix A: Emission Calculations
Fugitive Dust Emissions from Paved Roads

Company Name: Innovative Casting Technologies, Inc.
Address City IN Zip: 401 Blue Chip Court, Franklin, IN 46131-8825
Permit No.: 081-33097-00066
Significant Permit Revision: 081-34423-00066
Reviewer: Deborah Cole

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

Vehicle Informtation (provided by source)

Type	Maximum number of vehicles per day	Number of one-way trips per day per vehicle	Maximum trips per day (trip/day)	Maximum Weight Loaded (tons/trip)	Total Weight driven per day (ton/day)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/day)	Maximum one-way miles (miles/yr)
Vehicle (entering plant) (one-way trip)	10.0	1.0	10.0	16.0	160.0	500	0.095	0.9	345.6
Vehicle (leaving plant) (one-way trip)	10.0	1.0	10.0	5.0	50.0	500	0.095	0.9	345.6
		Totals	**20.0**		**210.0**			**1.9**	**691.3**

Average Vehicle Weight Per Trip = 10.5 tons/trip
Average Miles Per Trip = 0.09 miles/trip

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

	PM	PM10	PM2.5	
where k =	0.011	0.0022	0.00054	lb/VMT = particle size multiplier (AP-42 Table 13.2.1-1)
W =	10.5	10.5	10.5	tons = average vehicle weight (provided by source)
sL =	9.7	9.7	9.7	g/m^2 = silt loading value for paved roads at iron and steel production facilities - Table 13.2.1-3)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = E * [1 - (p/4N)] (Equation 2 from AP-42 13.2.1)
Mitigated Emission Factor, Eext = Ef * [1 - (p/4N)]
where p = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)
N = 365 days per year

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	0.957	0.191	0.0470	lb/mile
Mitigated Emission Factor, Eext =	0.875	0.175	0.0430	lb/mile

Process	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)
Vehicle (entering plant) (one-way trip)	0.17	0.03	8.12E-03	0.15	0.03	7.43E-03
Vehicle (leaving plant) (one-way trip)	0.17	0.03	8.12E-03	0.15	0.03	7.43E-03
Totals	**0.33**	**0.07**	**0.02**	**0.30**	**0.06**	**0.01**

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

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

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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

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

TO: Jack Laugle
President
Innovative Casting Technologies, Inc.
401 Blue Chip Court
Franklin, IN 46131-8825

DATE: October 1, 2014

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

SUBJECT: Final Decision
Minor Source Operating Permit (MSOP) Significant Permit Revision
081-34423-00066

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:
Cheryl Wise, Wilcox Environmental Engineering
John Wellspring, Wilcox Environmental Engineering
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.

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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

October 1, 2014

TO: Johnson County Library – Franklin Branch

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

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

Applicant Name: **Innovative Casting Technologies, Inc.**
Permit Number: **081-34423-00066**

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	VHAUN 10/1/2014 Innovative Casting Technologies, Inc 081-34423-00066 FINAL		
Name and address of Sender	▶	Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: **CERTIFICATE OF MAILING ONLY**

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2		Johnson County Public Library 401 South State Franklin IN 46131 *(Library)*									
3		Johnson County Commissioners 5 East Jefferson Franklin IN 46131 *(Local Official)*									
4		Johnson County Health Department 86 W. Court St, Courthouse Annex Franklin IN 46131-2345 *(Health Department)*									
5		Frederick & Iva Moore 6019 W 650 N Ligonier IN 46767 *(Affected Party)*									
6		Larry and Becky Bischoff 10979 North Smokey Row Road Mooresville IN 46158 *(Affected Party)*									
7		Greenwood City Council and Mayors Office 300 South Madison Avenue Greenwood IN 46142-3149 *(Local Official)*									
8		Franklin City Council & Mayors Office 70 E Monroe St Franklin IN 46131 *(Local Official)*									
9		Cheryl Wise Wilcox Environmental Engineering 5757 W 74th St Indianapolis IN 46278-1755 *(Consultant)*									
10		Mr. John Wellspring Wilcox Environmental Engineering 5757 W 74th Street Indianapolis IN 46278 *(Consultant)*									
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