



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

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Governor

Thomas W. Easterly
Commissioner

NOTICE OF 30-DAY PERIOD FOR PUBLIC COMMENT Preliminary Findings Regarding a Significant Modification to a Part 70 Operating Permit

for Metal Technologies Auburn, LLC in DeKalb County

Significant Source Modification No.: 033-35828-00042

Significant Permit Modification No.: 033-35881-00042

The Indiana Department of Environmental Management (IDEM) has received an application from Metal Technologies Auburn, LLC, located at 1537 West Auburn Drive, Auburn, Indiana, for a significant modification of its Part 70 Operating Permit issued on April 30, 2013. If approved by IDEM's Office of Air Quality (OAQ), this proposed modification would allow Metal Technologies Auburn, LLC to make certain changes at its existing source. Metal Technologies Auburn, LLC has applied to construct and operate a natural gas-fired thermal metal chip drying system.

The applicant intends to construct and operate new equipment that will emit air pollutants; therefore, the permit contains new or different permit conditions. In addition, some conditions from previously issued permits/approvals have been corrected, changed, or removed. These corrections, changes, and removals may include Title I changes (e.g. changes that add or modify synthetic minor emission limits). IDEM has reviewed this application and has developed preliminary findings, consisting of a draft permit and several supporting documents, which would allow the applicant to make this change.

A copy of the permit application and IDEM's preliminary findings are available at:

Eckhart Public Library
603 South Jackson Street
Auburn, IN 46706

and

IDEM Northern Regional Office
300 N. Michigan Street, Suite 450
South Bend, IN 46601-1295

A copy of the preliminary findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>.

How can you participate in this process?

The date that this notice is published in a newspaper marks the beginning of a 30-day public comment period. If the 30th day of the comment period falls on a day when IDEM offices are closed for business, all comments must be postmarked or delivered in person on the next business day that IDEM is open.

You may request that IDEM hold a public hearing about this draft permit. If adverse comments concerning the **air pollution impact** of this draft permit are received, with a request for a public hearing, IDEM will decide whether or not to hold a public hearing. IDEM could also decide to hold a public meeting instead of, or in addition to, a public hearing. If a public hearing or meeting is held, IDEM will make a separate announcement of the date, time, and location of that hearing or meeting. At a hearing,

you would have an opportunity to submit written comments and make verbal comments. At a meeting, you would have an opportunity to submit written comments, ask questions, and discuss any air pollution concerns with IDEM staff.

Comments and supporting documentation, or a request for a public hearing should be sent in writing to IDEM at the address below. If you comment via e-mail, please include your full U.S. mailing address so that you can be added to IDEM's mailing list to receive notice of future action related to this permit. If you do not want to comment at this time, but would like to receive notice of future action related to this permit application, please contact IDEM at the address below. Please refer to permit number SSM 033-35828-00042 and SPM 033-35881-00042 in all correspondence.

Comments should be sent to:

Brian Williams
IDEM, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
(800) 451-6027, ask for extension 4-5375
Or dial directly: (317) 234-5375
Fax: (317) 232-6749 attn: Brian Williams
E-mail: bwilliam@idem.IN.gov

All comments will be considered by IDEM when we make a decision to issue or deny the permit. Comments that are most likely to affect final permit decisions are those based on the rules and laws governing this permitting process (326 IAC 2), air quality issues, and technical issues. IDEM does not have legal authority to regulate zoning, odor, or noise. For such issues, please contact your local officials.

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>.

What will happen after IDEM makes a decision?

Following the end of the public comment period, IDEM will issue a Notice of Decision stating whether the permit has been issued or denied. If the permit is issued, it may be different than the draft permit because of comments that were received during the public comment period. If comments are received during the public notice period, the final decision will include a document that summarizes the comments and IDEM's response to those comments. If you have submitted comments or have asked to be added to the mailing list, you will receive a Notice of the Decision. The notice will provide details on how you may appeal IDEM's decision, if you disagree with that decision. The final decision will also be available on the Internet at the address indicated above, at the local library indicated above, at the IDEM Regional Office indicated above, and the IDEM public file room on the 12th floor of the Indiana Government Center North, 100 N. Senate Avenue, Indianapolis, Indiana 46204-2251.

If you have any questions, please contact Brian Williams or my staff at the above address.



Iryn Calilung, Section Chief
Permits Branch
Office of Air Quality



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DRAFT

Mr. Dan Plant
Metal Technologies Auburn, LLC
1401 South Grandstaff Drive
Auburn, IN 46706

Re: 033-35881-00042
Significant Permit Modification to
Part 70 Renewal No.: T033-32494-00042

Dear Mr. Plant:

Metal Technologies Auburn, LLC was issued Part 70 Operating Permit Renewal No. T033-32494-00042 on April 30, 2013 for a stationary gray and ductile iron foundry located at 1537 West Auburn Drive, Auburn, Indiana. An application requesting changes to this permit was received on May 14, 2015. Pursuant to the provisions of 326 IAC 2-7-12, a Significant Permit Modification to this permit is hereby approved as described in the attached Technical Support Document.

Please find attached the entire Part 70 Operating Permit as modified. The permit references the below listed attachment(s). Since this attachment has been provided in previously issued approvals for this source, IDEM OAQ has not included a copy of this attachment with this modification:

Attachment A: 40 CFR 63, Subpart EEEEE, National Emissions Standards for Hazardous Air Pollutants for Iron and Steel Foundries

Previously issued approvals for this source containing this attachment/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.

DRAFT

If you have any questions on this matter, please contact Brian Williams, of my staff, OAQ, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana, 46204-2251 at 317-234-5375 or 1-800-451-6027, and ask for extension 4-5375.

Sincerely,

Iryn Calilung, Section Chief
Permits Branch
Office of Air Quality

Attachments: Modified Permit and Technical Support Document

cc: File - DeKalb County
DeKalb County Health Department
U.S. EPA, Region 5
Compliance and Enforcement Branch
IDEM Northern Regional Office



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Part 70 Operating Permit Renewal OFFICE OF AIR QUALITY

**Metal Technologies Auburn, LLC
1537 West Auburn Drive
Auburn, Indiana 46706**

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

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

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: T033-32494-00042	
Issued by: Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Issuance Date: April 30, 2013 Expiration Date: April 30, 2018

Significant Permit Modification No.: 033-34870-00042, issued on January 9, 2015

Significant Permit Modification No.: 033-35881-00042	
Issued by: Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Issuance Date: Expiration Date: April 30, 2018

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SECTION A

SOURCE SUMMARY

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

A.1 General Information [326 IAC 2-7-4(c)][326 IAC 2-7-5(14)][326 IAC 2-7-1(22)]

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

Source Address:	1537 West Auburn Drive, Auburn, Indiana 46706
General Source Phone Number:	(260) 925-4717
SIC Code:	3321 (Gray and Ductile Iron Foundries)
County Location:	DeKalb
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Operating Permit Program
	Major Source, under PSD Rules
	Major Source, Section 112 of the Clean Air Act
	1 of 28 Source Categories

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

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

- (a) Scrap and charge handling, constructed in 1995 and approved for modification in 2014 to add a return scrap crusher, with a nominal capacity of 30 tons of metal per hour, with no control and exhausting inside the building;

The return scrap crusher consists of 2 massive steel plates and is used to reduce the size of the return scrap.

- (b) One (1) iron charging, melting, ladle metallurgy, holding and transfer system; identified as EU-2; constructed in 1995; a nominal capacity of 30 tons of metal per hour; emissions controlled by baghouses DC-2 and DC-8; emissions exhaust to stacks S-2 & S-8. The transfer operations refer to the transfer of metal from the holding furnace to the ladle. The system consists of the following equipment/operations:

- (1) One (1) furnace charging operation;
- (2) Three (3) electric induction furnaces*;
- (3) One (1) ladle metallurgical station; and
- (4) One (1) electric holding furnace.

* The three (3) electric induction furnaces are considered part of the affected source under 40 CFR Part 63, Subpart EEEEE.

Note: Stack S-8 is a common stack for Baghouse DC-8 and Baghouse DC-7.

Baghouse DC-8 and stack S-8 is also used for the Lines 1, 2, 3, & 4 pouring and casting operations, the EU-6 shot reblast unit, and the EU-5bc waste sand

system.

Pouring and Casting Operations

- (c) One (1) Line 1 pouring and casting operation; identified as EU-3a1; constructed in 1995 and modified in 2008; a nominal capacity of 10 tons of metal and 55 tons of sand per hour; particulate emissions controlled by baghouse DC-8; emissions exhaust to Stack S-8.

EU-3a1 is considered part of the affected source under 40 CFR Part 63, Subpart EEEEE.

- (d) One (1) Line 2 pouring and casting operation; identified as EU-3a2; constructed in 1995; modified in 2009, a nominal capacity of 10 tons of metal and 55 tons of sand per hour; particulate emissions controlled by baghouse DC-8; emissions exhaust to stack S-8.

EU-3a2 is considered part of the affected source under 40 CFR Part 63, Subpart EEEEE.

- (e) One (1) Line 3 pouring and casting operation; identified as EU-3a3; constructed in 1995, and approved for modification in 2012; a nominal capacity of 11 tons of metal and 55 tons of sand per hour; particulate emissions controlled by baghouse DC-8; emissions exhaust to stack S-8.

EU-3a3 is considered part of the affected source under 40 CFR Part 63, Subpart EEEEE.

- (f) One (1) Line 4 pouring and casting operation; identified as EU-3a4; constructed in 1995 and approved for modification in 2012; a nominal capacity of 11 tons of metal and 55 tons of sand per hour; particulate emissions controlled by baghouse DC-8; emissions exhaust to stack S-8.

EU-3a4 is considered part of the affected source under 40 CFR Part 63, Subpart EEEEE.

Note: Baghouse DC-8 and stack S-8 is a common control and stack, respectively of the Lines 1, 2, 3, & 4 pouring and casting operations.

Baghouse DC-8 and stack S-8 is also used for the iron charging, melting, ladle metallurgy, holding and transfer system, identified as EU-2, the EU-6 shot reblast unit, and the EU-5bc waste sand system.

Stack S-8 is a common stack for Baghouse DC-8 and Baghouse DC-7.

Casting/Mold Cooling Operations

- (g) One (1) Line 1 casting/mold cooling operation; identified as EU-3b1; constructed in 1995; a nominal capacity of 10 tons of metal and 55 tons of sand per hour; with no control, and emissions exhaust to stack S-3b.
- (h) One (1) Line 2 casting/mold cooling operation; identified as EU-3b2; constructed in 1995; a nominal capacity of 10 tons of metal and 55 tons of sand per hour with no control, and emissions exhaust to stack S-3b.

Note: Stack-3b is a common stack for the casting/mold cooling operations for Line 1 and Line 2.

- (i) One (1) Line 3 casting/mold cooling operation; identified as EU-3b3; constructed in 1995 and approved for modification in 2012; a nominal capacity of 11 tons of metal and 55 tons of sand per hour; with no control, and emissions exhaust to stack S-3d.

- (j) One (1) Line 4 casting/mold cooling operation; identified as EU-3b4; constructed in 1995 and approved for modification in 2012; a nominal capacity of 11 tons of metal and 55 tons of sand per hour; with no control, and emissions exhaust to stack S-3d.

Note: Stack-3d is a common stack for the casting/mold cooling operations for Line 3 and Line 4.

Casting Shakeout Operations

- (k) One (1) Line 3 casting shakeout operation; identified as EU-4a; constructed in 1995 and modified in 2012; with a nominal capacity of 11 tons of metal and 55 tons of sand per hour; particulate emissions controlled by baghouse DC-3 and exhausting to stack S-15.
- (l) One (1) Line 4 casting shakeout operation; identified as EU-4b; constructed in 1995 and modified in 2012; with a nominal capacity of 11 tons of metal and 55 tons of sand per hour; particulate emissions controlled by baghouse DC-4 and stack S-4.
- (m) One (1) Line 1 and Line 2 casting shakeout operation; identified as EU-5a; constructed in 1995; a nominal capacity of 20 tons of metal and 110 tons of sand per hour; particulate emissions controlled by baghouse DC-5; emissions exhaust to stack S-5.

Note: This EU-5a casting shakeout operation is shared by Line 1 and Line 2.

- (n) One (1) return sand/waste sand system; identified as EU-5bc; constructed in 1995; a nominal capacity of 220 tons of sand per hour; emissions controlled by baghouse DC-5, which exhausts to stack S-5 and baghouse DC-8, which exhausts to stack S-5.

Note: Baghouse DC-5 controls the return sand system.

Baghouse DC-8 controls the waste sand system.

Baghouse DC-5 and stack S-5 is a common control and stack, respectively of the Line 1 and Line 2 casting shakeout operation and return sand/waste sand system, identified as EU-5bc.

Stack S-8 is a common stack for Baghouse DC-8 and Baghouse DC-7.

Baghouse DC-8 and stack S-8 is also used for the iron charging, melting, ladle metallurgy, holding and transfer system, identified as EU-2, the Lines 1, 2, 3, and 4 pouring and casting operations, and the shot reblast unit EU-6.

- (o) One (1) shot reblast unit; identified as EU-6; constructed in 1997; a nominal capacity of 1.12 tons of iron castings per hour; emissions controlled by baghouse DC-8, which exhausts to stack S-8.

Note: Stack S-8 is a common stack for Baghouse DC-8 and Baghouse DC-7.

Baghouse DC-8 and stack S-8 is also used for the iron charging, melting, ladle metallurgy, holding and transfer system, identified as EU-2, the Lines 1, 2, 3, and 4 pouring and casting operations, and the EU-5bc waste sand system.

- (p) One (1) shot blast system; consisting of four (4) shot blast units; identified as EU-16 through EU-19; constructed in 1999 and modified in 2012; a total nominal capacity of 27 tons of iron castings per hour, with emissions from EU-16, EU-17, EU-18, and EU-19 controlled by baghouse DC-7, which exhausts to stack S-8.

Note: Stack S-8 is a common stack for Baghouse DC-8 and Baghouse DC-7.

- (q) Sand handling system; identified as (EU-1a); constructed in 1995 and modified in 2011; a nominal capacity of 220 tons of sand per hour; and exhausting to stack S-1, stack S-5 and stack S-10. The sand handling system is described as follows:
- (1) Metal Separation controlled by baghouse DC-5, and exhausting to stack S-5.
 - (2) Sand multi-cooler controlled by baghouse DC-5, and exhausting to stack S-5.
 - (3) Return sand conveyor (no real collection).
 - (4) Return sand distribution conveyor controlled by baghouse DC-1, and exhausting to stack S-1.
 - (5) Four (4) 250 ton return sand storage bins controlled by baghouse DC-1, and exhausting to stack S-1.
 - (6) Two (2) sand mullers, rated at 75 tons of sand per hour, each, controlled by baghouse DC-10 and exhausting to stack S-10.
 - (7) Two (2) sand mullers, rated at 75 tons of sand per hour, each, controlled by baghouse DC-1 and exhausting to stack S-1.

Ductile Iron Conversion Process

- (r) One (1) ductile iron conversion (DIC) process: identified as EU-20; constructed in 2009, with a nominal capacity of 30 tons of metal per hour, and particulate emissions captured by two side draft fume and exhaust hoods and controlled by Baghouse DC-20, exhausting to stack S-20;

Note: In this ductile iron conversion (DIC) process, magnesium and other elements are added to molten iron to produce ductile iron.

Core Making Process

- (s) One (1) Phenolic Urethane Cold Box (PUCB) core production process with a nominal capacity of 2.9 tons of cores per hour, constructed in 2012, consisting of the following units:
- (1) One (1) 65 ton core sand silo identified as EU-30a, controlled by a bin vent filter exhausting inside the building.
 - (2) One (1) Core sand mixer and sand transport system, identified as EU-30b, with a nominal capacity of 2.9 tons per hour, with emissions vented back to the core sand silo.
 - (3) One (1) PUCB core machine, identified as EU-30c, with a nominal capacity of 2.9 tons of cores/hour, each using a tertiary amine catalyst gas controlled by an acid scrubber, identified as SC-1 venting to stack SC-1.
 - (4) One (1) water based core wash, identified as EU-30d; and
 - (5) One (1) 1.5 MMBtu/hr natural gas fired drying oven, identified as EU-30e.

- (t) One (1) Warm Box Core production process with a nominal capacity of 2.9 tons cores per hour, constructed in 2012, consisting of the following units;
 - (1) One (1) 65 ton core sand silo, identified as EU-31a, controlled by a bin vent filter exhausting inside the building; and
 - (2) One (1) warm box core machine, identified as EU31b, with a nominal capacity of 2.9 tons of cores/hour and 0.6 MMBtu per hr of natural gas.

Thermal Chip Drying Process

- (u) One (1) natural gas-fired thermal chip dryer, identified as EU-32, approved in 2015 for construction, with a maximum capacity of 15 tons of metal chips and machining oil per hour, equipped with eight (8) low NOx retort burners, with a combined maximum heat input capacity of 9.50 MMBtu per hour, with particulate matter emissions controlled by cyclone DC-32a and baghouse DC-32c and VOC and CO emissions controlled by a 4.22 MMBtu per hour natural gas-fired smoke hood and thermal oxidizer, and exhausting to Stack S-32b. Emissions from the eight (8) natural gas-fired burners are uncontrolled and exhaust to Stack S-32a.

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

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

- (a) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment cutting torches, soldering equipment, welding equipment [326 IAC 2-7-1(21)(J)(vi)(EE)][326 IAC 6-3-2].
- (b) One (1) test sample blast machine; identified as EU-1b; constructed in 1995; a nominal capacity of 150 pounds of metal per hour; emissions controlled by and internally vented dust collector, exhausting to stack S-1. [326 IAC 6-3-2]
- (c) One (1) shot reclaim system, controlled by an internally vented dust collector, exhausting to inside the building. [326 IAC 6-3-2]
- (d) Activities with emissions equal to or less than the following thresholds: 5 lb/hr or 25 lb/day PM; 5 lb/hr or 25 lb/day SO₂; 5 lb/hr or 25 lb/day NO_x; 3 lb/hr or 15 lb/day VOC; 0.6 tons per year Pb; 1.0 ton/yr of a single HAP, or 2.5 ton/yr of any combination of HAPs: Scrap receiving operations: All metal scrap is received via truck and deposited into scrap storage bins within a building. A source of fugitive emissions. [326 IAC 6-4]
- (e) Paved and unpaved roads and parking lots with public access. [326 IAC 2-7-1(21)(J)(xiii)][326 IAC 6-4]
- (f) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including the following: deburring, buffing, polishing, abrasive blasting, pneumatic conveying, and woodworking operations, which include the following: Two (2) enclosed grinding units controlled by fabric filters and exhausting inside the building; and One (1) test sample blast machine; identified as EU-1b; constructed in 1995 controlled by fabric filters and exhausting inside the building. [326 IAC 2-7-1(21)(J)(xxiii)][326 IAC 6-3-2]

- (g) Eight (8) grinders; identified together as EU-7; constructed in 1999 and modified in 2012; a combined nominal capacity of 24 tons of iron castings per hour; emissions controlled by individual dust collectors which have a gas flow rate of less than 4,000 cfm each, and which have a grain loading of less than or equal to (0.03) grains per actual cubic foot, and which exhaust indoors. [326 IAC 2-7-1(21)(J)(xxiii)][326 IAC 2-2-3]
- (h) One (1) emergency diesel generator, constructed in 1994, with a maximum output horsepower rating (hp) of 1135 HP, using no control, and exhausting indoors.

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

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

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

SECTION B GENERAL CONDITIONS

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

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

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

- (a) This permit, T033-32494-00042, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.

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

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

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

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

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

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

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

B.6 Property Rights or Exclusive Privilege [326 IAC 2-7-5(6)(D)]

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

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

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

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

- (a) A certification required by this permit meets the requirements of 326 IAC 2-7-6(1) if:
- (1) it contains a certification by a "responsible official" as defined by 326 IAC 2-7-1(35), and
 - (2) the certification states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) The Permittee may use the attached Certification Form, or its equivalent with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.
- (c) A "responsible official" is defined at 326 IAC 2-7-1(35).

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

- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. All certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than July 1 of each year to:
- Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
- and
- United States Environmental Protection Agency, Region V
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590
- (b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) The annual compliance certification report shall include the following:
- (1) The appropriate identification of each term or condition of this permit that is the basis of the certification;
 - (2) The compliance status;
 - (3) Whether compliance was continuous or intermittent;
 - (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-7-5(3); and

- (5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

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

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

- (a) A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:

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

The Permittee shall implement the PMPs.

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

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

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

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

The PMP extension notification does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

The Permittee shall implement the PMPs.

- (c) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance

causes or is the primary contributor to an exceedance of any limitation on emissions. The PMPs and their submittal do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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

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

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

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

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

Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)

Facsimile Number: 317-233-6865

Northern Regional Office phone: (574) 245-4870; fax: (574) 245-4877.

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

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

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

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

- (A) A description of the emergency;

- (B) Any steps taken to mitigate the emissions; and
- (C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
- (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
- (e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4(c)(8) be revised in response to an emergency.
- (f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.
- (g) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

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

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

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

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

requirement until the permit is reissued. The permit shield shall continue in effect so long as the Permittee is in compliance with the compliance order.

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

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

- (a) All terms and conditions of permits established prior to T033-32494-00042 and issued pursuant to permitting programs approved into the state implementation plan have been either:
 - (1) incorporated as originally stated,
 - (2) revised under 326 IAC 2-7-10.5, or
 - (3) deleted under 326 IAC 2-7-10.5.
- (b) Provided that all terms and conditions are accurately reflected in this permit, all previous registrations and permits are superseded by this Part 70 operating permit.

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

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-7-3 and 326 IAC 2-7-4(a).

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

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).
- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:
 - (1) That this permit contains a material mistake.
 - (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
 - (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-7-9(a)(3)]
- (c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-7-9(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-7-9(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-7-9(c)]

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

- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-7-4. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

Request for renewal shall be submitted to:

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

- (b) A timely renewal application is one that is:
 - (1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
 - (2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the

document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

- (c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-7-4(a)(2)(D), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

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

- (a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.

- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

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

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

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

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

- (a) No Part 70 permit revision or notice shall be required under any approved economic incentives, marketable Part 70 permits, emissions trading, and other similar programs or processes for changes that are provided for in a Part 70 permit.
- (b) Notwithstanding 326 IAC 2-7-12(b)(1) and 326 IAC 2-7-12(c)(1), minor Part 70 permit modification procedures may be used for Part 70 modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA.

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

- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b) or (c) without a prior permit revision, if each of the following conditions is met:
 - (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
 - (2) Any preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;

- (3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);

- (4) The Permittee notifies the:

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

and

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

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

- (5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-7-20(b)(1) and (c)(1). The Permittee shall make such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ in the notices specified in 326 IAC 2-7-20(b)(1) and (c)(1).

- (b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:

- (1) A brief description of the change within the source;
- (2) The date on which the change will occur;
- (3) Any change in emissions; and
- (4) Any permit term or condition that is no longer applicable as a result of the change.

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

- (c) Emission Trades [326 IAC 2-7-20(c)]
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-7-20(c).

- (d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAQ, or U.S. EPA is required.
- (e) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.20 Source Modification Requirement [326 IAC 2-7-10.5]

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

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

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

- (a) Enter upon the Permittee's premises where a Part 70 source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy any records that must be kept under the conditions of this permit;
- (c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

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

- (a) The Permittee must comply with the requirements of 326 IAC 2-7-11 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

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

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

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

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

- (a) The Permittee shall pay annual fees to IDEM, OAQ within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.
- (b) Except as provided in 326 IAC 2-7-19(e), failure to pay may result in administrative enforcement action or revocation of this permit.
- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.24 Credible Evidence [326 IAC 2-7-5(3)][326 IAC 2-7-6][62 FR 8314][326 IAC 1-1-6]

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

SECTION C

SOURCE OPERATION CONDITIONS

Entire Source

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

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

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

C.2 Opacity [326 IAC 5-1]

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

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.3 Open Burning [326 IAC 4-1][IC 13-17-9]

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

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

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

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

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

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

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

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

- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of

326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

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

All required notifications shall be submitted to:

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

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

- (e) **Procedures for Asbestos Emission Control**
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) **Demolition and Renovation**
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).
- (g) **Indiana Licensed Asbestos Inspector**
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Licensed Asbestos inspector is not federally enforceable.

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

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

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

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

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

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

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

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

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

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

- (a) For new units:

Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units shall be implemented on and after the date of initial start-up.

- (b) For existing units:

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

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality

100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

The notification which shall be submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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

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

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

Corrective Actions and Response Steps [326 IAC 2-7-5][326 IAC 2-7-6]

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

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

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

C.13 Risk Management Plan [326 IAC 2-7-5(12)][40 CFR 68]

If a regulated substance, as defined in 40 CFR 68, is present at a source in more than a threshold

quantity, the Permittee must comply with the applicable requirements of 40 CFR 68.

C.14 Response to Excursions or Exceedances [40 CFR 64][326 IAC 3-8][326 IAC 2-7-5][326 IAC 2-7-6]

- (I) Upon detecting an excursion where a response step is required by the D Section, or an exceedance of a limitation, not subject to CAM, in this permit:
 - (a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.
 - (b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:
 - (1) initial inspection and evaluation;
 - (2) recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system); or
 - (3) any necessary follow-up actions to return operation to normal or usual manner of operation.
 - (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
 - (1) monitoring results;
 - (2) review of operation and maintenance procedures and records; and/or
 - (3) inspection of the control device, associated capture system, and the process.
 - (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
 - (e) The Permittee shall record the reasonable response steps taken.
- (II)
 - (a) *CAM Response to excursions or exceedances.*
 - (1) Upon detecting an excursion or exceedance, subject to CAM, the Permittee shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return

operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

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

condition and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under this condition (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). Section C - General Record Keeping Requirements of this permit contains the Permittee's obligations with regard to the records required by this condition.

- (2) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements

C.15 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5][326 IAC 2-7-6]

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

The response action documents submitted pursuant to this condition do require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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

C.16 Emission Statement [326 IAC 2-7-5(3)(C)(iii)][326 IAC 2-7-5(7)][326 IAC 2-7-19(c)][326 IAC 2-6]

In accordance with the compliance schedule specified in 326 IAC 2-6-3(b)(1), starting in 2004 and every three (3) years thereafter, the Permittee shall submit by July 1 an emission statement covering the previous calendar year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:

- (1) Indicate estimated actual emissions of all pollutants listed in 326 IAC 2-6-4(a);
- (2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1(32) ("Regulated pollutant, which is used only for purposes of Section 19 of this rule") from the source, for purpose of fee assessment.

The statement must be submitted to:

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

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

C.17 General Record Keeping Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-6][326 IAC 2-2][326 IAC 2-3]

- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. Support information includes the following, where applicable:

- (AA) All calibration and maintenance records.
- (BB) All original strip chart recordings for continuous monitoring instrumentation.
- (CC) Copies of all reports required by the Part 70 permit.

Records of required monitoring information include the following, where applicable:

- (AA) The date, place, as defined in this permit, and time of sampling or measurements.
- (BB) The dates analyses were performed.
- (CC) The company or entity that performed the analyses.
- (DD) The analytical techniques or methods used.
- (EE) The results of such analyses.
- (FF) The operating conditions as existing at the time of sampling or measurement.

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

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

- (c) If there is a reasonable possibility (as defined in 326 IAC 2-2-8 (b)(6)(A), 326 IAC 2-2-8 (b)(6)(B), 326 IAC 2-3-2 (l)(6)(A), and/or 326 IAC 2-3-2 (l)(6)(B)) that a "project" (as defined in 326 IAC 2-2-1(o) and/or 326 IAC 2-3-1(j)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a "major modification" (as defined in 326 IAC 2-2-1(dd) and/or 326 IAC 2-3-1(y)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(pp) and/or 326 IAC 2-3-1(kk)), the Permittee shall comply with following:

- (1) Before beginning actual construction of the "project" (as defined in 326 IAC 2-2-1(o) and/or 326 IAC 2-3-1(j)) at an existing emissions unit, document and maintain the following records:
 - (A) A description of the project.
 - (B) Identification of any emissions unit whose emissions of a regulated new source review pollutant could be affected by the project.
 - (C) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including:
 - (i) Baseline actual emissions;
 - (ii) Projected actual emissions;

- (iii) Amount of emissions excluded under section 326 IAC 2-2-1(pp)(2)(A)(iii) and/or 326 IAC 2-3-1 (kk)(2)(A)(iii); and
 - (iv) An explanation for why the amount was excluded, and any netting calculations, if applicable.
- (d) If there is a reasonable possibility (as defined in 326 IAC 2-2-8 (b)(6)(A) and/or 326 IAC 2-3-2 (l)(6)(A)) that a "project" (as defined in 326 IAC 2-2-1(oo) and/or 326 IAC 2-3-1(jj)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a "major modification" (as defined in 326 IAC 2-2-1(dd) and/or 326 IAC 2-3-1(y)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(pp) and/or 326 IAC 2-3-1(kk)), the Permittee shall comply with following:
 - (1) Monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that is emitted by any existing emissions unit identified in (1)(B) above; and
 - (2) Calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of five (5) years following resumption of regular operations after the change, or for a period of ten (10) years following resumption of regular operations after the change if the project increases the design capacity of or the potential to emit that regulated NSR pollutant at the emissions unit.

C.18 General Reporting Requirements [326 IAC 2-7-5(3)(C)][326 IAC 2-1.1-11][326 IAC 2-2][40 CFR 64][326 IAC 3-8]

- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Proper notice submittal under Section B -Emergency Provisions satisfies the reporting requirements of this paragraph. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported except that a deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.
- (b) The address for report submittal is:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

- (d) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.
- (e) If the Permittee is required to comply with the recordkeeping provisions of (d) in Section C - General Record Keeping Requirements for any "project" (as defined in 326 IAC 2-2-1 (oo) and/or 326 IAC 2-3-1 (jj)) at an existing emissions unit, and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ:
 - (1) The annual emissions, in tons per year, from the project identified in (c)(1) in Section C- General Record Keeping Requirements exceed the baseline actual emissions, as documented and maintained under Section C- General Record Keeping Requirements (c)(1)(C)(i), by a significant amount, as defined in 326 IAC 2-2-1 (ww) and/or 326 IAC 2-3-1 (pp), for that regulated NSR pollutant, and
 - (2) The emissions differ from the preconstruction projection as documented and maintained under Section C - General Record Keeping Requirements (c)(1)(C)(ii).
- (f) The report for project at an existing emissions unit shall be submitted no later than sixty (60) days after the end of the year and contain the following:
 - (1) The name, address, and telephone number of the major stationary source.
 - (2) The annual emissions calculated in accordance with (d)(1) and (2) in Section C - General Record Keeping Requirements.
 - (3) The emissions calculated under the actual-to-projected actual test stated in 326 IAC 2-2-2(d)(3) and/or 326 IAC 2-3-2(c)(3).
 - (4) Any other information that the Permittee wishes to include in this report such as an explanation as to why the emissions differ from the preconstruction projection.

Reports required in this part 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

- (g) The Permittee shall make the information required to be documented and maintained in accordance with (c) in Section C- General Record Keeping Requirements available for review upon a request for inspection by IDEM, OAQ. The general public may request this information from the IDEM, OAQ under 326 IAC 17.1.

Stratospheric Ozone Protection

C.19 Compliance with 40 CFR 82 and 326 IAC 22-1

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

SECTION D.1

EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Melting, Pouring and Casting Operations

- (a) Scrap and charge handling, constructed in 1995 and approved for modification in 2014 to add a return scrap crusher, with a nominal capacity of 30 tons of metal per hour, with no control and exhausting inside the building;

The return scrap crusher consists of 2 massive steel plates and is used to reduce the size of the return scrap.

- (b) One (1) iron charging, melting, ladle metallurgy, holding and transfer system; identified as EU-2; constructed in 1995; a nominal capacity of 30 tons of metal per hour; emissions controlled by baghouses DC-2 and DC-8; emissions exhaust to stacks S-2 & S-8. The transfer operations refer to the transfer of metal from the holding furnace to the ladle. The system consists of the following equipment/operations:

- (1) One (1) furnace charging operation;
- (2) Three (3) electric induction furnaces*;
- (3) One (1) ladle metallurgical station; and
- (4) One (1) electric holding furnace.

* The three (3) electric induction furnaces are considered part of the affected source under 40 CFR Part 63, Subpart EEEEE.

Note: Stack S-8 is a common stack for Baghouse DC-8 and Baghouse DC-7.

Baghouse DC-8 and stack S-8 is also used for the Lines 1, 2, 3, & 4 pouring and casting operations, the EU-6 shot reblast unit, and the EU-5bc waste sand system.

Pouring and Casting Operations

- (c) One (1) Line 1 pouring and casting operation; identified as EU-3a1; constructed in 1995 and modified in 2008; a nominal capacity of 10 tons of metal and 55 tons of sand per hour; particulate emissions controlled by baghouse DC-8; emissions exhaust to Stack S-8.

EU-3a1 is considered part of the affected source under 40 CFR Part 63, Subpart EEEEE.

- (d) One (1) Line 2 pouring and casting operation; identified as EU-3a2; constructed in 1995; modified in 2009, a nominal capacity of 10 tons of metal and 55 tons of sand per hour; particulate emissions controlled by baghouse DC-8; emissions exhaust to stack S-8.

EU-3a2 is considered part of the affected source under 40 CFR Part 63, Subpart EEEEE.

- (e) One (1) Line 3 pouring and casting operation; identified as EU-3a3; constructed in 1995, and approved for modification in 2012; a nominal capacity of 11 tons of metal and 55 tons of sand per hour; particulate emissions controlled by baghouse DC-8; emissions exhaust to stack S-8.

EU-3a3 is considered part of the affected source under 40 CFR Part 63, Subpart EEEEE.

- (f) One (1) Line 4 pouring and casting operation; identified as EU-3a4; constructed in 1995 and approved for modification in 2012; a nominal capacity of 11 tons of metal and 55 tons of sand per hour; particulate emissions controlled by baghouse DC-8; emissions exhaust to stack S-8.

EU-3a4 is considered part of the affected source under 40 CFR Part 63, Subpart EEEEE.

Note: Baghouse DC-8 and stack S-8 is a common control and stack, respectively of the Lines 1, 2, 3, & 4 pouring and casting operations.

Baghouse DC-8 and stack S-8 is also used for the iron charging, melting, ladle metallurgy, holding and transfer system, identified as EU-2, the EU-6 shot reblast unit, and the EU-5bc waste sand system.

Stack S-8 is a common stack for Baghouse DC-8 and Baghouse DC-7.

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

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

D.1.1 Best Available Control Technology (BACT) for PM/PM₁₀ Emissions [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3 (PSD - BACT) and PSD T033-21760-00042, issued in 2008, the Permittee shall comply with the following:

- (a) PM and PM₁₀ emissions from the charging, melting, metallurgy, holding and transfer operations shall be controlled by a baghouse.
- (b) PM and PM₁₀ emissions from the Lines 1, 2, 3 and 4 pouring and casting operations shall be controlled by a baghouse.
- (c) The PM and PM₁₀ emissions from the following facilities are limited, as indicated in the table below:

Process/facility Description (ID)	Control/ Stack	PM and PM ₁₀ (Filterable Emissions)		PM ₁₀ (Filterable Plus Condensable Emissions) (lb/ton iron produced)
		(gr/dscf)	(lb/hr)	
Charging, melting, metallurgy, holding and transfer operations	Baghouse DC-2 (Stack S-2) and Baghouse DC-8 (Stack S-8)	0.003	3.6 (total for 2 stacks)	0.06
Lines 1, 2, 3 and 4 Pouring and casting operations	Baghouse DC-8 (Stack S-8)			

PM10 emissions are surrogate for PM2.5 emissions.

- (d) The total iron production of the electric induction furnaces (comprising EU-2) shall not exceed 750 tons per day and 220,000 tons per twelve consecutive month period with compliance determined at the end of each month.

- (e) Visible emissions of the fugitive emissions from building openings shall not exceed twenty percent (20%) opacity, as determined by a six (6) minute average (24 readings taken in accordance with EPA Method 9, Appendix A); except for one 6-minute average per hour that does not exceed twenty seven percent (27%) opacity.

D.1.2 Best Available Control Technology (BACT) for VOC Emissions [326 IAC 2-2-3][326 IAC 8-1-6]

Pursuant to 326 IAC 2-2-3 (PSD - BACT), 326 IAC 8-1-6, and PSD T033-21760-00042, issued in 2008, VOC BACT for the Lines 1, 2, 3 and 4 pouring & casting, Lines 1, 2, 3 and 4 casting cooling, and casting shakeout operations is as follows:

- (a) The Permittee shall use low VOC emitting greensand binding materials and core resin binders.
- (b) The total VOC emissions from Lines 1, 2, 3 and 4 pouring & casting operations, Lines 1, 2, 3 and 4 casting cooling operations (Section D.2) and Lines 1, 2, 3 and 4 casting shakeout operations (Section D.3) shall not exceed:
 - (i) 0.8 pounds per ton of metal poured when using greensand molds without cores, and
 - (ii) 1.7 pounds of VOC per ton of metal poured when using greensand molds with cores.

Compliance with these limits and Condition D.1.1(d) will satisfy the requirements of 326 IAC 2-2.

D.1.3 Best Available Control Technology (BACT) for CO Emissions [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3 (PSD) and PSD T033-21760-00042, issued in 2008, the CO emissions from the following operations shall not exceed 6.0 pounds per ton of metal poured:

- (a) Lines 1, 2, 3 and 4 pouring and casting operations (stack S-8) (Section D.1),
- (b) Lines 1, 2, 3 and 4 casting/mold cooling operations (stack S-3b and stack S-3d) (Section D.2), and
- (c) Lines 1, 2, 3 and 4 casting shakeout operations (stack S-4, stack S-8, and stack S-5) (Section D.3).

Compliance with this limit and Condition D.1.1(d) will satisfy the requirements of 326 IAC 2-2.

D.1.4 PSD Minor Limit - Lead Emissions [326 IAC 2-2]

In order to render 326 IAC 2-2 not applicable, the total Lead emissions from the following operations shall not exceed 0.003 pounds per ton of metal poured:

- (a) Charging, melting, metallurgy, holding and transfer operations (stacks S-2 and S-8), and
- (b) Lines 1, 2, 3 and 4 pouring and casting operations (stack S-8).

Compliance with these limits and Conditions D.1.1(d), D.2.4 and D.3.4 will limit the source-wide Lead emissions to less than 0.6 tons per twelve consecutive month period and render the requirements of 326 IAC 2-2 not applicable to the source.

D.1.5 Particulate Emission Limitations from Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2, the allowable particulate matter (PM) from the scrap and charge handling shall not exceed 40.04 pounds per hour, each, when operating at a process weight rate of 30.0 tons per hour. This limitation was calculated using 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:

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

D.1.6 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

Compliance Determination Requirements

D.1.7 Particulate and VOC Control

- (a) Pursuant to 326 IAC 2-2, and in order to ensure compliance with Conditions D.1.1 and D.1.4, Baghouse DC-2 and Baghouse DC-8, used to control particulate emissions from the charging, melting, metallurgy, holding and transfer operations, shall be in operation and control at all times the charging, melting, metallurgy, holding and transfer operations are in operation.
- (b) Pursuant to 326 IAC 2-2, and in order to ensure compliance with Conditions D.1.1 and D.1.4, Baghouse DC-8, used to control particulate emissions from the Lines 1, 2, 3 and 4 pouring and casting operations, shall be in operation and control at all times the Lines 1, 2, 3 and 4 pouring and casting operations are in operation.
- (c) Pursuant to 326 IAC 2-2 and 326 IAC 8-1-6, and in order to ensure compliance with Condition D.1.2, the greensand molding materials, percent loss on ignition (%LOI), shell and phenolic urethane cold box core resins and percent resin in the cores shall be consistent with the respective characteristics used during validation testing conducted on July 15, 2008.

D.1.8 Testing Requirements [326 IAC 2-1.1-11]

PM and PM₁₀ testing

- (a) In order to demonstrate the compliance status with Condition D.1.1, the Permittee shall perform PM and PM₁₀ testing for the charging, melting, metallurgy, holding and transfer operations (Stack S-2 and Stack S-8) and the Lines 1, 2, 3 and 4 pouring and casting operations, utilizing methods approved by the Commissioner. The above mentioned operations shall all be in operation when the tests are conducted since a total limit (in lb/hour) is specified for the 2 stacks involved.

PM₁₀ includes filterable and condensable PM₁₀. These tests shall be repeated at least once every five (5) years after completion of the most recent valid compliance stack test.

CO testing

- (b) In order to demonstrate the compliance status with Condition D.1.3, the Permittee shall perform CO testing for the following operations utilizing methods approved by the Commissioner:
- (i) Charging, melting, metallurgy, holding and transfer operations (EU-2) (Stack S-2 and Stack S-8) (Section D.1),
 - (ii) Lines 1, 2, 3 and 4 pouring and casting operations (stack S-8) (Section D.1),
 - (iii) Lines 1, 2, 3 and 4 casting/mold cooling operations (stack S-3b and stack S-3d) (Section D.2), and
 - (iv) Lines 1, 2, 3 and 4 casting shakeout operations (stack S-4, stack S-8, and stack S-5) (Section D.3).

These tests shall be repeated at least once every five (5) years after completion of the most recent valid compliance stack test.

Lead testing

- (c) In order to demonstrate the compliance status with Condition D.1.4, the Permittee shall perform Lead testing for the charging, melting, metallurgy, holding and transfer operations (Stack S-2 and Stack S-8) and the Lines 1, 2, 3 and 4 pouring and casting operations, utilizing methods approved by the Commissioner. The above mentioned operations shall all be in operation when the tests are conducted since a total limit (in lb/ton) is specified for the 2 stacks involved.
- (d) Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

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

D.1.9 Visible Emissions Notations

- (a) Visible emission notations of the stack exhausts from Baghouse DC-2 (Stack S-2) and Baghouse DC-8 (Stack S-8) shall be performed once per day 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 reasonable response steps. Failure to take response steps shall be considered a deviation from this permit. Section C - Response to Excursions and Exceedances contains the Permittee's obligations with regard to responding to the reasonable response steps required by this condition.

D.1.10 Baghouse Parametric Monitoring

- (a) The Permittee shall record the pressure drop across the baghouses used in conjunction with the charging, melting, metallurgy, holding and transfer operations (EU-2) and Lines 1, 2, 3 and 4 pouring and casting operations (Baghouse DC-2 and Baghouse DC-8) at least once per day when the respective facilities are in operation. When for any one reading, the pressure drop across the dust collector is outside the normal range, the Permittee shall take reasonable response. The normal range for this unit is a pressure drop between 1.5 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 drop 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.1.11 Broken or Failed Bag Detection

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

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 Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-19]

D.1.12 Record Keeping Requirements

- (a) In order to document the compliance status with Condition D.1.1(d), the Permittee shall maintain records of the total metal production of the electric induction furnaces (comprising EU-2).
- (b) In order to document the compliance status with Condition D.1.2, the Permittee shall maintain records of the following:
 - (1) The resin content of the shell and phenolic urethane cold box cores, and

- (2) The %LOI of the greensand mold system.
- (c) In order to document the compliance status with Condition D.1.8, the Permittee shall maintain records of the results from testing required by that condition.
- (d) In order to document the compliance status with Condition D.1.9, the Permittee shall maintain records of the visible emission notations required by that condition. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).
- (e) In order to document the compliance status with Condition D.1.10, the Permittee shall maintain records of the pressure drop readings required by that condition. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of pressure drop reading (e.g. the process did not operate that day).
- (f) For extended periods of time when visible emissions notations and daily parametric monitoring are not required (e.g., the units are venting indoors or during plant shutdown), IDEM, OAQ Compliance Branch has determined that it is sufficient to document the reason daily visible emissions notations and parametric monitoring will not be required on the first day of the period and document when the visible emissions notations and daily parametric monitoring requirement will resume.
- (g) Section C - General Record Keeping Requirements of this permit contains the Permittee's obligations with regard to the records required by this condition.

D.1.13 Reporting Requirements

A quarterly summary of the information to document the compliance status with the twelve-month rolling limit in Condition D.1.1(d) shall be submitted no later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Casting/Mold Cooling Operations

Casting/Mold Cooling Operations

- (g) One (1) Line 1 casting/mold cooling operation; identified as EU-3b1; constructed in 1995; a nominal capacity of 10 tons of metal and 55 tons of sand per hour; with no control, and emissions exhaust to stack S-3b.
- (h) One (1) Line 2 casting/mold cooling operation; identified as EU-3b2; constructed in 1995; a nominal capacity of 10 tons of metal and 55 tons of sand per hour with no control, and emissions exhaust to stack S-3b.

Note: Stack-3b is a common stack for the casting/mold cooling operations for Line 1 and Line 2.

- (i) One (1) Line 3 casting/mold cooling operation; identified as EU-3b3; constructed in 1995 and approved for modification in 2012; a nominal capacity of 11 tons of metal and 55 tons of sand per hour; with no control, and emissions exhaust to stack S-3d.
- (j) One (1) Line 4 casting/mold cooling operation; identified as EU-3b4; constructed in 1995 and approved for modification in 2012; a nominal capacity of 11 tons of metal and 55 tons of sand per hour; with no control, and emissions exhaust to stack S-3d.

Note: Stack-3d is a common stack for the casting/mold cooling operations for Line 3 and Line 4.

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

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

D.2.1 Best Available Control Technology (BACT) for PM/PM₁₀ Emissions [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3 (PSD - BACT) and PSD T033-21750-00042, issued in 2008, the PM and PM₁₀ emissions from the following facilities are limited, as indicated in the table below:

Process/facility Description (ID)	Control/Stack	PM and PM ₁₀ (Filterable Emissions)		PM ₁₀ (Filterable Plus Condensable Emissions)
		(gr/dscf)	(lb/hr)	(lb/ton iron produced)
Line 1 and Line 2 casting/mold cooling operations	None (stack S-3b)	0.01	2.14	0.09
Line 3 and Line 4 casting/mold cooling operations	None (stack S-3d)	0.01	2.14	0.09

PM10 emissions are surrogate for PM2.5 emissions.

Compliance with these limits and Condition D.1.1(d) will satisfy the requirements of 326 IAC 2-2.

D.2.2 Best Available Control Technology (BACT) for VOC Emissions [326 IAC 2-2-3][326 IAC 8-1-6]

Pursuant to 326 IAC 2-2-3 (PSD - BACT), 326 IAC 8-1-6 and PSD T033-21760-00042, issued in 2008, the Permittee shall comply with VOC BACT for the Lines 1, 2, 3 and 4 casting/mold cooling operations in Condition D.1.2.

D.2.3 Best Available Control Technology (BACT) for CO Emissions [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3 (PSD - BACT) and PSD T033-21760-00042, issued in 2008 the Permittee shall comply with CO BACT for the Lines 1, 2, 3 and 4 casting/mold cooling operations in Condition D.1.3.

D.2.4 PSD Minor Limit - Lead Emissions [326 IAC 2-2]

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

- (a) The Lead emissions from the Line 1 and Line 2 casting/mold cooling operations (stack S-3b) shall not exceed 0.0012 pounds per ton of iron processed.
- (b) The Lead emissions from the Line 3 and Line 4 casting/mold cooling operations (stack S-3d) shall not exceed 0.0012 pounds per ton of iron processed.

Compliance with these limits and Conditions D.1.1(d), D.1.4 and D.3.4 will limit the source-wide lead emissions to less than 0.6 tons per twelve consecutive month period and render the requirements of 326 IAC 2-2 not applicable.

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

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

Compliance Determination Requirements

D.2.6 Testing Requirements [326 IAC 2-1.1-11]

PM and PM₁₀ testing

- (a) In order to demonstrate the compliance status with Condition D.2.1, the Permittee shall perform PM and PM₁₀ testing for the Line 1 and Line 2 casting/mold cooling operations (Stack 3b) utilizing methods approved by the Commissioner. The above mentioned operations shall all be in operation when the tests are conducted since a combined limit (in lb/hour) is specified for the operations involved. PM₁₀ includes filterable and condensable PM₁₀. These tests shall be repeated at least once every five (5) years after completion of the most recent valid compliance stack test.
- (b) In order to demonstrate the compliance status with Condition D.2.1, the Permittee shall perform PM and PM₁₀ testing for the Line 3 and Line 4 casting/mold cooling operations (Stack 3d) utilizing methods approved by the Commissioner. The above mentioned operations shall all be in operation when the tests are conducted since a combined limit (in lb/hour) is specified for the operations involved. PM₁₀ includes filterable and condensable PM₁₀. These tests shall be repeated at least once every five (5) years after completion of the most recent valid compliance stack test.

CO Testing

- (c) In order to demonstrate the compliance status with Condition D.2.3, the Permittee shall perform the CO testing for the Lines 1, 2, 3 and 4 casting/mold cooling operations (Stacks 3b and 3d) required by Condition D.1.7(b).

Lead Testing

- (d) In order to demonstrate the compliance status with Condition D.2.4, the Permittee shall perform lead testing for the Line 1 and Line 2 casting/mold cooling operations (Stack 3b) utilizing methods approved by the Commissioner. The above mentioned operations shall all be in operation when the tests are conducted since a combined limit (in lb/hour) is specified for the operations involved. These tests shall be repeated at least once every five (5) years after completion of the most recent valid compliance stack test.
- (e) In order to demonstrate the compliance status with Condition D.2.4, the Permittee shall perform lead testing for the Line 3 and Line 4 casting/mold cooling operations (Stack 3d) utilizing methods approved by the Commissioner. The above mentioned operations shall all be in operation when the tests are conducted since a combined limit (in lb/hour) is specified for the operations involved. These tests shall be repeated at least once every five (5) years after completion of the most recent valid compliance stack test.
- (f) 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.

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

D.2.7 Record Keeping Requirements

- (a) In order to document the compliance status with Condition D.2.6, the Permittee shall maintain records of the results from testing required by that condition.
- (b) Section C - General Record Keeping Requirements of this permit contains the Permittee's obligations with regard to the records required by this condition.

SECTION D.3

EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Casting Shakeout and Waste Sand System

Casting Shakeout Operations

- (k) One (1) Line 3 casting shakeout operation; identified as EU-4a; constructed in 1995 and modified in 2012; with a nominal capacity of 11 tons of metal and 55 tons of sand per hour; particulate emissions controlled by baghouse DC-3 and exhausting to stack S-15.
- (l) One (1) Line 4 casting shakeout operation; identified as EU-4b; constructed in 1995 and modified in 2012; with a nominal capacity of 11 tons of metal and 55 tons of sand per hour; particulate emissions controlled by baghouse DC-4 and stack S-4.
- (m) One (1) Line 1 and Line 2 casting shakeout operation; identified as EU-5a; constructed in 1995; a nominal capacity of 20 tons of metal and 110 tons of sand per hour; particulate emissions controlled by baghouse DC-5; emissions exhaust to stack S-5.

Note: This EU-5a casting shakeout operation is shared by Line 1 and Line 2.

- (n) One (1) return sand/waste sand system; identified as EU-5bc; constructed in 1995; a nominal capacity of 220 tons of sand per hour; emissions controlled by baghouse DC-5, which exhausts to stack S-5 and baghouse DC-8, which exhausts to stack S-5.

Note: Baghouse DC-5 controls the return sand system. Baghouse DC-8 controls the waste sand system. Baghouse DC-5 and stack S-5 is a common control and stack, respectively of the Line 1 and Line 2 casting shakeout operation and return sand/waste sand system, identified as EU-5bc. Stack S-8 is a common stack for Baghouse DC-8 and Baghouse DC-7. Baghouse DC-8 and stack S-8 is also used for the iron charging, melting, ladle metallurgy, holding and transfer system, identified as EU-2, the Lines 1, 2, 3, and 4 pouring and casting operations, and the shot reblast unit EU-6.

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

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

D.3.1 Best Available Control Technology (BACT) for PM/PM₁₀ Emissions [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3 (PSD - BACT) and PSD T033-21760-00042, issued in 2008, the Permittee shall comply with the following:

- (a) PM and PM₁₀ emissions from the Line 3 and Line 4 casting shakeout operation shall be controlled by a baghouse.
- (b) PM and PM₁₀ emissions from the Line 1 and Line 2 casting shakeout operation and return sand and waste sand system shall be controlled by a baghouse.
- (c) The PM and PM₁₀ emissions from the following facilities are limited, as indicated in the table below:

Process/facility Description (ID)	Control/Stack	PM and PM ₁₀ (Filterable Emissions)		PM ₁₀ (Filterable Plus Condensable Emissions)
		(gr/dscf)	(lb/hr)	(lb/ton iron produced)
Line 3 and Line 4 casting shakeout operation	Baghouse DC-3 (Stack S-15) and Baghouse DC-4 (Stack S-4)	0.003	2.06 (total for 2 stacks)	0.10
Line 1 and Line 2 casting shakeout operation	Baghouse DC-5 (Stack S-5) and Baghouse DC-8 (Stack S-8)	0.003	3.34 (total for 2 stacks)	0.12
Return sand and waste sand system				

PM10 emissions are surrogate for PM2.5 emissions.

Compliance with these limits and Condition D.1.1(d) will satisfy the requirements of 326 IAC 2-2.

D.3.2 Best Available Control Technology (BACT) for VOC Emissions [326 IAC 2-2][326 IAC 8-1-6]

Pursuant to 326 IAC 2-2-3 (PSD - BACT), 326 IAC 8-1-6 and PSD T033-21760-00042, issued in 2008, the Permittee shall comply with VOC BACT for the Lines 1, 2, 3 and 4 casting shakeout operations in Condition D.1.2.

D.3.3 Best Available Control Technology (BACT) for CO Emissions [326 IAC 2-2][326 IAC 8-1-6]

Pursuant to 326 IAC 2-2-3 (PSD - BACT) and PSD T033-21760-00042, issued in 2008, the Permittee shall comply with CO BACT for the Lines 1, 2, 3 and 4 casting shakeout operations in Condition D.1.3.

D.3.4 PSD Minor Limit - Lead Emissions [326 IAC 2-2]

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

- (a) The lead emissions from the Line 3 and Line 4 casting shakeout operation (stack S-15 and S-4) shall not exceed 0.0012 pounds per ton of iron processed.
- (b) The lead emissions from the Line 1 and Line 2 casting shakeout operation and return sand and waste sand system (stack S-5 and stack S-8) shall not exceed 0.0012 pounds per ton of iron processed.

Compliance with these limits and Conditions D.1.1(d), D.1.4, and D.2.4 will limit the source-wide lead emissions to less than 0.6 tons per twelve consecutive month period and render the requirements of 326 IAC 2-2 not applicable.

D.3.5 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

Compliance Determination Requirements

D.3.6 Particulate Control

- (a) Pursuant to 326 IAC 2-2, and in order to ensure compliance with Condition D.3.1, baghouse DC-3 and baghouse DC-4, used to control particulate emissions from the Line 3 and Line 4 casting shakeout operation, shall be in operation and control at all times Line 3 and Line 4 casting shakeout operation are in operation.
- (b) Pursuant to 326 IAC 2-2, and in order to ensure compliance with Condition D.3.1, baghouse DC-5 and baghouse DC-8, used to control particulate emissions from the Line 1 and Line 2 casting shakeout operation and Return sand and waste sand system, shall be in operation and control at all times from the Line 1 and Line 2 casting shakeout operation and Return sand and waste sand system are in operation.

D.3.7 Testing Requirements [326 IAC 2-1.1-11]

PM and PM₁₀ testing

- (a) In order to demonstrate the compliance status with Condition D.3.1, the Permittee shall perform PM and PM₁₀ testing for the Line 3 and Line 4 casting shakeout operations (stack S-15 and S-4), utilizing methods approved by the Commissioner. PM₁₀ includes filterable and condensable PM₁₀. These tests shall be repeated at least once every five (5) years after completion of the most recent valid compliance stack test. The above mentioned operations shall all be in operation when the tests are conducted since a total limit (in lb/hour) is specified for the 2 stacks involved.
- (b) In order to demonstrate the compliance status with Condition D.3.1, the Permittee shall perform PM and PM₁₀ testing for the Line 1 and Line 2 casting shakeout operations (stack S-5) and the return sand and waste sand system (stack S-5 and stack S-8) utilizing methods approved by the Commissioner. PM₁₀ includes filterable and condensable PM₁₀. These tests shall be repeated at least once every five (5) years after completion of the most recent valid compliance stack test. The above mentioned operations shall all be in operation when the tests are conducted since a total limit (in lb/hour) is specified for the 2 stacks involved.

CO testing

- (c) In order to demonstrate the compliance status with Condition D.3.3, the Permittee shall perform the CO testing for the Line 3 and Line 4 casting shakeout operations (stack S-15 and S-4), the Line 1 and Line 2 shakeout operations (stack S-5) required by Condition D.1.7(b).

Lead testing

- (d) In order to demonstrate the compliance status with Condition D.3.4, the Permittee shall perform Lead testing for the Line 3 and Line 4 casting shakeout operations (stack S-15 and S-4), utilizing methods approved by the Commissioner. The above mentioned operations shall all be in operation when the tests are conducted since a combined limit (in lb/hour) is specified for the operations involved. These tests shall be repeated at least once every five (5) years after completion of the most recent valid compliance stack test.
- (e) In order to demonstrate the compliance status with Condition D.3.4, the Permittee shall perform Lead testing for the Line 1 and Line 2 shakeout operations (stack S-5) utilizing methods approved by the Commissioner. The above mentioned operations shall all be in operation when the tests are conducted since a combined limit (in lb/hour) is specified for the operations involved. These tests shall be repeated at least once every five (5) years

after completion of the most recent valid compliance stack test.

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

D.3.8 Visible Emissions Notations [40 CFR 64]

Pursuant to 40 CFR 64,

- (a) Visible emission notations of the stack exhaust from the Line 3 and Line 4 casting shakeout operations (stack S-15 and S-4), the Line 1 and Line 2 casting shakeout operations (stack S-5), and the return sand and waste sand system (stack S-5) shall be performed once per day 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 reasonable response steps. Failure to take response steps shall be considered a deviation from this permit. Section C - Response to Excursions or Exceedances contains the Permittee's obligations with regard to responding to the reasonable response steps required by this condition.

D.3.9 Baghouse Parametric Monitoring [40 CFR 64]

Pursuant to 40 CFR 64,

- (a) The Permittee shall record the pressure drop across the baghouses used in conjunction with the Line 3 and Line 4 casting shakeout operations (Baghouse DC-3 and Baghouse DC-4), the Line 1 and Line 2 casting shakeout operations (Baghouse DC-5), and the return sand and waste sand system (Baghouse DC-5 and Baghouse DC-8) at least once per day when the respective facilities are in operation. When for any one reading, the pressure drop across the dust collector is outside the normal range, the Permittee shall take reasonable response. The normal range for this unit is a pressure drop between 1.5 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 drop 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.3.10 Broken or Failed Bag Detection [40 CFR 64]

Pursuant to 40 CFR 64,

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

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 Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-19]

D.3.11 Record Keeping Requirements

- (a) In order to document the compliance status with Condition D.3.7, the Permittee shall maintain records of the results from testing required by that condition.
- (b) In order to document the compliance status with Condition D.3.8, the Permittee shall maintain records of the visible emission notations required by that condition. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).
- (c) In order to document the compliance status with Condition D.3.9, the Permittee shall maintain records of the pressure drop readings required by that condition. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of pressure drop reading (e.g. the process did not operate that day).
- (d) For extended periods of time when visible emissions notations and daily parametric monitoring are not required (e.g., the units are venting indoors or during plant shutdown), IDEM, OAQ has determined that it is sufficient to document the reason daily visible emissions notations and parametric monitoring will not be required on the first day of the period and document when the visible emissions notations and daily parametric monitoring requirement will resume.
- (e) Section C - General Record Keeping Requirements of this permit contains the Permittee's obligations with regard to the records required by this condition.

SECTION D.4

EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Grinding, Blasting, Sand Handling

- (o) One (1) shot reblast unit; identified as EU-6; constructed in 1997; a nominal capacity of 1.12 tons of iron castings per hour; emissions controlled by baghouse DC-8, which exhausts to stack S-8.

Note: Stack S-8 is a common stack for Baghouse DC-8 and Baghouse DC-7.

Baghouse DC-8 and stack S-8 is also used for the iron charging, melting, ladle metallurgy, holding and transfer system, identified as EU-2, the Lines 1, 2, 3, and 4 pouring and casting operations, and the EU-5bc waste sand system.

- (p) One (1) shot blast system; consisting of four (4) shot blast units; identified as EU-16 through EU-19; constructed in 1999 and modified in 2012; a total nominal capacity of 27 tons of iron castings per hour, with emissions from EU-16, EU-17, EU-18, and EU-19 controlled by baghouse DC-7, which exhausts to stack S-8.

Note: Stack S-8 is a common stack for Baghouse DC-8 and Baghouse DC-7.

- (q) Sand handling system; identified as (EU-1a); constructed in 1995 and modified in 2011; a nominal capacity of 220 tons of sand per hour; and exhausting to stack S-1, stack S-5 and stack S-10. The sand handling system is described as follows:

- (1) Metal Separation controlled by baghouse DC-5, and exhausting to stack S-5.
- (2) Sand multi-cooler controlled by baghouse DC-5, and exhausting to stack S-5.
- (3) Return sand conveyor (no real collection).
- (4) Return sand distribution conveyor controlled by baghouse DC-1, and exhausting to stack S-1.
- (5) Four (4) 250 ton return sand storage bins controlled by baghouse DC-1, and exhausting to stack S-1.
- (6) Two (2) sand mullers, rated at 75 tons of sand per hour, each, controlled by baghouse DC-10 and exhausting to stack S-10.
- (7) Two (2) sand mullers, rated at 75 tons of sand per hour, each, controlled by baghouse DC-1 and exhausting to stack S-1.

Insignificant Activities:

- (g) Eight (8) grinders; identified together as EU-7; constructed in 1999 and approved for modification in 2012; a combined nominal capacity of 24 tons of iron castings per hour; emissions controlled by individual dust collectors which have a gas flow rate of less than 4,000 cfm each, and which have a grain loading of less than or equal to (0.03) grains per actual cubic foot, and which exhaust indoors. [326 IAC 2-7-1(21)(J)(xxiii)][326 IAC 2-2-3]

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

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

D.4.1 Best Available Control Technology (BACT) for PM and PM₁₀ Emissions [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3 (PSD - BACT) and PSD T033-21760-00042, issued in 2008, the Permittee shall comply with the following:

- (a) PM and PM₁₀ emissions from the shot reblast unit (EU-6) shall be controlled by a baghouse.
- (b) PM and PM₁₀ emissions from the shot blast system (EU-16 through EU-19) shall be controlled by a baghouse.
- (c) PM and PM₁₀ emissions from the grinders (EU-7) shall be controlled by dust collectors and exhaust indoors.
- (d) PM and PM₁₀ emissions from the sand handling operations (EU-1a) shall be controlled by a baghouse.
- (e) The PM and PM₁₀ emissions from the following facilities are limited, as indicated in the table below:

Process/facility Description (ID)	Control/Stack	PM and PM ₁₀ (Filterable Emissions)	
		(gr/dscf)	(lb/hr)
Shot reblast operation (EU-6)	Baghouse DC-8 (Stack S-8)	0.003	0.15
Shot blast system (EU-16, 17, 18 and 19)	Baghouse DC-7 (Stack S-8)	0.003	0.95
Sand handling operations (EU-1a)	Baghouse DC-1 (Stack S-1) and Baghouse DC-10 (Stack S-10)	0.003	0.64 (total for 2 stacks)
Exhausts indoors: Grinders (EU-7)	Individual dust collectors	0.003	-

PM₁₀ emissions are surrogate for PM_{2.5} emissions.

Compliance with these limits and Condition D.1.1(d) will satisfy the requirements of 326 IAC 2-2.

D.4.2 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

Compliance Determination Requirements

D.4.3 Particulate Control

- (a) Pursuant to 326 IAC 2-2, and in order to ensure compliance with Condition D.4.1, Baghouse DC-8, used to control particulate emissions from the shot reblast operation, shall be in operation and control at all times the shot reblast operation EU-6 is in operation.
- (b) Pursuant to 326 IAC 2-2, and in order to comply with Condition D.4.1, baghouse DC-7, used to control particulate emissions from the Shot blast system, shall be in operation and control at all times Shot blast system (EU-16, EU-17, EU-18, and EU-19) are in operation.

- (c) Pursuant to 326 IAC 2-2, baghouse DC-1 and baghouse DC-10, used to control particulate emissions from the sand handling operations, shall be in operation at all times the sand handling operations EU-1a is in operation.
- (d) Pursuant to 326 IAC 2-2, the dust collectors used in conjunction with EU-7, used to control particulate emissions from the eight (8) grinders, shall be in operation and control at all times the eight (8) grinders, identified together as EU-7, are in operation.

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

D.4.4 Visible Emissions Notations [40 CFR 64]

Pursuant to 40 CFR 64,

- (a) Visible emission notations of the each of the stack exhausts from the shot reblast operation (Stack S-8), Shot blast system EU-16 through EU-19 (Stack S-8), and the sand handling operations EU1a (Stacks S-1 and S-10) shall be performed once per day 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 reasonable response steps in accordance with Section C - Response to Excursions and Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions and Exceedances, shall be considered a deviation from this permit.

D.4.5 Baghouse Parametric Monitoring [40 CFR 64]

Pursuant to 40 CFR 64,

- (a) The Permittee shall record the pressure drop across the baghouses used in conjunction with the shot reblast operation (Baghouse DC-8), the shot blast system EU-16 through EU-19 (Baghouse DC-7), and the sand handling operations EU-1a (Baghouses DC-1 and DC-10) at least once per day when the respective facilities are in operation. When for any one reading, the pressure drop across the dust collector is outside the normal range, the Permittee shall take reasonable response. The normal range for this unit is a pressure drop between 1.5 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 drop 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.4.6 Broken or Failed Bag Detection [40 CFR 64]

Pursuant to 40 CFR 64,

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

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 Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-19]

D.4.7 Record Keeping Requirements

- (a) In order to document the compliance status with Condition D.4.4, the Permittee shall maintain records of the visible emission notations required by that condition. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).
- (b) In order to document the compliance status with Condition D.4.5, the Permittee shall maintain records of the pressure drop readings required by that condition. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of pressure drop reading (e.g. the process did not operate that day).
- (c) For extended periods of time when visible emissions notations and daily parametric monitoring are not required (e.g., the units are venting indoors or during plant shutdown), IDEM, OAQ Compliance Branch has determined that it is sufficient to document the reason daily visible emissions notations and parametric monitoring will not be required on the first day of the period and document when the visible emissions notations and daily parametric monitoring requirement will resume.
- (d) Section C - General Record Keeping Requirements of this permit contains the Permittee's obligations with regard to the records required by this condition.

SECTION D.5 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Ductile Iron Conversion Process

- (r) One (1) ductile iron conversion (DIC) process: identified as EU-20; constructed in 2009, with a nominal capacity of 30 tons of metal per hour, and particulate emissions captured by two side draft fume and exhaust hoods and controlled by Baghouse DC-20, exhausting to stack S-20;

Note: In this ductile iron conversion (DIC) process, magnesium and other elements are added to molten iron to produce ductile iron.

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

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

D.5.1 PSD Minor Limits [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (PSD) not applicable to this 2009 modification to the existing PSD major source, the following conditions shall apply:

- (a) The PM emissions from the ductile iron conversion process shall be limited to less than 25 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (b) The PM₁₀ emissions from the ductile iron conversion process shall be limited to less than 15 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with these limits shall limit the PM and PM₁₀ emissions to less than 25 and 15 tons per twelve consecutive month period, respectively, and render the requirements of 326 IAC 2-2 not applicable to Significant Permit Modification No. 033-27652-00042, issued in 2009.

Pursuant to SPM No. 033-27652-00042, issued in 2009, SPM No. 033-29247-00042, issued in 2010, and SPM No. 033-34870-00042, PM₁₀ emissions are surrogate for PM_{2.5} emissions.

D.5.2 Particulate Emission Limitations from Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the ductile iron conversion process, identified as EU-20, shall not exceed 39.96 pounds per hour when operating at a process weight rate of 30 tons per hour. The pounds per hour limitation was calculated using the following equation:

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

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

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

D.5.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

Compliance Determination Requirements

D.5.4 Particulate Control

- (a) In order to ensure compliance with Conditions D.5.1 and D.5.2, baghouse DC-20 shall be in operation and control at all times when the ductile iron conversion (DIC) process is 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.5.5 Testing Requirements [326 IAC 2-7-6(1), (6)][326 IAC 2-1.1-11]

In order to demonstrate compliance with Conditions D.5.1 and D.5.2, the Permittee shall perform inlet and outlet PM and PM₁₀ testing on baghouse DC-20 controlling the ductile iron conversion (DIC) process (EU-20) using methods as approved by the Commissioner. PM₁₀ includes filterable and condensable PM₁₀. These tests shall be repeated at least once every five (5) years after completion of the most recent valid compliance stack test. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

D.5.6 PM and PM10 Emissions

Compliance with Condition D.5.1 shall be determined no later than 30 days after the end of each month. For a particular month, this shall be based on the total PM and PM10 emitted for that month added to the previous eleven (11)-month total PM and PM10 emitted so as to arrive at the PM and PM10 emissions for the most recent twelve (12) consecutive month period. The PM and PM10 emissions for a month can be arrived at using the following equations:

$$(a) \quad PM = \frac{(P_{DIC} \times EFPM_{DICc} + P_{DIC} \times EFPM_{DICu} \times \frac{(1-CE)}{CE})}{2,000}$$

Where:

PM = tons of PM emitted for that month

P_{DIC} = tons of ductile iron processed for that month

EFPM_{DICc} = Controlled PM emission factor (0.0023 lbs/ton of ductile iron processed based on June 2, 2010 stack test or the emission factor determined from the most recent valid stack test)

EFPM_{DICu} = Uncontrolled PM emission factor (0.32 lbs/ton of ductile iron processed based on June 2, 2010 stack test or the emission factor determined from the most recent valid stack test)

CE = Percent Capture Efficiency (70%)

$$(b) \quad PM10 = \frac{(P_{DIC} \times EFPM_{10DICc} + P_{DIC} \times EFPM_{10DICu} \times \frac{(1-CE)}{CE})}{2,000}$$

Where:

PM10 = tons of PM10 emitted for that month

P_{DIC} = tons of ductile iron processed for that month

EFPM_{10DICc} = Controlled PM10 emission factor (0.0023 lbs/ton of ductile iron processed based on June 2, 2010 stack test or the emission factor determined from the most recent valid stack test)

EFPM_{10DICu} = Uncontrolled PM10 emission factor (0.29 lbs/ton of ductile iron processed based on June 2, 2010 stack test or the emission factor determined from the most recent valid stack test)
CE = Percent Capture Efficiency (70%)

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

D.5.7 Parametric Monitoring [40 CFR 64]

Pursuant to 40 CFR 64, the Permittee shall record the fan amperage of the baghouse DC-20 used in conjunction with the ductile iron conversion (DIC) process at least once per day when the DIC process is in operation. When for any one reading, the fan amperage across the baghouse is outside the normal range, the Permittee shall take reasonable response steps. The normal range for this unit is a fan amperage between 43 and 47 amps unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. Section C - Responses to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A fan amperage 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.

D.5.8 Broken or Failed Bag Detection [40 CFR 64]

Pursuant to 40 CFR 64,

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

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 2-7-5(3)][326 IAC 2-7-19]

D.5.9 Record Keeping Requirements

- (a) In order to document the compliance status with Condition D.5.1, the Permittee shall maintain records of the total ductile iron produced each month (comprising EU-20).
- (b) In order to document the compliance status with Condition D.5.5, the Permittee shall maintain records of the results from the testing required by that condition.

- (c) In order to document the compliance status with Condition D.5.7, the Permittee shall maintain records of the fan amperage required by that condition. The Permittee shall include in its daily record when a fan amperage is not taken and the reason for the lack of a fan amperage (e.g. the process did not operate that day).
- (d) Section C - General Record Keeping Requirements of this permit contains the Permittee's obligations with regard to the records required by this condition.

D.5.10 Reporting Requirements

A quarterly summary of the information to document the compliance status with Conditions D.5.1(a) and D.5.1(b) shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting Requirements contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

SECTION D.6

EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Core Making

- (s) One (1) Phenolic Urethane Cold Box (PUCB) core production process with a nominal capacity of 2.9 tons of cores per hour, constructed in 2012, consisting of the following units:
 - (1) One (1) 65 ton core sand silo identified as EU-30a, controlled by a bin vent filter exhausting inside the building.
 - (2) One (1) Core sand mixer and sand transport system, identified as EU-30b, with a nominal capacity of 2.9 tons per hour, with emissions vented back to the core sand silo.
 - (3) One (1) PUCB core machine, identified as EU30c, with a nominal capacity of 2.9 tons of cores/hour, each using a tertiary amine catalyst gas controlled by an acid scrubber, identified as SC-1 venting to stack SC-1.
 - (4) One (1) water based core wash, identified as EU30d; and
 - (5) One (1) 1.5 MMBtu/hr natural gas fired drying oven, identified as EU-30e.
- (t) One (1) Warm Box Core production process with a nominal capacity of 2.9 tons cores per hour, constructed in 2012, consisting of the following units;
 - (1) One (1) 65 ton core sand silo, identified as EU-31a, controlled by a bin vent filter exhausting inside the building; and
 - (2) One (1) warm box core machine, identified as EU31b, with a nominal capacity of 2.9 tons of cores/hour and 0.6 MMBtu per hr of natural gas.

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

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

D.6.1 PSD Minor Limits [326 IAC 2-2]

In order to render 326 IAC 2-2 not applicable to this 2012 modification to the existing PSD major source, the Permittee shall comply with the following limits:

PUCB Core Production

- (a) The throughput of sand to the PUCB Core Production shall be less than 25,404 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (b) The total PM emissions from the PUCB Core Production shall be less than 0.925 pound per ton of sand throughput.
- (c) The total PM₁₀ emissions from the PUCB Core Production shall be less than 0.52 pound per ton of sand throughput, each.
- (d) The total PM_{2.5} emissions from the PUCB Core Production shall be less than 0.32 pound per ton of sand throughput.

Note: The sand throughput is equivalent to the core throughput. The above emissions limitations include all emission units related to the PUCB Core Production: the sand silo, sand mixer, core machine, core wash, and drying oven.

Warm Box Core Production

- (e) The throughput of sand to the Warm Box Core Production shall be less than 25,404 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (f) The total PM emissions from Warm Box Core Production shall be less than 0.925 pound per ton of sand throughput.
- (g) The total PM₁₀ emissions from Warm Box Core Production shall be less than 0.52 pound per ton of sand throughput.
- (h) The total PM_{2.5} emissions from the Warm Box Core Production shall be less than 0.32 pound per ton of sand throughput.

Note: The sand throughput is equivalent to the core throughput. The above emissions limitations include all emission units related to the Warm Box Core Production: the sand silo and core machine.

Compliance with these limits, and pursuant to the Actual-to-Projected-Actual (ATPA) Analysis for Significant Permit Modification No. 033-31732-00042 will ensure that the total emissions from the PUCB Core Production and Warm Box Core Production for PM are less than 25 tons per year, PM₁₀ emissions less than 15 tons per year and PM_{2.5} emissions are less than 10 tons per year, and render the requirements of 326 IAC 2-2 (PSD) not applicable to Significant Permit Modification No. 033-31732-00042, issued in 2012.

D.6.2 Particulate Emission Limitations from Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2, the allowable particulate matter (PM) from the PUCB Core Production and the Warm Box Core Production shall not exceed 8.37 pounds per hour, each, when operating at a process weight rate of 2.9 tons per hour, each. This limitation was calculated using 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.6.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

Compliance Determination Requirements

D.6.4 Particulate Emissions Control

In order to ensure compliance with Condition D.6.1 and Condition 6.2, fabric bin vent filter for particulate control shall be in operation and control emissions from the Core Sand Silos and Core Sand Handling at all times that the associated emission unit are in operation.

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

D.6.5 Record Keeping Requirements

- (a) To document compliance with Condition D.6.1(a), the Permittee shall maintain records of the sand throughput to the Core Production and the Warm Box Core Production for each month.
- (b) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the record keeping required by this condition.

D.6.6 Reporting Requirements

A quarterly summary of the information to document the compliance status with Condition D.6.1(a) shall be submitted not later than thirty (30) days following the end of each quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

SECTION D.7 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Thermal Chip Dryer

Thermal Chip Drying Process

- (u) One (1) natural gas-fired thermal chip dryer, identified as EU-32, approved in 2015 for construction, with a maximum capacity of 15 tons of metal chips and machining oil per hour, equipped with eight (8) low NOx retort burners, with a combined maximum heat input capacity of 9.50 MMBtu per hour, with particulate matter emissions controlled by cyclone DC-32a and baghouse DC-32c and VOC and CO emissions controlled by a 4.22 MMBtu per hour natural gas-fired smoke hood and thermal oxidizer, and exhausting to Stack S-32b. Emissions from the eight (8) natural gas-fired burners are uncontrolled and exhaust to Stack S-32a.

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

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

D.7.1 PSD Minor Limits [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (PSD) not applicable to this 2015 modification to the existing PSD major source, the following conditions shall apply:

- (a) The VOC emissions from the thermal chip dryer (excluding natural gas combustion emissions) shall not exceed 39.58 tons of VOC per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with these emission limits will ensure that the potential to emit from this 2015 modification is less than forty (40) tons of VOC per and therefore will render the requirements of 326 IAC 2-2 not applicable.

D.7.2 Particulate Emission Limitations from Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the thermal chip dryer, identified as EU-32, shall not exceed 25.16 pounds per hour when operating at a process weight rate of 15 tons per hour. The pound per hour limitation was calculated using the following equation:

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

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

D.7.3 Best Available Control Technology (BACT) for VOC [326 IAC 8-1-6]

Pursuant to 326 IAC 8-1-6 (BACT) and Significant Source Modification No. 033-35828-00042, the Permittee shall control the VOC emissions from thermal chip dryer using Best Available Control Technology (BACT). The BACT for the thermal chip dryer has been determined to be the following:

- (a) The thermal chip dryer (EU-32) shall use a thermal oxidizer to control VOC emissions with an overall control efficiency equal to or greater than 98% (VOC capture efficiency of 100% and minimum VOC destruction efficiency of 98%)

- (b) The VOC emission rate after controls from the thermal chip dryer and exhausted to Stack S-32b shall not exceed 0.16 pounds per ton of metal chips processed.

Compliance with these conditions equates to 10.51 tons of VOC emitted (excluding natural gas combustion emissions from the retort burners, which exhaust through Stack S-32a) per twelve (12) consecutive month period, based on the thermal chip dryer operating at a maximum capacity of 15 tons of metal chips per hour. Compliance with this condition shall satisfy the requirements of 326 IAC 8-1-6 (General Reduction Requirements).

D.7.4 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

Compliance Determination Requirements

D.7.5 Volatile Organic Compound (VOC)

- (a) In order to comply with Conditions D.7.1(a) and D.7.3, the thermal oxidizer for VOC control shall be in operation and control emissions from the thermal chip dryer, at all times that the process is in operation.
- (b) Compliance with the VOC emission limitation contained in Condition D.7.1(a), shall be determined using the following equation:

$$\text{VOC} = \frac{M \times EF_C}{2,000 \text{ lbs/ton}}$$

Where:

VOC = tons of VOC emitted for previous 12 consecutive month period

M = tons of metal chips processed in previous 12 months

EF_C = controlled VOC emission factor (0.16 pounds of VOC per ton of metal chips processed or the controlled emission factor determined from most recent valid compliance demonstration)

D.7.6 Testing Requirements [326 IAC 2-7-6(1), (6)][326 IAC 2-1.1-11]

PM, PM₁₀, and PM_{2.5} testing

- (a) In order to verify the uncontrolled PM, PM₁₀ and PM_{2.5} emissions from the thermal chip dryer, the Permittee shall perform uncontrolled PM, PM₁₀, and PM_{2.5} testing on the thermal chip dryer no later than sixty (60) days after achieving maximum capacity, but not later than one hundred and eighty (180) days after initial start-up, utilizing methods as approved by the Commissioner. 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. PM₁₀ and PM_{2.5} includes filterable and condensable PM₁₀ and PM_{2.5}.

VOC testing

- (b) In order to demonstrate compliance with Conditions D.7.1(a) and D.7.3, the Permittee shall perform VOC testing, including emission rate, destruction efficiency, and capture efficiency of the thermal chip dryer control system no later than sixty (60) days after achieving maximum capacity, but not later than one hundred and eighty (180) days after initial start-up, utilizing methods as approved by the Commissioner. This testing shall be repeated 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 2-7-6(1)][326 IAC 2-7-5(1)]

D.7.7 Parametric Monitoring

- (a) The Permittee shall determine the appropriate duct pressure or fan amperage from the most recent valid stack test.
- (b) The duct pressure or fan amperage shall be observed at least once per day for the thermal oxidizer whenever the thermal oxidizer is operating. On and after the date the stack test results are available, the duct pressure or fan amperage shall be maintained at the minimum operating fan amperage of twelve (12) amps or within the normal range as established in the most recent valid compliant stack test.

D.7.8 Thermal Oxidizer Operating Temperature

- (a) A continuous monitoring system shall be calibrated, maintained, and operated on the thermal oxidizer for measuring operating temperature, when controlling the VOC emissions from the thermal chip dryer. For the purpose of this condition, continuous means no less than once per fifteen (15) minutes. The output of this system shall be recorded as a 3-hour rolling average. From the date of issuance of this permit until the stack test results are available, the Permittee shall operate the thermal oxidizer at or above the 3-hour rolling average temperature of 1,400°F.
- (b) The Permittee shall determine the 3-hour average temperature from the most recent valid stack test that demonstrates compliance with the limits in Condition D.7.1(a) and D.7.3.
- (c) On and after the date the stack test results are available, the Permittee shall operate the thermal oxidizer at or above the 3-hour rolling average temperature as observed during the compliant stack test.

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

D.7.9 Record Keeping Requirements

- (a) To document the compliance status with Condition D.7.1(a), the Permittee shall maintain monthly records of the amount of metal chips processed in the thermal chip dryer.
- (b) To document the compliance status with Condition D.7.7, the Permittee shall maintain once per day records of the thermal oxidizer duct pressure or fan amperage. The Permittee shall include in its daily record when duct pressure or fan amperage is not taken and the reason for the lack of duct pressure or fan amperage notation (e.g. the process being controlled by the thermal oxidizer did not operate that day, etc.).
- (c) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

D.7.10 Reporting Requirements

A quarterly summary of the information to document the compliance status with Condition D.7.1(a) shall be submitted no later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting Requirements contains the Permittee's obligations with regard to the records required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

SECTION D.8 EMISSIONS UNIT OPERATION CONDITIONS

Regulated Insignificant Activities:

- (a) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment cutting torches, soldering equipment, welding equipment [326 IAC 2-7-1(21)(J)(vi)(EE)][326 IAC 6-3-2].
- (b) One (1) test sample blast machine; identified as EU-1b; constructed in 1995; a nominal capacity of 150 pounds of metal per hour; emissions controlled by and internally vented dust collector, exhausting to stack S-1. [326 IAC 6-3-2]
- (c) One (1) shot reclaim system, controlled by an internally vented dust collector, exhausting to inside the building. [326 IAC 6-3-2]
- (d) Activities with emissions equal to or less than the following thresholds: 5 lb/hr or 25 lb/day PM; 5 lb/hr or 25 lb/day SO₂; 5 lb/hr or 25 lb/day NO_x; 3 lb/hr or 15 lb/day VOC; 0.6 tons per year Pb; 1.0 ton/yr of a single HAP, or 2.5 ton/yr of any combination of HAPs: Scrap receiving operations: All metal scrap is received via truck and deposited into scrap storage bins within a building. A source of fugitive emissions. [326 IAC 6-4]
- (e) Paved and unpaved roads and parking lots with public access. [326 IAC 2-7-1(21)(J)(xiii)][326 IAC 6-4]
- (f) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including the following: deburring, buffing, polishing, abrasive blasting, pneumatic conveying, and woodworking operations, which include the following: Two (2) enclosed grinding units controlled by fabric filters and exhausting inside the building; and One (1) test sample blast machine; identified as EU-1b; constructed in 1995 controlled by fabric filters and exhausting inside the building. [326 IAC 2-7-1(21)(J)(xxiii)][326 IAC 6-3-2]
- (h) One (1) emergency diesel generator, constructed in 1994, with a maximum output horsepower rating (hp) of 1135 HP, using no control, and exhausting indoors.

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

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

D.8.1 Particulate Emission Limitations from Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2, the particulate emissions from the insignificant grinding, brazing, soldering, and welding operations and test sample blast machine shall be limited by the following:

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

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

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

SECTION E.1

EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Melting, Pouring and Casting Operations

- (a) Scrap and charge handling, constructed in 1995 and approved for modification in 2014 to add a return scrap crusher, with a nominal capacity of 30 tons of metal per hour, with no control and exhausting inside the building;

The return scrap crusher consists of 2 massive steel plates and is used to reduce the size of the return scrap.

- (b) One (1) iron charging, melting, ladle metallurgy, holding and transfer system; identified as EU-2; constructed in 1995; a nominal capacity of 30 tons of metal per hour; emissions controlled by baghouses DC-2 and DC-8; emissions exhaust to stacks S-2 & S-8. The transfer operations refer to the transfer of metal from the holding furnace to the ladle. The system consists of the following equipment/operations:

- (1) One (1) furnace charging operation;
- (2) Three (3) electric induction furnaces*;
- (3) One (1) ladle metallurgical station; and
- (4) One (1) electric holding furnace.

* The three (3) electric induction furnaces are considered part of the affected source under 40 CFR Part 63, Subpart EEEEE.

Note: Stack S-8 is a common stack for Baghouse DC-8 and Baghouse DC-7. Baghouse DC-8 and stack S-8 is also used for the Lines 1, 2, 3, & 4 pouring and casting operations and the EU-6 shot reblast unit.

Pouring and Casting Operations

- (c) One (1) Line 1 pouring and casting operation; identified as EU-3a1; constructed in 1995 and modified in 2008; a nominal capacity of 10 tons of metal and 55 tons of sand per hour; particulate emissions controlled by baghouse DC-8; emissions exhaust to Stack S-8.

EU-3a1 is considered part of the affected source under 40 CFR Part 63, Subpart EEEEE.

- (d) One (1) Line 2 pouring and casting operation; identified as EU-3a2; constructed in 1995; modified in 2009, a nominal capacity of 10 tons of metal and 55 tons of sand per hour; particulate emissions controlled by baghouse DC-8; emissions exhaust to stack S-8.

EU-3a2 is considered part of the affected source under 40 CFR Part 63, Subpart EEEEE.

- (e) One (1) Line 3 pouring and casting operation; identified as EU-3a3; constructed in 1995, and approved for modification in 2012; a nominal capacity of 11 tons of metal and 55 tons of sand per hour; particulate emissions controlled by baghouse DC-8; emissions exhaust to stack S-8.

EU-3a3 is considered part of the affected source under 40 CFR Part 63, Subpart EEEEE.

- (f) One (1) Line 4 pouring and casting operation; identified as EU-3a4; constructed in 1995 and

approved for modification in 2012; a nominal capacity of 11 tons of metal and 55 tons of sand per hour; particulate emissions controlled by baghouse DC-8; emissions exhaust to stack S-8.

EU-3a4 is considered part of the affected source under 40 CFR Part 63, Subpart EEEEE.

Note: Baghouse DC-8 and stack S-8 is a common control and stack, respectively of the Lines 1, 2, 3, & 4 pouring and casting operations.

Baghouse DC-8 and stack S-8 is also used for the iron charging, melting, ladle metallurgy, holding and transfer system, identified as EU-2, and the EU-6 shot reblast unit.

Stack S-8 is a common stack for Baghouse DC-8 and Baghouse DC-7.

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

National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements - 40 CFR Part 63, Subpart EEEEE [326 IAC 2-7-5(1)]

E.1.1 General Provisions Relating to National Emissions Standards for Hazardous Air Pollutants under 40 CFR Part 63 [326 IAC 20-1][326 IAC 20-92][40 CFR Part 63, Subpart A]

(a) Pursuant to 326 IAC 20-92 and 40 CFR 63.7760, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference as 326 IAC 20-1-1, for the iron and steel foundry and all activities associated with the iron and steel foundry as specified in 40 CFR 63.7682(b), and in Table 1 of 40 CFR Part 63, Subpart EEEEE in accordance with schedule in 40 CFR Part 63, Subpart EEEEE.

(b) Pursuant to 326 IAC 20-92 and 40 CFR 63.10, the Permittee shall submit all required notifications and reports to:

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

E.1.2 National Emissions Standards for Hazardous Air Pollutants for Iron and Steel Foundries: Requirements [40 CFR Part 63, Subpart EEEEE]

Except as specified in 40 CFR 63.7683(b), pursuant to 326 IAC 20-92 and 40 CFR 63.7683(a), the Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart EEEEE for the electric induction furnaces associated with facility EU-2, the pouring and casting operations (EU-3a1, EU-3a2, EU-3a3 and EU-3a4) and the fugitive emissions from foundry operations no later than April 23, 2007:

- (1) 40 CFR 63.7681
- (2) 40 CFR 63.7682
- (3) 40 CFR 63.7683 (a), (b), (f)
- (4) 40 CFR 63.7690 (a)(1), (a)(5), (a)(7)
- (5) 40 CFR 63.7700 (a), (b), (c)(1)(i), (c)(2), (c)(3)
- (6) 40 CFR 63.7710 (a), (b)(1), (b)(3) - (b)(6)
- (7) 40 CFR 63.7720
- (8) 40 CFR 63.7730 (a), (b)
- (9) 40 CFR 63.7731

- (10) 40 CFR 63.7732 (a), (b)(1), (b)(2), (b)(4), (c)(1), (c)(2), (c)(4), (d), (h)
- (11) 40 CFR 63.7733 (e), (f)
- (12) 40 CFR 63.7734 (a)(1), (a)(5), (a)(7)
- (13) 40 CFR 63.7735 (a), (b)
- (14) 40 CFR 63.7736 (c), (d)
- (15) 40 CFR 63.7740 (b), (f)
- (15) 40 CFR 63.7741 (b)(14)
- (16) 40 CFR 63.7742
- (17) 40 CFR 63.7743 (a)(1), (a)(5), (a)(7), (c)
- (18) 40 CFR 63.7744 (a)
- (19) 40 CFR 63.7745
- (20) 40 CFR 63.7746
- (21) 40 CFR 63.7747 (b) - (d)
- (22) 40 CFR 63.7750 (a), (b), (d), (e)
- (23) 40 CFR 63.7751
- (24) 40 CFR 63.7752
- (25) 40 CFR 63.7753
- (26) 40 CFR 63.7760
- (27) 40 CFR 63.7761
- (28) 40 CFR 63.7765
- (29) Table 1 of Subpart EEEEE

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

Source Name: Metal Technologies Auburn, LLC
Source Address: 1537 West Auburn Drive, Auburn, Indiana 46706
Part 70 Permit No.: T033-32494-00042

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

Please check what document is being certified:

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

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

Signature:

Printed Name:

Title/Position:

Phone:

Date:

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

PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT

Source Name: Metal Technologies Auburn, LLC
Source Address: 1537 West Auburn Drive, Auburn, Indiana 46706
Part 70 Permit No.: T033-32494-00042

This form consists of 2 pages

Page 1 of 2

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

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

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

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

Page 2 of 2

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

Form Completed by:_____

Title / Position: _____

Date:_____

Phone: _____

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

Part 70 Quarterly Report

Source Name: Metal Technologies Auburn, LLC
Source Address: 1537 West Auburn Drive, Auburn, Indiana 46706
Part 70 Permit No.: T033-32494-00042
Facility: Electric Induction Furnaces (comprising EU-2)
Parameter: Metal production
Limit: The total iron production shall not exceed 220,000 tons per twelve consecutive month period with compliance determined at the end of each month.

QUARTER :

YEAR:

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

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.

Deviation has been reported on:

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

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

Part 70 Quarterly Report

Source Name: Metal Technologies Auburn, LLC
Source Address: 1537 West Auburn Drive, Auburn, Indiana 46706
Part 70 Permit No.: T033-32494-00042
Facility: Ductile Iron Conversion Process (EU-20)
Parameter: PM Emissions
Limit: The PM emissions from the ductile iron conversion process shall be limited to less than 25 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
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.

Deviation has been reported on:

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

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

Part 70 Quarterly Report

Source Name: Metal Technologies Auburn, LLC
Source Address: 1537 West Auburn Drive, Auburn, Indiana 46706
Part 70 Permit No.: T033-32494-00042
Facility: Ductile Iron Conversion Process (EU-20)
Parameter: PM10 Emissions
Limit: The PM10 emissions from the ductile iron conversion process shall be limited to less than 15 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
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.

Deviation has been reported on:

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

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

Part 70 Quarterly Report

Source Name: Metal Technologies Auburn, LLC
Source Address: 1537 West Auburn Drive, Auburn, Indiana 46706
Part 70 Permit No.: T033-32494-00042
Facility: PUCB Core Production
Parameter: Sand Throughput
Limit: Less than 25,404 tons per twelve consecutive month period with compliance determined at the end of each month.

QUARTER :

YEAR:

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

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.

Deviation has been reported on:

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

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

Part 70 Quarterly Report

Source Name: Metal Technologies Auburn, LLC
Source Address: 1537 West Auburn Drive, Auburn, Indiana 46706
Part 70 Permit No.: T033-32494-00042
Facility: Warm Box Core Production
Parameter: Sand Throughput
Limit: Less than 25,404 tons per twelve consecutive month period with compliance determined at the end of each month.

QUARTER :

YEAR:

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

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.

Deviation has been reported on:

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

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

Part 70 Quarterly Report

Source Name: Metal Technologies Auburn, LLC
Source Address: 1537 West Auburn Drive, Auburn, Indiana 46706
Part 70 Permit No.: T033-32494-00042
Facility: Thermal Chip Dryer (EU-32)
Parameter: VOC Emissions
Limit: The VOC emissions from the thermal chip dryer (excluding natural gas combustion emissions) shall not exceed 39.58 tons of VOC per twelve (12) consecutive month period, with compliance determined at the end of each month.

QUARTER :

YEAR:

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

☐ No deviation occurred in this quarter.

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

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

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

Source Name: Metal Technologies Auburn, LLC
Source Address: 1537 West Auburn Drive, Auburn, Indiana 46706
Part 70 Permit No.: T033-32494-00042

Months: _____ to _____ Year: _____

Page 1 of 2

This report shall be submitted quarterly based on a calendar year. Proper notice submittal under Section B -Emergency Provisions satisfies the reporting requirements of paragraph (a) of Section C-General Reporting. Any deviation from the requirements of this permit, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

☐ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

☐ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

Permit Requirement (specify permit condition #)

Date of Deviation:

Duration of Deviation:

Number of Deviations:

Probable Cause of Deviation:

Response Steps Taken:

Permit Requirement (specify permit condition #)

Date of Deviation:

Duration of Deviation:

Number of Deviations:

Probable Cause of Deviation:

Response Steps Taken:

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

Form Completed by:_____

Title / Position: _____

Date:_____

Phone: _____

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

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

Source Description and Location

Source Name:	Metal Technologies Auburn, LLC
Source Location:	1537 West Auburn Drive, Auburn, Indiana 46706
County:	DeKalb
SIC Code:	3321 (Gray and Ductile Iron Foundries)
Operation Permit No.:	T 033-32494-00042
Operation Permit Issuance Date:	April 30, 2013
Significant Source Modification No.:	033-35828-00042
Significant Permit Modification No.:	033-35881-00042
Permit Reviewer:	Brian Williams

Existing Approvals

The source was issued Part 70 Operating Permit No. 033-32494-00042 on April 30, 2013. The source has since received the following approval:

- (a) Administrative Amendment No. 033-34144-00042, issued on February 25, 2014; and
- (b) Significant Permit Modification No. 033-34870-00042, issued on January 9, 2015.

County Attainment Status

The source is located in DeKalb County.

Pollutant	Designation
SO ₂	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O ₃	Unclassifiable or attainment effective July 20, 2012, for the 2008 8-hour ozone standard. ¹
PM _{2.5}	Unclassifiable or attainment effective April 5, 2005, for the annual PM _{2.5} standard.
PM _{2.5}	Unclassifiable or attainment effective December 13, 2009, for the 24-hour PM _{2.5} standard.
PM ₁₀	Unclassifiable effective November 15, 1990.
NO ₂	Cannot be classified or better than national standards.
Pb	Unclassifiable or attainment effective December 31, 2011.
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 (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to ozone. DeKalb County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

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

Fugitive Emissions

Since this source is classified as 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.

Source Status - Existing Source

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

Pollutant	Emissions (ton/yr)
PM	>100
PM ₁₀	>100
PM _{2.5}	>100
SO ₂	<100
NO _x	<100
VOC	>100
CO	>100
HAPs	
Single HAP	>10
Total HAPs	>25

- (a) This existing source is a major stationary source, under PSD (326 IAC 2-2), because a PSD regulated pollutant, excluding GHGs, is emitted at a rate of 100 tons per year or more, and it is one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1).
- (b) This existing source is a major source of HAPs, as defined in 40 CFR 63.2, because HAP emissions are greater than ten (10) tons per year for a single HAP and greater than twenty-five (25) tons per year for a combination of HAPs. Therefore, this source is a major source under Section 112 of the Clean Air Act (CAA).
- (c) These emissions are based upon Significant Permit Modification No. 033-34870-00042, issued on January 9, 2015.
- (d) On June 23, 2014, in the case of *Utility Air Regulatory Group v. EPA*, cause no. 12-1146, (available at http://www.supremecourt.gov/opinions/13pdf/12-1146_4g18.pdf) the United States Supreme Court ruled that the U.S. EPA does not have the authority to treat greenhouse gases (GHGs) as an air pollutant for the purpose of determining operating permit applicability or PSD Major source status. On July 24, 2014, the U.S. EPA issued a memorandum to the Regional Administrators outlining next steps in permitting decisions in light of the Supreme Court's decision. U.S. EPA's guidance states that U.S. EPA will no longer require PSD or Title V permits for sources "previously classified as 'Major'"

based solely on greenhouse gas emissions.”

The Indiana Environmental Rules Board adopted the GHG regulations required by U.S. EPA at 326 IAC 2-2-1(zz), pursuant to Ind. Code § 13-14-9-8(h) (Section 8 rulemaking). A rule, or part of a rule, adopted under Section 8 is automatically invalidated when the corresponding federal rule, or part of the rule, is invalidated. Due to the United States Supreme Court Ruling, IDEM, OAQ cannot consider GHGs emissions to determine operating permit applicability or PSD applicability to a source or modification.

Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed a modification application, submitted by Metal Technologies Auburn, LLC on May 14, 2015, relating to the construction and operation of a natural gas-fired thermal metal chip drying system. The source is planning on installing this process to allow them to supplement or replace the purchase of chips from outside sources. The dryer will vaporize the water and VOC based machining lubricant on the metal machining chips. The dried chips will then be melted in the existing electric induction furnaces. The addition of this process will not increase the throughputs to any downstream or upstream processes. The following is a list of the proposed emission units and pollution control device(s):

One (1) natural gas-fired thermal chip dryer, identified as EU-32, approved in 2015 for construction, with a maximum capacity of 15 tons of metal chips and machining oil per hour, equipped with eight (8) low NO_x retort burners, with a combined maximum heat input capacity of 9.50 MMBtu per hour, with particulate matter emissions controlled by cyclone DC-32a and baghouse DC-32c and VOC and CO emissions controlled by a 4.22 MMBtu per hour natural gas-fired smoke hood and thermal oxidizer, and exhausting to Stack S-32b. Emissions from the eight (8) natural gas-fired burners are uncontrolled and exhaust to Stack S-32a.

“Integral Part of the Process” Determination

The source has submitted the following information to justify why the thermal oxidizer should be considered an integral part of the thermal chip drying process:

The thermal oxidizer would be included regardless of air pollution regulations because the oil/VOC vapors coming out of the dryer could be a fire hazard without it. The vapors would build up in the ductwork and the heat from the dryer could ignite a fire. In addition, the oxidizer would also be installed because of the soiling of surrounding surfaces from the oil/VOC vapors. It would be bad practice, regardless of air pollution regulations to allow one system at the facility to negatively impact surrounding systems in such a way.

IDEM, OAQ has evaluated the information submitted and does not agree that the thermal oxidizer should be considered an integral part of the thermal chip drying process. This determination is based on the fact that the primary purpose of the thermal oxidizer is for pollutant control. Therefore, the permitting level will be determined using the potential to emit before the thermal oxidizer.

Enforcement Issues

There are no pending enforcement actions related to this modification.

Emission Calculations

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

Permit Level Determination - Part 70 Modification to an Existing Source

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

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

Increase in PTE Before Controls of the Modification	
Pollutant	Potential To Emit (ton/yr)
PM	6.54
PM ₁₀	5.80
PM _{2.5}	3.57
SO ₂	11.40
VOC	525.92
CO	5.72
NO _x	3.85
Pb	0.34
Single HAPs	<10
Total HAPs	<25

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

(a) Significant Source Modification - Approval to Construct

This source modification is subject to 326 IAC 2-7-10.5(g)(4)(D) because the potential to emit VOC is greater than twenty-five (25) tons per year before control.

(b) Significant Permit Modification - Approval to Operate

This modification will be incorporated into the Part 70 Operating Permit through a significant permit modification issued pursuant to 326 IAC 2-7-12(d)(1) because the modification involves significant change in permit terms or conditions (such as a case-by-case determination of emission limitations and significant changes in existing monitoring Part 70 permit terms and conditions).

Permit Level Determination - PSD

The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this Part 70 source and permit modification, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Process / Emission Unit	Project Emissions (ton/yr)							
	PM	PM ₁₀	PM _{2.5} *	SO ₂	NO _x	VOC	CO	Pb
Thermal Chip Dryer - Process Emissions	6.43	5.36	3.13	11.36	0	39.58	0.77	0.34
Natural Gas Combustion - Retort Burners**	0.08	0.31	0.31	0.02	2.04	0.22	3.43	0
Natural Gas Combustion - Smoke Hood and Thermal Oxidizer	0.03	0.14	0.14	0.01	1.81	0.10	1.52	0
Total for Modification	6.54	5.80	3.57	11.40	3.85	39.9	5.72	0.34
Significant Thresholds	25	15	10	40	40	40	100	0.6

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

**Unlimited potential to emit

This modification to an existing major PSD stationary source is not major because:

- (a) The emissions increase of each PSD regulated pollutant, excluding GHGs, are less than the PSD significant thresholds; and
- (b) The emissions increase of GHGs from this modification to an existing major PSD source are less than seventy-five thousand (75,000) tons of CO₂ equivalent (CO₂e) emissions per year. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

Since this source is considered a major PSD source and the unrestricted potential to emit of this modification is greater than forty (40) tons of VOC per year, the source has elected to limit the potential to emit of this 2015 modification as follows:

- (a) The VOC emissions from the thermal chip dryer (excluding natural gas combustion emissions) shall not exceed 39.58 tons of VOC per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with this emission limit will ensure that the potential to emit from this 2015 modification is less than forty (40) tons of VOC per and therefore will render the requirements of 326 IAC 2-2 not applicable.

These are new emission limits due to this modification.

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of Modification (tons/year)											
	PM	PM ₁₀ [*]	PM _{2.5}	SO ₂	NO _x	VOC	CO	Total HAPs	Lead			
2008 PSD/Title V												
Scrap and charge handling	66.00	66.00	66.00	0	0	0	0	0	0			
3 EIF furnaces total EU-2	15.77	6.60	6.60	0	0	0	0	9.46	0.33			
Line 1 Pouring & Casting EU-3a1 ⁽¹⁾				2.20	1.10	187.00	660.00	113.32				
Line 2 Pouring & Casting EU-3a2 ⁽²⁾												
Line 3 Pouring & Casting EU-3a3												
Line 4 Pouring & Casting EU-3a4												
Line 1 Casting/Mold Cooling EU-3b1	9.37	4.95	4.95	0	0					0.07		
Line 2 Casting/Mold Cooling EU-3b2												
Line 3 Casting/Mold Cooling EU-3b3	9.37	4.95	4.95									0.07
Line 4 Casting/Mold Cooling EU-3b4												
Line 3 Casting Shakeout EU-4a	9.02	5.50	5.50	0	0					0.07		
Line 4 Casting Shakeout EU-4b												
Lines 1 and 2 Casting Shakeout EU-5a	14.63	6.60	6.60									0.07
Return Sand System EU-5bc				0	0	0	0	0				
Sand System & Mullers for Lines 1 & 2 EU-1 ⁽³⁾												
Sand System & Mullers for Lines 3 & 4 EU-1 ⁽³⁾												
EU-16 Shot Blast	4.16	4.16	4.16	0	0	0	0	0	0			
EU-17 Shot Blast												
EU-18 Shot Blast												
EU-19 Shot Blast												
EU1b Sample Blast												
EU-6 Re-blast	0.66	0.66	0.66									
EU-7 Grinding	0.45	0.45	0.45	0	0	0	0	0	0			
2009 Modification												
DIC Process EU-20 ⁽⁴⁾	24.9	14.9	14.9	0	0	0	0	0	0			
2012 Modification ⁽⁵⁾												
PUCB Sand Silo EU-30a	11.75	6.61	4.06	0	0	0	0	0	0			
PUCB core mixing EU-30				0	0	15.62	0	0	0			
PUCB core making (DMIPA) EU-30				0	0	3.94E-03	0	0	0			
Warm Box Core production EU-31	11.75	6.61	4.06	0	0	0	0	0	0			
Warm Box Sand Silo EU-31a				0	0	0	0	0	0			
2015 Modification												
Natural Gas Combustion - Retort Burners	0.08	0.31	0.31	0.02	2.04	0.22	3.43	0.077	0			
Thermal Chip Dryer - Process Emissions and Natural Gas Combustion Emissions from Smoke Hood and Thermal Oxidizer ⁽⁶⁾	6.47	5.49	3.26	11.37	1.81	10.51	2.30	0.40	0.34			

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of Modification (tons/year)								
	PM	PM ₁₀ *	PM _{2.5}	SO ₂	NO _x	VOC	CO	Total HAPs	Lead
Natural Gas Combustion	0.02	0.07	0.07	0.01	0.90	0.05	0.76	0.02	4.51 E-06
Emergency Generator	0.20	0.11	0.11	1.15	6.81	0.20	1.56	3.13E-03	0.00
Fugitive Emissions	1.46	0.28	0.28	0	0	0	0	0	0
Total PTE of Entire Source	192.16	140.36	133.05	14.75	12.66	213.62	668.04	122.93	0.93
Title V Major Source Thresholds	NA	100	100	100	100	100	100	25	10
PSD Major Source Thresholds	100	100	100	100	100	100	100	NA	0.6
(1) Line 1 Pouring & Casting modified in 2008. (2) Line 2 Pouring & Casting modified in 2009. (3) Sand handling modified in 2011. (4) Ductile iron conversion process added in 2009. Throughput limits for DIC conversion modified in 2010; no physical modification. (5) Phenolic urethane cold box core production process and warm box core production process added in 2012. (6) VOC emissions limited pursuant to 326 IAC 8-1-6 (BACT), which is more stringent than 326 IAC 2-2 (PSD) avoidance limit.									

Federal Rule Applicability Determination

NSPS:

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

NESHAP:

- (b) The requirements of the National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production, 40 CFR 63.1500, Subpart RRR and 326 IAC 20-70, are not included for this proposed modification for the thermal chip dryer, since this source does not process aluminum and is not located at a secondary aluminum production facility.
- (c) The requirements of the National Emission Standards for Hazardous Air for Iron and Steel Foundries, 40 CFR 63.7680, Subpart EEEEE, and 326 IAC 20-92, are not included for this proposed modification for the thermal chip dryer, since it does not meet the definition of a scrap preheater in 40 CFR 63.7765. The flame from the thermal chip dryer burners will not directly contact the scrap metal chips.
- (d) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) applicable to this proposed modification.

CAM:

- (e) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to new or modified emission units that involve a pollutant-specific emission unit and meet the following criteria:
- (1) has a potential to emit before controls equal to or greater than the Part 70 major source threshold for the pollutant involved;
 - (2) is subject to an emission limitation or standard for that pollutant; and
 - (3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

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

CAM Applicability Analysis							
Emission Unit	Control Device Used	Emission Limitation (Y/N)	Uncontrolled PTE (ton/yr)	Controlled PTE (ton/yr)	Part 70 Major Source Threshold (ton/yr)	CAM Applicable (Y/N)	Large Unit (Y/N)
Thermal Chip Dryer - PM	Y	Y 326 IAC 6-3-2	<100	-	100	N	-
Thermal Chip Dryer - PM10 and PM2.5	Y	N	<100	-	100	N	-
Thermal Chip Dryer - SO2	N	-	-	-	100	N	-
Thermal Chip Dryer - NOx	N	-	-	-	100	N	-
Thermal Chip Dryer - VOC	Y	Y 326 IAC 2-2 and 326 IAC 8-1-6	>100	<100	100	Y	N
Thermal Chip Dryer - CO	Y	N	-	-	100	N	-
Thermal Chip Dryer - Total HAPs	N	-	-	-	25	N	-
Thermal Chip Dryer - Single HAP	N	-	-	-	10	N	-

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are applicable to the thermal chip dryer for VOC upon issuance of the Title V Renewal. A CAM plan must be submitted as part of the Renewal application.

State Rule Applicability Determination

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

326 IAC 2-2 (PSD)

PSD applicability is discussed under the Permit Level Determination - PSD section.

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

Pursuant to 326 IAC 2-4.1-1(b)(2), the requirements of 326 IAC 2-4.1-1 do not apply to a major source specifically regulated, or exempt from regulation, by a standard issued pursuant to Section 112(d), 112(h), or 112(j) of the CAA. This source is subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Iron and Steel Foundries (40 CFR 63.7680, Subpart EEEEE. Therefore, the existing source is exempt from the requirements of 326 IAC 2-4.1-1.

326 IAC 2-7-6(5) (Annual Compliance Certification)

The U.S. EPA Federal Register 79 FR 54978 notice does not exempt Title V Permittees from the requirements of 40 CFR 70.6(c)(5)(iv) or 326 IAC 2-7-6(5)(D), but the submittal of the Title V annual compliance certification to IDEM satisfies the requirement to submit the Title V annual compliance certifications to EPA. IDEM does not intend to revise any permits since the requirements of 40 CFR 70.6(c)(5)(iv) or 326 IAC 2-7-6(5)(D) still apply, but Permittees can note on their Title V annual compliance certification that submission to IDEM has satisfied reporting to EPA per Federal Register 79 FR 54978. This only applies to Title V Permittees and Title V compliance certifications.

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

Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the thermal chip dryer shall not exceed 25.16 pounds per hour when operating at a process weight rate of 15 tons per hour. The pound per hour limitation was calculated with the following equation:

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

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

Based on calculations, the baghouse is not needed to comply with this limit.

This is a new requirement due to this modification.

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

The thermal chip dryer will be constructed after January 1, 1980 and has potential VOC emissions greater than twenty-five (25) tons per year. Therefore, the thermal chip dryer is subject to 326 IAC 8-1-6 and the Permittee is required to control the VOC emissions using the Best Available Control Technology (BACT).

According to the BACT analysis contained in Appendix B, IDEM, OAQ has determined that the following requirements represent BACT for the thermal chip dryer:

- (a) The thermal chip dryer (EU-32) shall use a thermal oxidizer to control VOC emissions with an overall control efficiency equal to or greater than 98% (VOC capture efficiency of 100% and minimum VOC destruction efficiency of 98%).
- (b) The VOC emission rate after controls from the thermal chip dryer and exhausted to Stack S-32b shall not exceed 0.16 pounds per ton of metal chips processed.

Compliance with these limits equates to 10.51 tons of VOC emitted (excluding natural gas combustion emissions from the retort burners, which exhaust through Stack S-32a) per twelve (12) consecutive month period, based on the thermal chip dryer operating at a maximum capacity of 15 tons of metal chips per hour.

Compliance with this limit shall satisfy the requirements of 326 IAC 8-1-6 (General Reduction Requirements).

This is a new requirement due to this modification.

Compliance Determination and Monitoring Requirements

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

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

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

Emission Unit/Control	Operating Parameters	Frequency
Thermal Chip Dryer/Thermal Oxidizer	Operating Temperature	Continuous
	Fan Amperage or Duct Pressure	Once per day

These monitoring conditions are necessary because the thermal oxidizer for the thermal chip dryer must operate properly to ensure compliance with 326 IAC 8-1-6 (BACT) and to render the requirements of 326 IAC 2-2 (PSD) not applicable to this 2015 modification.

- (b) The testing requirements applicable to this proposed modification are as follows:

Testing Requirements				
Emission Unit	Control Device	Pollutant	Timeframe for Testing	Frequency of Testing
Thermal Chip Dryer	NA	PM, PM ₁₀ , and PM _{2.5} ¹	No later than 60 days after achieving maximum capacity but not later than 180 after initial startup	One time
Thermal Chip Dryer	Thermal Oxidizer	VOC ²	No later than 60 days after achieving maximum capacity but not later than 180 after initial startup	Once every five (5) years

- (1) The source is using alternative emission factors for PM, PM₁₀, PM_{2.5}. Based on these emission factors the unlimited potential to emit is less than the PSD significant thresholds. The source must perform uncontrolled PM, PM₁₀, and PM_{2.5} testing to verify the unlimited potential to emit for the thermal chip dryer. Testing is only one-time because emissions are uncontrolled.
- (2) This testing is necessary to demonstrate compliance with 326 IAC 8-1-6 (BACT) and 326 IAC 2-2 (PSD). IDEM typically requires thermal chip dryers to be tested once every two and one-half (2.5) years. However, on June 26, 2015, Dave Cline of IDEM's Compliance Data Section determined that testing once every five (5) years is satisfactory in conjunction with the compliance monitoring requirements above.

Proposed Changes

The changes listed below have been made to Part 70 Operating Permit No. 033-32494-00042. Deleted language appears as ~~strike throughs~~ and new language appears in **bold**:

- (a) Section A.2 has been revised to include new descriptive language for the proposed thermal chip drying process.
- (b) The existing Section D.7 has been moved to Section D.8. Section D.7 will now contain the applicable requirements for the proposed thermal chip drying process.
- (c) A new Part 70 Quarterly Report Form has been included to allow the source to report the metal chip throughput limit in Condition D.7.1(a).

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

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

...

Thermal Chip Drying Process

- (u) **One (1) natural gas-fired thermal chip dryer, identified as EU-32, approved in 2015 for construction, with a maximum capacity of 15 tons of metal chips and machining oil per hour, equipped with eight (8) low NOx retort burners, with a combined maximum heat input capacity of 9.50 MMBtu per hour, with particulate matter emissions controlled by cyclone DC-32a and baghouse DC-32c and VOC and CO emissions controlled by a 4.22 MMBtu per hour natural gas-fired smoke hood and thermal oxidizer, and exhausting to Stack S-32b. Emissions from the eight (8) natural gas-fired burners are uncontrolled and exhaust to Stack S-32a.**

SECTION D.7 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Thermal Chip Dryer

Thermal Chip Drying Process

- (u) **One (1) natural gas-fired thermal chip dryer, identified as EU-32, approved in 2015 for construction, with a maximum capacity of 15 tons of metal chips and machining oil per hour, equipped with eight (8) low NOx retort burners, with a combined maximum heat input capacity of 9.50 MMBtu per hour, with particulate matter emissions controlled by cyclone DC-32a and baghouse DC-32c and VOC and CO emissions controlled by a 4.22 MMBtu per hour natural gas-fired smoke hood and thermal oxidizer, and exhausting to Stack S-32b. Emissions from the eight (8) natural gas-fired burners are uncontrolled and exhaust to Stack S-32a.**

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

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

D.7.1 PSD Minor Limits [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (PSD) not applicable to this 2015 modification to the existing PSD major source, the following conditions shall apply:

- (a) **The VOC emissions from the thermal chip dryer (excluding natural gas combustion emissions) shall not exceed 39.58 tons of VOC per twelve (12) consecutive month period, with compliance determined at the end of each month.**

Compliance with these emission limits will ensure that the potential to emit from this 2015 modification is less than forty (40) tons of VOC per and therefore will render the requirements of 326 IAC 2-2 not applicable.

D.7.2 Particulate Emission Limitations from Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the thermal chip dryer, identified as EU-32, shall not exceed 25.16 pounds per hour when operating at a process weight rate of 15 tons per hour. The pound per hour limitation was calculated using the following equation:

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

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

D.7.3 Best Available Control Technology (BACT) for VOC [326 IAC 8-1-6]

Pursuant to 326 IAC 8-1-6 (BACT) and Significant Source Modification No. 033-35828-00042, the Permittee shall control the VOC emissions from thermal chip dryer using Best Available Control Technology (BACT). The BACT for the thermal chip dryer has been determined to be the following:

- (a) The thermal chip dryer (EU-32) shall use a thermal oxidizer to control VOC emissions with an overall control efficiency equal to or greater than 98% (VOC capture efficiency of 100% and minimum VOC destruction efficiency of 98%)
- (b) The VOC emission rate after controls from the thermal chip dryer and exhausted to Stack S-32b shall not exceed 0.16 pounds per ton of metal chips processed.

Compliance with these conditions equates to 10.51 tons of VOC emitted (excluding natural gas combustion emissions from the retort burners, which exhaust through Stack S-32a) per twelve (12) consecutive month period, based on the thermal chip dryer operating at a maximum capacity of 15 tons of metal chips per hour. Compliance with this condition shall satisfy the requirements of 326 IAC 8-1-6 (General Reduction Requirements).

D.7.4 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

Compliance Determination Requirements

D.7.5 Volatile Organic Compound (VOC)

- (a) In order to comply with Conditions D.7.1(a) and D.7.3, the thermal oxidizer for VOC control shall be in operation and control emissions from the thermal chip dryer, at all times that the process is in operation.

- (b) Compliance with the VOC emission limitation contained in Condition D.7.1(a), shall be determined using the following equation:

$$\text{VOC} = \frac{M \times EF_c}{2,000 \text{ lbs/ton}}$$

Where:

VOC = tons of VOC emitted for previous 12 consecutive month period

M = tons of metal chips processed in previous 12 months

EF_c = controlled VOC emission factor (0.16 pounds of VOC per ton of metal chips processed or the controlled emission factor determined from most recent valid compliance demonstration)

D.7.6 Testing Requirements [326 IAC 2-7-6(1), (6)] [326 IAC 2-1.1-11]
PM, PM₁₀, and PM_{2.5} testing

- (a) In order to verify the uncontrolled PM, PM₁₀ and PM_{2.5} emissions from the thermal chip dryer, the Permittee shall perform uncontrolled PM, PM₁₀, and PM_{2.5} testing on the thermal chip dryer no later than sixty (60) days after achieving maximum capacity, but not later than one hundred and eighty (180) days after initial start-up, utilizing methods as approved by the Commissioner. 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. PM₁₀ and PM_{2.5} includes filterable and condensable PM₁₀ and PM_{2.5}.

VOC testing

- (b) In order to demonstrate compliance with Conditions D.7.1(a) and D.7.3, the Permittee shall perform VOC testing, including emission rate, destruction efficiency, and capture efficiency of the thermal chip dryer control system no later than sixty (60) days after achieving maximum capacity, but not later than one hundred and eighty (180) days after initial start-up, utilizing methods as approved by the Commissioner. This testing shall be repeated 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 2-7-6(1)] [326 IAC 2-7-5(1)]

D.7.7 Parametric Monitoring

- (a) The Permittee shall determine the appropriate duct pressure or fan amperage from the most recent valid stack test.
- (b) The duct pressure or fan amperage shall be observed at least once per day for the thermal oxidizer whenever the thermal oxidizer is operating. On and after the date the stack test results are available, the duct pressure or fan amperage shall be maintained at the minimum operating fan amperage of twelve (12) amps or within the normal range as established in the most recent valid compliant stack test.

D.7.8 Thermal Oxidizer Operating Temperature

- (a) A continuous monitoring system shall be calibrated, maintained, and operated on the thermal oxidizer for measuring operating temperature, when controlling the VOC emissions from the thermal chip dryer. For the purpose of this condition, continuous means no less than once per fifteen (15) minutes. The output of this system shall be recorded as a 3-hour rolling average. From the date of issuance of this permit until the stack test results are available, the Permittee shall operate the

thermal oxidizer at or above the 3-hour rolling average temperature of 1,400°F.

- (b) The Permittee shall determine the 3-hour average temperature from the most recent valid stack test that demonstrates compliance with the limits in Condition D.7.1(a) and D.7.3.
- (c) On and after the date the stack test results are available, the Permittee shall operate the thermal oxidizer at or above the 3-hour rolling average temperature as observed during the compliant stack test.

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

D.7.9 Record Keeping Requirements

- (a) To document the compliance status with Condition D.7.1(a), the Permittee shall maintain monthly records of the amount of metal chips processed in the thermal chip dryer.
- (b) To document the compliance status with Condition D.7.7, the Permittee shall maintain once per day records of the thermal oxidizer duct pressure or fan amperage. The Permittee shall include in its daily record when duct pressure or fan amperage is not taken and the reason for the lack of duct pressure or fan amperage notation (e.g. the process being controlled by the thermal oxidizer did not operate that day, etc.).
- (c) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

D.7.10 Reporting Requirements

A quarterly summary of the information to document the compliance status with Condition D.7.1(a) shall be submitted no later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting Requirements contains the Permittee's obligations with regard to the records required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

SECTION D.78 EMISSIONS UNIT OPERATION CONDITIONS

Regulated Insignificant Activities:

...

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

D.78.1 Particulate Emission Limitations from Manufacturing Processes [326 IAC 6-3-2]

...

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

Part 70 Quarterly Report

Source Name: Metal Technologies Auburn, LLC
Source Address: 1537 West Auburn Drive, Auburn, Indiana 46706
Part 70 Permit No.: T033-32494-00042
Facility: Thermal Chip Dryer (EU-32)
Parameter: VOC Emissions
Limit: The VOC emissions from the thermal chip dryer (excluding natural gas combustion emissions) shall not exceed 39.58 tons of VOC per twelve (12)

consecutive month period, with compliance determined at the end of each month.

QUARTER :

YEAR:

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

☐ No deviation occurred in this quarter.

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

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

...

Conclusion and Recommendation

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 033-35828-00042 and Significant Permit Modification No. 033-35881-00042. The staff recommends to the Commissioner that this Part 70 Significant Source and Significant Permit Modification be approved.

IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Brian Williams at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5375 or toll free at 1-800-451-6027 extension 4-5375.
- (b) A copy of the 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: Emission Calculations
Summary of Modification**

Company Name: Metal Technologies Auburn, LLC
Source Address: 1537 West Auburn Drive, Auburn, IN 46706
Significant Source Modification No: 033-35828-00042
Significant Permit Modification No: 033-35881-00042
Reviewer: Brian Williams

Unlimited Potential to Emit of Modification (tons/year)									
Process	PM	PM10	PM2.5	SO2	NOx	VOC	CO	Total HAPs	Single HAP
Thermal Chip Dryer - Process Emissions	6.43	5.36	3.13	11.36	0	525.60	0.77	0.36	0.34 Lead
Natural Gas Combustion - Retort Burners	0.08	0.31	0.31	0.02	2.04	0.22	3.43	0.08	0.07 Hexane
Natural Gas Combustion - Smoke Hood and Thermal Oxidizer	0.03	0.14	0.14	0.01	1.81	0.10	1.52	0.03	0.03 Hexane
Total	6.54	5.80	3.57	11.40	3.85	525.92	5.72	0.47	0.34 Lead

Limited Potential to Emit of Modification (tons/year)									
Process	PM	PM10	PM2.5	SO2	NOx	VOC	CO	Total HAPs	Single HAP
Thermal Chip Dryer - Process Emissions and Natural Gas Combustion Emissions from Smoke Hood and Thermal Oxidizer*	6.47	5.49	3.26	11.37	527.41	10.51	2.30	0.40	0.34 Lead
Natural Gas Combustion - Retort Burners	0.08	0.31	0.31	0.02	2.04	0.22	3.43	0.077	0.073 Hexane
Total	6.54	5.80	3.57	11.40	529.45	10.74	5.72	0.47	0.34 Lead

*VOC emissions limited pursuant to 326 IAC 8-1-6 (BACT).

Appendix A: Emissions Calculations
Gray Iron Foundries
Emissions Summary
Company Name: Metal Technologies Auburn, LLC
Source Address: 1537 West Auburn Drive, Auburn, IN 46706
Significant Source Modification No: 033-35828-00042
Significant Permit Modification No: 033-35861-00042
Reviewer: Brian Williams

Summary of Emission Units

Process Description		Emission Unit ID(s)	Control / Stack ID	Nominal Throughput (ton/hour)	Nominal Throughput (lb/hour)	Nominal Throughput (tons/yr)
Raw Material Handling and Preparation	Scrap and Charge Handling	Scrap and charge handling	No control; indoors	30.00	60,000	262,800
	Sand Handling	EU-5bc Return Sand System	Baghouse DC-5 (Stack S-5) and Baghouse DC-8 (Stack S-8)	220.00	440,000	1,927,200
		EU-1 Sand System & Mullers for Lines 1 & 2	Baghouse DC-1 (Stack S-1)			
		EU-1 Sand System & Mullers for Lines 3 & 4	Baghouse DC-10 (Stack S-10)			
	Magnesium Treatment	EU-20 (Ductile Iron Conversion Process)	Baghouse DC-20 (Stack S-20)	30.00	60,000	262,800
	Thermal Chip Dryer	EU-32	Cyclone D-32a, Thermal Oxidizer D-32b, and Baghouse D-32c (Stack S-32b)	15.00	30,000.00	131,400
Metal Melting	Electric Induction Furnaces	EU-2 (3 EIF furnaces total)	Baghouses DC-2 and DC-8 (Stacks S-2 and S-8)	30.00	60,000	262,800
Casting and Finishing	Pouring/Casting	EU-3a1 Pouring & Casting Line 1	Baghouse DC-8 (Stack S-8)	10.00	84,000	367,920
		EU-3a2 Pouring & Casting Line 2		10.00		
		EU-3a3 Pouring & Casting Line 3		11.00		
		EU-3a4 Pouring & Casting Line 4		11.00		
	Casting/Mold Cooling	EU-3b1 Casting/Mold Cooling Line 1	No control (Stack S-3b)	10.00	84,000	367,920
		EU-3b2 Casting/Mold Cooling Line 2		10.00		
		EU-3b3 Casting/Mold Cooling Line 3	No control (Stack S-3d)	11.00		
		EU-3b4 Casting/Mold Cooling Line 4		11.00		
	Casting Shakeout	EU-4a Casting Shakeout Line 3	Baghouse DC-3 (Stack S-15)	11.00	84,000	367,920
		EU-4b Casting Shakeout Line 4	Baghouse DC-4 (Stack S-4)	11.00		
		EU-5a Casting Shakeout Line 1 and 2	Baghouse DC-5 (Stack S-5)	20.00		
	Grinding*	EU-7 Grinding	Internally vented dust collectors	24.00	36,000	157,680
	Blasting*	EU-16 Shot Blast	Baghouse DC-7 (Stack S-8)	27.00	36,000	157,680
		EU-17 Shot Blast				
		EU-18 Shot Blast				
		EU-19 Shot Blast	Internally vented dust collector	0.08		
		EU-6 Re-blast	Baghouse DC-8 (Stack S-8)	1.12		
Mold and Core Production	Core Making	EU-30a PUCB Sand Silo	bin vent filter	2.90	5,800	25,404
		EU-30 PUCB core mixing	no control			
		EU-30 PUCB core making (DMIPA)	Acid Scrubber SC-1 (Stack SC-1)	2.90	5,800	25,404
		EU-31 Warm Box Core production	no control			
		EU-31a Warm Box Sand Silo	bin vent filter			
Natural Gas Combustion				Heat Input Capacity (MMBtu/hr)		Total Heat Input Capacity (MMBtu/hr)
		PUCB drying oven	no control	1.50		2.10
		Warm Box core machine	no control	0.60		
		Thermal Chip Dryer Retort Burners (Low-NOx)	no control (Stack S-32a)	6.545		10.73
		Smoke Hood and Thermal Oxidizer Burners	Thermal Oxidizer D-32b and Baghouse D-32c	4.18		
Emergency Generator				Output Horsepower Rating (hp)		
		Emergency Generator	no control	1135		

Notes

* Amount of metal finished (Grinding and Blasting) is equal to 60% of the total metal melted

Methodology

Nominal Throughput (lb/hour) = Nominal Throughput (ton/hr) * 2,000 lb/ton
 Nominal Throughput (ton/yr) = Nominal Throughput (ton/hr) * 8,760 hours/year

Appendix A: Emissions Calculations
Gray Iron Foundries
Emissions Summary
Company Name: Metal Technologies Auburn, LLC
Source Address: 1537 West Auburn Drive, Auburn, IN 46706
Significant Source Modification No: 033-35828-00042
Significant Permit Modification No: 033-35861-00042
Reviewer: Brian Williams

Summary of Unlimited PTE

		Unlimited Potential to Emit (tons/year)										
		Criteria Pollutants							Hazardous Air Pollutants			
Process Description		PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO	Lead	Beryllium (Be)	Organic HAPs	Metallic HAPs
Scrap and Charge Handling	Scrap and charge handling	78.84	78.84	78.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sand Handling	EU-5bc Return Sand System	3,784.32	835.70	835.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	EU-1 Sand System & Mullers for Lines 1 & 2											
	EU-1 Sand System & Mullers for Lines 3 & 4											
Thermal Chip Dryer and Natural Gas Combustion	EU-32	6.54	5.80	3.57	11.40	3.85	525.92	5.72	0.34	0.00	0.11	0.36
Magnesium Treatment	EU-20 (Ductile Iron Conversion Process)	236.52	236.52	236.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electric Induction Furnaces	EU-2 (3 EIF furnaces total)	118.26	113.00	113.00	0.00	0.00	0.00	0.00	5.58	1.18E-04	0.00	9.46
Pouring/Casting	EU-3a1 Pouring & Casting Line 1	772.63	378.96	378.96	3.68	1.84						
	EU-3a2 Pouring & Casting Line 2											
	EU-3a3 Pouring & Casting Line 3											
	EU-3a4 Pouring & Casting Line 4											
Casting/Mold Cooling	EU-3b1 Casting/Mold Cooling Line 1	257.54	257.54	257.54	0.00	0.00	312.73	1,103.76	1.16	0.00	51.51	61.81
	EU-3b2 Casting/Mold Cooling Line 2											
	EU-3b3 Casting/Mold Cooling Line 3											
	EU-3b4 Casting/Mold Cooling Line 4											
Casting Shakeout	EU-4a Casting Shakeout Line 3	588.67	412.07	412.07	0.00	0.00						
	EU-4b Casting Shakeout Line 4											
	EU-5a Casting Shakeout Line 1 and 2											
Grinding/Cleaning	EU-17 Grinding	1,340.28	134.03	134.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Blasting	EU-16 Shot Blast	1,340.28	134.03	134.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	EU-17 Shot Blast											
	EU-18 Shot Blast											
	EU-19 Shot Blast											
Core Making	EU-6 Re-blast											
	EU-30a PUCB Sand Silo	45.73	6.86	6.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	EU-30 PUCB core mixing	0.00	0.00	0.00	0.00	0.00	15.62	0.00	0.00	0.00	0.00	0.00
	EU-30 PUCB core making (DMIPA)	0.00	0.00	0.00	0.00	0.00	3.94E-03	0.00	0.00	0.00	0.00	0.00
	EU-31 Warm Box Core production	13.97	13.97	13.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	EU-31a Warm Box Sand Silo	45.73	6.86	6.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Natural Gas Combustion	0.02	0.07	0.07	0.01	0.90	0.05	0.76	0.00	0.00	0.02	4.94E-05
Emergency Generator		0.20	0.11	0.11	1.15	6.81	0.20	1.56	0.00	0.00	3.13E-03	0.00
Fugitive Emissions		1.46	0.28	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Unlimited/ Uncontrolled PTE		8,630.99	2,614.66	2,612.43	16.23	13.40	854.53	1,111.80	7.08	1.18E-04	51.64	71.64

Notes
PM10 emissions are surrogate for PM2.5 emissions.

Methodology
Except where noted in the following pages, uncontrolled/unlimited emission factors are based on AP-42 Chapter 12.10 Gray Iron Foundries and US EPA Fire Version 6.25
Where emission factors are not available for PM2.5, it is assumed that PM2.5 = PM10

See following pages for detailed emissions calculations, methodology and emission factors.

123.27

Total HAPs

Appendix A: Emissions Calculations
Gray Iron Foundries
Emissions Summary
Company Name: Metal Technologies Auburn, LLC
Source Address: 1537 West Auburn Drive, Auburn, IN 46706
Significant Source Modification No: 033-35828-00042
Significant Permit Modification No: 033-35861-00042
Reviewer: Brian Williams

Summary of Limited PTE

			Limited Potential to Emit (tons/year)*										
			Criteria Pollutants							Hazardous Air Pollutants			
Emission Unit	Control / Stack ID	Type of Foundry Process	PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO	Lead	Beryllium (Be)	Organic HAPs	Metallic HAPs
Scrap and charge handling	No control; indoors	Scrap and Charge Handling	66.00	66.00	66.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Thermal Chip Dryer	Cyclone D-32a, Thermal Oxidizer D-32b, and Baghouse D-32c (Stack S-32b)	Wet Metal Machining Chip Drying and Natural Gas Combustion from Smoke Hood and RTO	6.47	5.49	3.26	11.37	1.81	10.51	2.30	0.34	0.00	0.03	0.02
Thermal Chip Dryer Natural Gas Burners	no control (Stack S-32a)	Natural Gas Combustion	0.08	0.31	0.31	0.02	2.04	0.22	3.43	0.00	0.00	0.08	2.14E-04
EU-2 (3 EIF furnaces total)	DC-2 (Stack S-2)	Metal Melting: Electric Induction Furnaces				0	0	0	0		1.18E-04	0.00	9.46
EU-3a1 Pouring & Casting Line 1	DC-8 (Stack S-8)	Casting and Finishing: Pouring/Casting	15.77	6.60	6.60	2.20	1.10			0.33			
EU-3a2 Pouring & Casting Line 2													
EU-3a3 Pouring & Casting Line 3													
EU-3a4 Pouring & Casting Line 4													
EU-3b1 Casting/Mold Cooling Line 1	Uncontrolled, Stack S-3b	Castings and Finishing: Casting/Mold Cooling	9.37	4.95	4.95	0	0	187.00	660.00	0.07	0	51.51	61.81
EU-3b2 Casting/Mold Cooling Line 2	Uncontrolled, Stack S-3d												
EU-3b3 Casting/Mold Cooling Line 3													
EU-3b4 Casting/Mold Cooling Line 4													
EU-4a Casting Shakeout Line 3	DC-3 (Stack S-15)	Casting and Finishing: Casting Shakeout	9.02	5.50	5.50	0	0			0.07	0	0	0
EU-4b Casting Shakeout Line 4	DC-4 (Stack S-4)												
EU-5a Casting Shakeout Line 1 and 2	DC-5 (Stack S-5) and DC-8 (Stack S-8)		14.63	6.60	6.60					0.07			
EU-5bc Return Sand System	DC-1 (Stack S-1)		2.80	2.80	2.80					0			
EU-1 Sand System & Mullers for Lines 1 & 2	DC-10 (Stack S-10)	Raw Material Handling and Preparation: Sand Handling	4.16	4.16	4.16	0	0	0	0	0	0	0	0
EU-16 Shot Blast													
EU-17 Shot Blast													
EU-18 Shot Blast													
EU-19 Shot Blast	vented internally	DC-8 (Stack S-8)	3.31	3.31	3.31	0	0	0	0	0	0	0	0
EU-6 Re-blast			0.66	0.66	0.66								
EU-7 Grinding	vented internally	Casting and Finishing: Grinding	0.45	0.45	0.45	0	0	0	0	0	0	0	0
EU-20 DIC Station	DC-20 (Stack S-20)	Magnesium Treatment	24.90	14.90	14.90	0	0	0	0	0	0	0	0
EU-30a PUCB Sand Silo	bin vent filter	Mold & Core Production	11.75	6.61	4.06	0	0	0	0	0	0	0	0
EU-30 PUCB core mixing	no control					0	0	15.62	0	0	0	0	
EU-30 PUCB core making (DMIPA)	Acid Scrubber SC-1 (Stack SC-1)					0	0	3.94E-03	0	0	0	0	
EU-31 Warm Box Core production	no control		11.75	6.61	4.06	0	0	0	0	0	0	0	0
EU-31a Warm Box Sand Silo	bin vent filter					0	0	0	0	0	0	0	0
Natural Gas Combustion			0.02	0.07	0.07	0.01	0.90	0.05	0.76	4.51E-06	0	1.70E-02	4.94E-05
Emergency Generator			0.20	0.11	0.11	1.15	6.81	0.20	1.56	0.00	0.00	0.00	0.00
Fugitive Emissions			1.46	0.28	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Total Limited PTE		192.16	140.36	133.05	14.75	12.66	213.62	668.04	0.93	1.18E-04	51.64	71.29

Methodology

*Limited Production Capacity for all melt = 750 tons/day or 220,000 tons/year

This production limit is the total for all EIF melting furnaces. Therefore, each Line (1 through 4) will have a production limit of 1/4 of the total melt production, or 55,000 tons/yr. Any limits combining two (2) lines out of the total four (4) lines will then divide the production capacity by half.

Limited PM and PM10 (tons/yr) = Limited PM and PM10 (lb/ton) * Limited Production Capacity (tons/yr) * 1 ton/2,000 lb

Limited PM (tons/yr) = [PM Limit (Filterable) (lb/hr) * 8,760 hr/yr / Limited Production Capacity (tons/yr)] * 1 ton/2,000 lb

PM is filterable PM only.

PM10 is filterable and condensable PM10 combined.

PM10 emissions are surrogate for PM2.5 emissions.

PM2.5 is filterable and condensable PM2.5 combined.

For EU-16 through EU-19 shot blast and EU-1a Sample Blast and EU-6 Re-blast, PM limits are in lb/hr. hrs/yr * 1 ton/2,000 lb

Methodology: Limited PM/PM10/PM2.5 (tons/yr) = Limited PM/PM10/PM2.5 (lb/hr) * 8,760 hrs/yr

EU-20 DIC Station Limited PTE based on controlled lb/ton limits for PM and PM10 and melt rate for ductile iron limitation.

EU-7 Grinding Limited PTE based on grain loading limit and air flow rate of control device.

For Emission Units without specific pollutant limits listed on the following page, the methodology is the same as Unlimited PTE.

122.93**Total HAPs**

Appendix A: Emissions Calculations
Gray Iron Foundries
Emissions Summary
Company Name: Metal Technologies Auburn, LLC
Source Address: 1537 West Auburn Drive, Auburn, IN 46706
Significant Source Modification No: 033-35828-00042
Significant Permit Modification No: 033-35881-00042
Reviewer: Brian Williams

Detailed Permit Limits

Total Iron Production Limit	
tons/day	tons/yr
750	220,000

This production limit is the total for all EIF melting furnaces. Therefore, each Line (1 through 4) will have a production limit of 1/4 of the total melt production, or 55,000 tons/yr in determining potential to emit after limitations.

Limit	Type of Foundry Process	Emission Unit(s)	Permit Limits			
			Control / Stack ID	PM and PM10 (Filterable) (gr/dscf)	PM and PM10 (Filterable) (lbs/hr)	PM10 (Filterable and Condensable) (lbs/ton)
PSD - BACT for PM, PM10 (T033-21760-00042)	Metal Melting: Electric Induction Furnaces	EU-2 (3 EIF furnaces total)	Baghouses DC-2 and DC-8 (Stacks S-2 and S-8)	0.003	3.6	0.06
	Casting and Finishing: Pouring/Casting	EU-3a1 Pouring & Casting Line 1	Baghouse DC-8 (Stack S-8)			
		EU-3a2 Pouring & Casting Line 2				
		EU-3a3 Pouring & Casting Line 3				
		EU-3a4 Pouring & Casting Line 4				
	Casting and Finishing: Blasting	EU-6 Re-blast	Baghouse DC-8 (Stack S-8)	0.003	0.15	-
	Raw Material Handling and Preparation: Sand Handling	EU-5bc Return Sand System	Baghouse DC-5 (Stack S-5) and Baghouses DC-8 (Stack S-8)	0.003	3.34	0.12
		EU-5a Casting Shakeout Line 1 and 2	Baghouse DC-5 (Stack S-5)			
	Casting and Finishing: Casting Shakeout	EU-4 Casting Shakeout Line 4	Baghouse DC-4 (Stack S-4)	0.003	2.06	0.10
		EU-4 Casting Shakeout Line 3	Baghouse DC-3 (Stack S-15)			
		Casting and Finishing: Blasting	EU-16 Shot Blast ***	Baghouse DC-7 (Stack S-8)	0.003	0.95
	EU-17 Shot Blast ***					
	EU-18 Shot Blast ***					
	EU-19 Shot Blast ***					
	Raw Material Handling and Preparation: Sand Handling	EU-1 Sand System & Mufflers for Lines 1 & 2 ***	Baghouse DC-1 (Stack S-1)	0.003	0.64	-
		EU-1 Sand System & Mufflers for Lines 3 & 4 ***	Baghouse DC-10 (Stack S-10)			
	Casting and Finishing: Grinding	EU-7 Grinding ***	Internally vented dust collectors	0.003	-	-
	Casting and Finishing: Casting Cooling	EU-3b1 Casting/Mold Cooling Line 1	No control (Stack S-3b)	0.01	2.14	0.09
		EU-3b2 Casting/Mold Cooling Line 2				
		EU-3b3 Casting/Mold Cooling Line 3	No control (Stack S-3d)	0.01	2.14	0.09
		EU-3b4 Casting/Mold Cooling Line 4				
*** Limited emissions (lb/hr) are filterable and condensable PM10						
lb/hr limit:						
326 IAC 6-5-2	Casting and Finishing – Blasting	EU1b Sample Blast	Internally vented dust collector	0.75	Process Weight Rate = 0.08 tons/hr	

*** Limited emissions (lb/hr) are filterable and condensable PM10

328 IAC 6-3-2	Casting and Finishing --- Blasting	EU1b Sample Blast	Internally vented dust collector	lb/hr limit: 0.75	Process Weight Rate = 0.08 tons/hr
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				Limited & Controlled PTE	
				(lbs/hr)	(tons/yr)
Casting and Finishing: Grinding	EU-7 Grinding ***	4,000	0.003	0.10	0.45

Methodology

PTE of PM (lbs/hr) = Air Flow Rate (acfm) * Outlet Grain Loading (gr/dscf) * 60 min/hr * 1 lb/7,000 gr

PTE of PM (tons/yr) = Air Flow Rate (acfm) * Outlet Grain Loading (gr/dscf) * 60 min/hr * 1 lb/7,000 gr * 8,760 hrs/yr * 1 ton/2,000 lbs

		VOC BACT Limits		CO BACT Limits	Lead PSD Minor Limits
		lb/ton greensand molds w/out cores	lb/ton greensand molds with cores	lb/ton of metal	lb/ton of iron produced
EU-2 (3 EIF furnaces total)		-	-	-	
Pouring, Cooling, and Shakeout	EU-3a1 Pouring & Casting Line 1	0.8	1.7	6.0	0.003
	EU-3a2 Pouring & Casting Line 2				
	EU-3a3 Pouring & Casting Line 3				
	EU-3a4 Pouring & Casting Line 4				
	EU-3b1 Casting/Mold Cooling Line 1				0.0012
	EU-3b2 Casting/Mold Cooling Line 2				0.0012
	EU-3b3 Casting/Mold Cooling Line 3				
	EU-3b4 Casting/Mold Cooling Line 4				0.0012
	EU-4 Casting Shakeout Line 4				
	EU-4 Casting Shakeout Line 3				0.0012
EU-5a Casting Shakeout Line 1 and 2	0.0012				
EU-5bc Return Sand System		-	-	-	

PSD Minor Limit for EU-20		Limited (tons/yr)				Uncontrolled (lb/ton)		Controlled (lb/ton)		328 IAC 6-3-2 Limit (lb/hour)
Emission Unit	Control	PM	PM10	Capture Efficiency (%)	PM	PM10	PM	PM10	PM	
EU-20 DIC Station	DC-20 (Stack S-20)	24.90	14.90	70.00%	0.32	0.29	0.0023	0.0023	39.96	

PSD Minor Limit for Mold & Core Production		lb/ton of core throughput limit		
Emission Unit	Sand throughput (tons/yr)	PM	PM10	PM2.5
EU-30a PUCB Sand Silo EU-31a Warm Box Sand Silo	25,404	0.925	0.52	0.32

PSD Minor Limit for Thermal Chip Dryer		lb/ton of metal chips and oil throughput limit
Emission Unit	Maximum Metal Chip Throughput (tons/yr)	VOC
EU-32 Thermal Chip Dryer	131,400	0.16

Appendix A: Emissions Calculations**Gray Iron Foundries****Raw Material Handling and Preparation****Company Name:** Metal Technologies Auburn, LLC**Source Address:** 1537 West Auburn Drive, Auburn, IN 46706**Significant Source Modification No:** 033-35828-00042**Significant Permit Modification No:** 033-35881-00042**Reviewer:** Brian Williams**Emission Factors**

Raw Material Handling and Preparation		Emission Unit ID(s)	Nominal Throughput (tons/yr)	Uncontrolled Emission Factors (lb/ton)											
				PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO	GHGs as CO ₂ e	Lead	Beryllium (Be)	Organic HAPs	Metallic HAPs
Scrap and Charge Handling	(SCC 3-04-003-15)	Scrap and charge handling	262,800	0.6	0.6	0.6	0	0	0	0	0	0	0	0	0
Sand Handling	(SCC 3-04-003-50)	EU-5bc Return Sand System	1,927,200	3.60	0.54	0.54	0	0	0	0	0	0	0	0	0
		EU-1 Sand System & Mullers for Lines 1 & 2													
		EU-1 Sand System & Mullers for Lines 3 & 4													
Magnesium Treatment	(SCC 3-04-003-21)	EU-20 (Ductile Iron Conversion Process)	262,800	1.80	1.80	1.80	0	0	0	0	0	0	0	0	0

Notes

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

Summary of Emissions (Uncontrolled)

Raw Material Handling and Preparation		Uncontrolled Potential to Emit (tons/yr)											
		PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO	GHGs as CO ₂ e	Lead	Beryllium (Be)	Organic HAPs	Metallic HAPs
Scrap and Charge Handling	Scrap and charge handling	78.84	78.84	78.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sand Handling	EU-5bc Return Sand System	3,468.96	520.34	520.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	EU-1 Sand System & Mullers for Lines 1 & 2												
	EU-1 Sand System & Mullers for Lines 3 & 4												
Magnesium Treatment	EU-20 (Ductile Iron Conversion Process)	236.52	236.52	236.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals		3,784.32	835.70	835.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Methodology

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

Appendix A: Emissions Calculations
Process Emissions - Thermal Chip Dryer

Company Name: Metal Technologies Auburn, LLC
Source Address: 1537 West Auburn Drive, Auburn, IN 46701
Significant Source Modification No: 033-35828-00042
Significant Permit Modification No: 033-35881-00042
Reviewer: Brian Williams

Process	Emission Unit ID	Maximum Chip and Oil Throughput (tons/hr)	Combustible Organic Content (Oil) On Chips (By Weight) ¹ (%)	Percent VOC of Oil ² (%)	Maximum Oil Throughput (kgal/hr)	Particulate Control Efficiency (%)	VOC Destruction Efficiency (%)	CO Destruction Efficiency (%)
Thermal Chip Dryer	EU-32	15.00	1.00%	40.00%	0.04	99.00%	98.00%	95.00%

A =	Weight % Ash =	0.65
L =	Weight % Lead =	0.04
S =	Weight % Sulfur =	0.5

	PM ⁴	PM10 ⁴	PM2.5 ⁵	Condensable PM ⁶	SO ₂	VOC	CO	Lead	Arsenic	Cadmium	Chromium	Cobalt	Nickel	Combined HAPs
Uncontrolled Emission Factors (lb/kgal)	41.6 (64A)	33.15 (51A)	18.72 (28.8A)	1.50	73.5 (147S)	NA	5.0	2.2000 (55L)	1.1E-01	9.3E-03	2.0E-02	2.1E-04	1.1E-02	2.3505
Uncontrolled Emission Factors (lb/ton)	0.10	0.08	0.04	0.004	0.17	8.00	0.012	5.18E-03	2.59E-04	2.19E-05	4.71E-05	4.94E-07	2.59E-05	5.53E-03

Summary of Emissions (Uncontrolled)

Uncontrolled Potential to Emit (tons/yr) ⁷													
Process	PM	PM10	PM2.5	SO ₂	VOC	CO	Lead	Arsenic	Cadmium	Chromium	Cobalt	Nickel	Combined HAPs
Thermal Chip Dryer	6.43	5.36	3.13	11.36	525.60	0.77	0.34	0.02	1.44E-03	3.09E-03	3.25E-05	1.70E-03	0.36
Totals	6.43	5.36	3.13	11.36	525.60	0.77	0.34	0.02	1.44E-03	3.09E-03	3.25E-05	1.70E-03	0.36

Controlled Potential to Emit (tons/yr) ⁷													
Process	PM	PM10	PM2.5	SO ₂	VOC	CO	Lead	Arsenic	Cadmium	Chromium	Cobalt	Nickel	Combined HAPs
Thermal Chip Dryer	0.06	0.05	0.03	11.36	10.51	0.04	0.34	0.02	1.44E-03	3.09E-03	3.25E-05	1.70E-03	0.36
Totals	0.06	0.05	0.03	11.36	10.51	0.04	0.34	0.02	1.44E-03	3.09E-03	3.25E-05	1.70E-03	0.36

- Notes**
- (1) 1% is max operating design of dryer
- (2) Based on OmniSource Ft. Wayne permit 29387. Actual expected 15%-30%, using 40% to be conservative
- (3) No emission factors exist for thermal chip drying. Therefore, source has used the emission factors for waste oil combustion found in AP-42, Chapter 1.11, SCC 1-03-013-02 (Supplement B 10/96). Source is assuming emissions generated by the dryer are a function of the amount of oil on the chips.
- (4) No information was given in AP-42 regarding whether the PM/PM10 emission factors included filterable and condensable PM.
- (5) No direct PM2.5 emission factor was given. Direct PM2.5 is a subset of PM10. If one assumes all PM10 to be all direct PM2.5, then a worst case assumption of direct PM2.5 can be made, notwithstanding the filterable and condensable issue mentioned.
- (6) AP-42 1.3 "Fuel Oil Combustion" used for condensables due to lack of "Waste Oil Combustion" CPM EF
- (7) Source will perform uncontrolled PM, PM10 and PM2.5 testing to verify alternative emission factor (AEF). Source will also perform controlled testing to demonstrate compliance with VOC emission limit to render 326 IAC 2-2 (PSD) not applic

Methodology

Maximum Oil Throughput (kgal/hr) = Max. Chip & Oil Throughput (tons/hr) * Combustible Organic Content (Oil) On Chips (% By Weight) * 2,000 (lb/tons) / 8.5 (lbs/gal of oil) / 1,000 (kgal/gal)

Uncontrolled Emission Factors (lb/ton) = Max. Chip & Oil Throughput (tons/hr) * Maximum Oil Throughput (kgal/hr) / Uncontrolled Emission Factors (lb/kg)

Uncontrolled PTE (tons/yr) = Max. Chip & Oil Throughput (tons/hr) * Emission Factor (lb/ton) * 8,760 (hrs/yr) * 1 ton/2,000 lbs

Appendix A: Emissions Calculations**Gray Iron Foundries****Metal Melting****Company Name:** Metal Technologies Auburn, LLC**Source Address:** 1537 West Auburn Drive, Auburn, IN 46706**Significant Source Modification No:** 033-35828-00042**Significant Permit Modification No:** 033-35881-00042**Reviewer:** Brian Williams**Emission Factors**

Metal Melting		Emission Unit ID(s)	Nominal Throughput (tons/yr)	Uncontrolled Emission Factors (lb/ton)											
				PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO	GHGs as CO ₂ e	Lead	Beryllium (Be) ⁽¹⁾	Organic HAPs	Metallic HAPs ⁽²⁾
Electric Induction Furnaces	(SCC-3-04-003-03)	EU-2 (3 EIF furnaces total)	262,800.00	0.90	0.86	0.86	0	0	0	0	0	4.25E-02	9.00E-07	0	7.20E-02

Notes

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

(1) Uncontrolled Beryllium emissions are based on 0.0001% of the uncontrolled PM emission factor per data from the 1998 foundry ICR.

(2) Metallic HAPs based on assumption that 8% of PM emissions are metallic HAPs, consistent with the ratio of emissions from the Iron and Steel Foundry MACT Standard (40 CFR 63, Subpart EEEEE)

Summary of Emissions (Uncontrolled)

Metal Melting		Uncontrolled Potential to Emit (tons/yr)											
		PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO	GHGs as CO ₂ e	Lead	Beryllium (Be)	Organic HAPs	Metallic HAPs
Electric Induction Furnaces	(SCC-3-04-003-03)	118.26	113.00	113.00	0.00	0.00	0.00	0.00	0.00	5.58	1.18E-04	0.00	9.46
Totals		118.26	113.00	113.00	0.00	0.00	0.00	0.00	0.00	5.58	1.18E-04	0.00	9.46

Methodology

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

Appendix A: Emissions Calculations
Gray Iron Foundries
Casting and Finishing
Company Name: Metal Technologies Auburn, LLC
Source Address: 1537 West Auburn Drive, Auburn, IN 46704
Significant Source Modification No: 033-35828-00042
Significant Permit Modification No: 033-35881-00042
Reviewer: Brian Williams

Casting and Finishing		Emission Unit ID(s)	Nominal Throughput (tons/yr)	Uncontrolled Emission Factors (lb/ton)											
				PM	PM10	PM2.5	SO ₂	NOx	VOC ⁽¹⁾	CO ⁽¹⁾	GHGs as CO ₂ e ⁽²⁾	Lead ⁽³⁾	Beryllium (Be)	Organic HAPs ⁽⁴⁾	Metallic HAPs ⁽⁵⁾
Pouring/Casting	(SCC 3-04-003-20)	EU-3a1 Pouring & Casting Line 1	367,920.00	4.20	2.06	2.06	0.02	0.01							0.336
		EU-3a2 Pouring & Casting Line 2													
		EU-3a3 Pouring & Casting Line 3													
		EU-3a4 Pouring & Casting Line 4													
Casting Cooling	(SCC 3-04-003-25)	EU-3b1 Casting/Mold Cooling Line 1	367,920.00	1.40	1.40	1.40	0	0	1.70	6.00	10	0.0063	0.00	0.28	0
		EU-3b2 Casting/Mold Cooling Line 2													
		EU-3b3 Casting/Mold Cooling Line 3													
		EU-3b4 Casting/Mold Cooling Line 4													
Casting Shakeout	(SCC 3-04-003-31)	EU-4a Casting Shakeout Line 3	367,920.00	3.20	2.24	2.24	0	0							0
		EU-4b Casting Shakeout Line 4													
		EU-5a Casting Shakeout Line 1 and 2													
Grinding ⁽⁶⁾	(SCC 3-04-003-40)	EU-7	157,680.00	17.00	1.70	1.70	0	0	0	0	0	0	0	0	0
Blasting ⁽⁶⁾	(SCC 3-04-003-40)	EU-16 Shot Blast	157,680.00	17.00	1.70	1.70	0	0	0	0	0	0	0	0	0
		EU-17 Shot Blast													
		EU-18 Shot Blast													
		EU-19 Shot Blast													
		EU1b Sample Blast													
		EU-6 Re-blast													

Notes

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

(1) VOC and CO emission factors are based on the proposed BACT emission limits for the combined pouring, cooling, and shakeout processes.

(2) GHGs as CO₂e emissions is equal to CO₂ emissions. CO₂ emission factor from American Foundry Society (AFS) Data, "Pouring, Cooling, and Shakeout CO/CO₂ Emission Sources and Variability" (AFS 08-031)

(3) Lead and Organic HAPs emissions from Casting Emission Reduction Program (CERP) data. Uncontrolled lead emissions from the pouring, cooling and shakeout processes are based on a factor of 0.18% of the PM emissions

(4) Organic HAPs emissions from Casting Emission Reduction Program (CERP) data, combined for pouring, cooling, and shakeout processes.

(5) Metallic HAPs based on assumption that 8% of PM emissions are metallic HAPs, consistent with the ratio of emissions from the Iron and Steel Foundry MACT Standard (40 CFR 63, Subpart EEEEE)

(6) Amount of metal finished (Grinding and Blasting) is equal to 60% of the total metal melted.

Summary of Emissions (Uncontrolled)

Casting and Finishing		Uncontrolled Potential to Emit (tons/yr)											
		PM	PM10	PM2.5	SO ₂	NOx	VOC	CO	GHGs as CO ₂ e	Lead	Beryllium (Be)	Organic HAPs	Metallic HAPs
Pouring/Casting	EU-3a1 Pouring & Casting Line 1	772.63	378.96	378.96	3.68	1.84							61.81
	EU-3a2 Pouring & Casting Line 2												
	EU-3a3 Pouring & Casting Line 3												
	EU-3a4 Pouring & Casting Line 4												
Casting Cooling	EU-3b1 Casting/Mold Cooling Line 1	257.54	257.54	257.54	0.00	0.00	312.73	1,103.76	1,839.60	1.16	0.00	51.51	0.00
	EU-3b2 Casting/Mold Cooling Line 2												
	EU-3b3 Casting/Mold Cooling Line 3												
	EU-3b4 Casting/Mold Cooling Line 4												
Casting Shakeout	EU-4a Casting Shakeout Line 3	588.67	412.07	412.07	0.00	0.00							0.00
	EU-4b Casting Shakeout Line 4												
	EU-5a Casting Shakeout Line 1 and 2												
Grinding/Cleaning	EU-7	1,340.28	134.03	134.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Blasting	EU-16 Shot Blast	1,340.28	134.03	134.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	EU-17 Shot Blast												
	EU-18 Shot Blast												
	EU-19 Shot Blast												
	EU1b Sample Blast												
	EU-6 Re-blast												
Totals		4,299.41	1,316.63	1,316.63	3.68	1.84	312.73	1,103.76	1,839.60	1.16	0.00	51.51	61.81

Methodology

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

Appendix A: Emissions Calculations
Gray Iron Foundries
Mold and Core Production
Company Name: Metal Technologies Auburn, LLC
Source Address: 1537 West Auburn Drive, Auburn, IN 46706
Significant Source Modification No: 033-35828-00042
Significant Permit Modification No: 033-35881-00042
Reviewer: Brian Williams

Mold and Core Production		Emission Unit ID(s)	Nominal Throughput (tons/yr)	Uncontrolled Emission Factors (lb/ton)											
				PM	PM10	PM2.5	SO ₂	NOx	VOC ⁽¹⁾	CO	GHGs as CO ₂ e	Lead	Beryllium (Be)	Organic HAPs	Metallic HAPs
PUCB Core Production	Sand Handling (SCC 3-04-003-50)	EU-30a PUCB Sand Silo	25,404.00	3.6	0.54	0.54	0	0	0	0	0	0	0	0	0
	Core Making (SCC 3-04-003-19)	EU-30 PUCB core mixing		0	0	0	0	1.23	0	0	0	0	0		
		EU-30 PUCB core making (DMIPA)						0.00031							
Warm Box Core Production	Sand Handling (SCC 3-04-003-50)	EU-31 Warm Box Core production	25,404.00	1.1	1.1	1.1	0	0	0	0	0	0	0	0	0
	Core Making (SCC 3-04-003-19)	EU-31a Warm Box Sand Silo		3.6	0.54	0.54	0	0	0	0	0	0	0	0	0

	lbs/hr	lbs/yr	tons/year	
Part 1 and Part 2 PUCB Resins	71.340	624,938.40	312	based on resin at 1.23% of core weight
DMIPA Catalyst Gas	1.798	15,750.48	7.88	based on DMIPA at 0.031% of core weight

Notes

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

(1) Site-specific emission factors for VOC. Uncontrolled VOC emissions from the core resins and catalyst gas are based on a mass balance assuming 5% VOC loss from the core resins, 100% of the loss of DMIPA catalyst gas, and the specific ratios of resins and catalyst gas that will be used for the PUCB cores.

Methodology

Core Resin Usage (lb/hr) = 1.23% * Nominal Throughput of Core Making (ton/hr) * 2,000 lb/ton

Core Resin Usage (lb/yr) = Core Resin Usage (lb/hr) * 8,760 hr/yr

Core Resin Usage (ton/yr) = Core Resin Usage (lb/hr) * 8,760 hr/yr * 1 ton/2,000 lb

Summary of Emissions (Uncontrolled)

Mold and Core Production		Uncontrolled Potential to Emit (tons/yr)											
		PM	PM10	PM2.5	SO ₂	NOx	VOC	CO	GHGs as CO ₂ e	Lead	Beryllium (Be)	Organic HAPs	Metallic HAPs
PUCB Core Production	EU-30a PUCB Sand Silo	45.73	6.86	6.86	0	0	0	0	0	0	0	0	0
	EU-30 PUCB core mixing	0	0	0	0	0	15.62	0	0	0	0	0	0
	EU-30 PUCB core making (DMIPA)	0	0	0	0	0	3.94E-03	0	0	0	0	0	0
Warm Box Core Production	EU-31 Warm Box Core production	13.97	13.97	13.97	0	0	0	0	0	0	0	0	0
	EU-31a Warm Box Sand Silo	45.73	6.86	6.86	0	0	0	0	0	0	0	0	0
Totals		105.43	27.69	27.69	0.00	0.00	15.63	0.00	0.00	0.00	0.00	0.00	0.00

Methodology

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

Controlled VOC Emissions

		Throughput (lb/year)	VOC emissions		Controlled VOC PTE (tons/yr)*
EU-W9 PUCB Core Production	Core Making Resins	624,938	0.05	lb/lb resin	15.62
	Core Making Catalyst Gas	15,750	0.01	lb/lb DMIPA	7.88E-02
	Sum:				15.70

Notes

*Control device: SC-1 Acid Scrubber (Stack SC-1), for catalyst gas

Methodology

Core Resin Usage throughput methodology is the same as above.

Limited VOC PTE (tons/year) = Throughput (lb/year) * VOC Limit (lb/lb) * 1 ton/2,000 lb

PSD Minor Limit for Mold & Core Production		lb/ton of core throughput limit		
Emission Unit	Sand throughput (tons/yr)	PM	PM10	PM2.5
EU-30a PUCB Sand Silo	25,404	0.925	0.52	0.32
EU-31a Warm Box Sand Silo	25,404	0.925	0.52	0.32

Summary of Emissions (Limited)

Mold and Core Production		Limited Potential to Emit (tons/yr)											
		PM	PM10	PM2.5	SO ₂	NOx	VOC	CO	GHGs as CO ₂ e	Lead	Beryllium (Be)	Organic HAPs	Metallic HAPs
PUCB Core Production	EU-30a PUCB Sand Silo	11.75	6.61	4.06	0	0	0	0	0	0	0	0	0
	EU-30 PUCB core mixing				0	0	15.62	0	0	0	0	0	0
	EU-30 PUCB core making (DMIPA)				0	0	3.94E-03	0	0	0	0	0	0
Warm Box Core Production	EU-31a Warm Box Sand Silo	11.75	6.61	4.06	0	0	0	0	0	0	0	0	0
	EU-31 Warm Box Core production				0	0	0	0	0	0	0	0	0
Totals		23.50	13.21	8.13	0.00	0.00	15.63	0.00	0.00	0.00	0.00	0.00	0.00

2012 Modification: Significant Source Modification No. 033-31731-00042, issued on July 20, 2012 and Significant Permit Modification No. 033-31732-00042, issued on August 7, 20

Plantwide ATPA (Projected Actual - Baseline Could Have Accommodated Emissions)	1.28	1.33	1.33	0.01	0.90	15.75	0.76
Combustion units	0.02	0.07	0.07	0.01	0.90	0.05	0.76
Total	24.80	14.61	9.53	0.02	1.80	31.43	1.52
PSD Significant Threshold	25	15	10	40	40	40	100

See Technical Support document to Significant Permit Modification No. 033-31732-00042 for ATPA analysis for this modification

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
PUCB Drying Oven and Warm Box Core

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Company Name: Metal Technologies Auburn, LLC
Source Address: 1537 West Auburn Drive, Auburn, IN 46706
Significant Source Modification No: 033-35828-00042
Significant Permit Modification No: 033-35881-00042
Reviewer: Brian Williams

Heat Input Capacity MMBtu/hr	HHV mmBtu mmscf	Potential Throughput MMCF/yr
2.1	1020	18.0

Emission Factor in lb/MMCF	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx 100 **see below	VOC	CO
Potential Emission in tons/yr	0.02	0.07	0.07	0.01	0.90	0.05	0.76

*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					
Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	1.894E-05	1.082E-05	6.763E-04	1.623E-02	3.066E-05

HAPs - Metals					
Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	4.509E-06	9.919E-06	1.262E-05	3.427E-06	1.894E-05

Worst HAP
1.623E-02
(Hexane)

Total HAPs
1.702E-02

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/1,020 MMBtu

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

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.

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

Appendix A: Emission Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Thermal Chip Dryer

Company Name: Metal Technologies Auburn, LLC
Source Address: 1537 West Auburn Drive, Auburn, IN 46706
Significant Source Modification No: 033-35828-00042
Significant Permit Modification No: 033-35881-00042
Reviewer: Brian Williams

1. Process Description

Emission Unit ID	Heat Input Capacity (MMBtu/hr)
Chip Dryer Retort Burners (Low-NOx)	9.50
Smoke Hood and Thermal Oxidizer Burners	4.22
Total	13.72

2. Combustion Emissions - Criteria Pollutants

NOx Burner Type	Fuel Heat Value (MMBtu/MMCF)	Emission Factor (lbs/MMCF)						
		PM*	PM10*	direct PM2.5	SO ₂	NOx**	VOC	CO
Low-NOx Burners	1.020	1.9	7.6	7.6	0.6	50	5.5	84.0
Ordinary Burners	1.020	1.9	7.6	7.6	0.6	100	5.5	84.0

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

** Emission factors for NOx: Uncontrolled = 100 lbs/MMCF, Low NOx Burners = 50 lbs/MMCF

Emission factors are from AP 42, Chapter 1.4, Tables 1.4-1, and 1.4-2, SCC 1-01-006-02, 1-02-006-02, 1-03-006-02, 1-03-006-03. (7/98)

Emission Unit ID	Potential Throughput (MMCF/yr)	Potential To Emit (tons/yr)						
		PM	PM10	direct PM2.5	SO ₂	NOx	VOC	CO
Chip Dryer Retort Burners (Low-NOx)	81.59	0.08	0.31	0.31	0.02	2.04	0.22	3.43
Smoke Hood and Thermal Oxidizer Burners	36.24	0.03	0.14	0.14	0.01	1.81	0.10	1.52
Total	117.83	0.11	0.45	0.45	0.04	3.85	0.32	4.95

Methodology

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

Potential To Emit (tons/year) = Throughput (MMCF/yr) x Emission Factor (lbs/MMCF) x 1 ton/2,000 lbs

3. Combustion Emissions - HAP Pollutants

Emission Unit ID	Emission Factor (lbs/MMCF)									
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	Cadmium	Chromium	Manganese	Mercury	Nickel
	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	1.1E-03	1.4E-03	3.8E-04	2.6E-04	2.1E-03

Emission Unit ID	Potential To Emit (tons/yr)									
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	Cadmium	Chromium	Manganese	Mercury	Nickel
Chip Dryer Retort Burners (Low-NOx)	8.57E-05	4.90E-05	3.06E-03	7.34E-02	1.39E-04	4.49E-05	5.71E-05	1.55E-05	1.06E-05	8.57E-05
Smoke Hood and Thermal Oxidizer Burners	3.81E-05	2.17E-05	1.36E-03	3.26E-02	6.16E-05	1.99E-05	2.54E-05	6.89E-06	4.71E-06	3.81E-05
Total	1.24E-04	7.07E-05	4.42E-03	1.06E-01	2.00E-04	6.48E-05	8.25E-05	2.24E-05	1.53E-05	1.24E-04

HAP emission factors are from AP 42, Chapter 1.4, Tables 1.4-3 and 1.4-4. (7/98)

Methodology

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

Total HAP =	0.11
Highest Single HAP =	1.06E-01
	Hexane

Appendix A: Emission Calculations
Large Reciprocating Internal Combustion Engines - Diesel Fuel
Output Rating (>600 HP)

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Company Name: Metal Technologies Auburn, LLC
Source Address: 1537 West Auburn Drive, Auburn, IN 46706
Significant Source Modification No: 033-35828-00042
Significant Permit Modification No: 033-35881-00042
Reviewer: Brian Williams

Emissions calculated based on output rating (hp)

Output Horsepower Rating (hp)	1135.0
Maximum Hours Operated per Year	500
Potential Throughput (hp-hr/yr)	567,500
Sulfur Content (S) of Fuel (% by weight)	0.500

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	7.00E-04	4.01E-04	4.01E-04	4.05E-03 (.00809S)	2.40E-02 **see below	7.05E-04	5.50E-03
Potential Emission in tons/yr	0.20	0.11	0.11	1.15	6.81	0.20	1.56

*PM10 emission factor in lb/hp-hr was calculated using the emission factor in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.3-1).

**NOx emission factor: uncontrolled = 0.024 lb/hp-hr, controlled by ignition timing retard = 0.013 lb/hp-hr

Hazardous Air Pollutants (HAPs)

	Pollutant						
	Benzene	Toluene	Xylene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs***
Emission Factor in lb/hp-hr****	5.43E-06	1.97E-06	1.35E-06	5.52E-07	1.76E-07	5.52E-08	1.48E-06
Potential Emission in tons/yr	1.54E-03	5.58E-04	3.83E-04	1.57E-04	5.01E-05	1.57E-05	4.21E-04

***PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

****Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.3-1).

Green House Gas Emissions (GHG)

	Pollutant		
	CO2	CH4	N2O
Emission Factor in lb/hp-hr	1.16E+00	6.35E-05	9.30E-06
Potential Emission in tons/yr	3.29E+02	1.80E-02	2.64E-03

Potential Emission of Total HAPs (tons/yr)	3.13E-03
---	-----------------

Summed Potential Emissions in tons/yr	3.29E+02
CO2e Total in tons/yr	3.30E+02

Methodology

Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.4-1 , 3.4-2, 3.4-3, and 3.4-4.

CH4 and N2O Emission Factor from 40 CFR 98 Subpart C Table C-2.

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

Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]

Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [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: Fugitive Emissions

Company Name: Metal Technologies Auburn, LLC
Source Address: 1537 West Auburn Drive, Auburn, IN 46706
Significant Source Modification No: 033-35828-00042
Significant Permit Modification No: 033-35881-00042
Reviewer: Brian Williams

Total Fugitives (ton/yr)	PM	PM10
Truck Dumping	4.12E-04	1.95E-04
Paved Roads	1.45	0.28
Storage Piles	8.65E-04	4.09E-04
Storage Pile Handling	7.02E-07	3.32E-07
Total	1.46	0.28

Truck Dumping (see AP-42 for more information)

Waste sand is the only material dumped on-site. All other materials are either unloaded indoors or unloaded into a silo.

$$E = k(0.0032) * (U/5)^{1.3} / (M/2)^{1.4} \quad \text{AP-42 Chapter 13.2.4, Equation 1}$$

E = Emission Factor (lbs/ton)
k = 0.35 particle size multiplier for PM-10
0.74 particle size multiplier for PM
U = 1 mean wind speed (mph)
M = 7.4 material moisture content (fraction)

PM Emission Factor:
E = 4.6799E-05 lb/ton

PM-10 Emission Factor:
E = (0.35)(0.0032) * (12.7/5)^{1.3} / (10%/2)^{1.4}
E = 2.2135E-05 lb/ton

Annual potential amount of dry material delivered by truck = 17,600 tpy

Potential PM Emissions (tons/year) = Emission factor (lb/ton) * Gypsum delivered (tpy) / 2000 (lbs/ton)
Potential PM Emissions (tons/year) = **0.000411833 tpy**

Potential PM-10 Emissions (tons/year) = Emission factor (lb/ton) * Gypsum delivered (tpy) / 2000 (lbs/ton)
Potential PM-10 Emissions (tons/year) = **0.000194786 tpy**

Paved Roads (see AP-42 for more information)

Maximum Vehicular Speed: 10 mph
Average Distance of Haul: 0.25 miles

Vehicle Type	No. of One Way Trips per Hour	Weight
Dump Truck	8	40
total		8

Weighted Average Gross Weight: 40 tons

Calculations:

$$E = k(sL/2)^{0.65} * (W/3)^{1.5} \quad \text{AP-42 Chapter 13.2.1, Equation 1}$$

E = Emission factor (lbs/vehicle miles traveled(VMT))
k = 0.016 particle size multiplier for PM-10
0.082 particle size multiplier for PM
sL = 0.015 road surface silt content (g/m^2)
W = 40 weighted average vehicle weight (tons) (calculate from table above)

source: AP-42, chapter 13.2.1, p. 13.2.1-6.

VMT = 17520 (miles/yr)

PM
E = 0.16596319 lbs/VMT

Potential PM Emissions (ton/yr) = Emission factor (lbs/VMT) * VMT / 2000 (lbs/ton)
Potential PM Emissions (ton/yr) = **1.45 tpy**

PM-10
E = 0.03238306 lbs/VMT

Potential PM-10 Emissions (ton/yr) = Emission factor (lbs/VMT) * VMT / 2000 (lbs/ton)
Potential PM-10 Emissions (ton/yr) = **0.28 tpy**

Storage Piles (if applicable) (see AP-42 for more information)

The section that discusses storage piles, AP-42 Section 13.2.4, indicates that the largest contribution to emissions from the storage pile is the loading into the pile. An equation for the storage pile was not available. Therefore, it is assumed that the emissions from the storage pile is equal to the emissions from the truck dumping.

Potential PM Emissions (tons/year) = **0.000864849 tpy**
Potential PM-10 Emissions (tons/year) = **0.00040905 tpy**

Storage Pile Handling (if applicable) (see AP-42 for more information)

$$EF \text{ (lb/ton)} = k * (0.0032) * (U/5)^{1.3} / (M/2)^{1.4}$$

where:

k value for:	
PM	PM10
0.74	0.35

U value = 1 mph
M value = 7.4 %
Storage capacity = 60 tons

PM EF = 4.68E-05 lb/ton
PM10 EF = 2.21E-05 lb/ton

PM Emissions (ton/yr) = EF (lb/ton) * Storage Capacity (tons) * use rate (1/year) * 1/2000 ton/lb
PM Emissions (ton/yr) = 7.02E-07

PM10 Emissions (ton/yr) = EF (lb/ton) * Storage Capacity (tons) * use rate (1/year) * 1/2000 ton/lb
PM10 Emissions (ton/yr) = 3.32E-07

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

**Appendix B
Best Available Control Technology (BACT) Determination**

Source Description and Location
--

Source Name:	Metal Technologies Auburn, LLC
Source Location:	1537 West Auburn Drive, Auburn, Indiana 46706
County:	DeKalb
SIC Code:	3321 (Gray and Ductile Iron Foundries)
Operation Permit No.:	T 033-32494-00042
Operation Permit Issuance Date:	April 30, 2013
Significant Source Modification No.:	033-35828-00042
Significant Permit Modification No.:	033-35881-00042
Permit Reviewer:	Brian Williams

Introduction

The Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) has performed the following evaluation of the Best Available Control Technology (BACT) for one (1) thermal chip dryer located at a stationary gray and ductile iron foundry.

Description of Process

The following process is subject to 326 IAC 8-1-6 because the VOC potential emissions are greater than 25 tons per year:

- (a) One (1) natural gas-fired thermal chip dryer, identified as EU-32, approved in 2015 for construction, with a maximum capacity of 15 tons of metal chips and machining oil per hour, equipped with eight (8) low NO_x retort burners, with a combined maximum heat input capacity of 6.545 MMBtu per hour, with particulate matters emissions controlled by cyclone DC-32a and baghouse DC-32b and VOC and CO emissions controlled by a 4.18 MMBtu per hour natural gas-fired smoke hood and thermal oxidizer, and exhausting to Stack S-32b. Emissions from the eight (8) natural gas-fired burners are uncontrolled and exhaust to Stack S-32a.

Pursuant to 326 IAC 8-1-6 (New Facilities; General Reduction Requirements), BACT is required for all facilities constructed after January 1, 1980 that have potential Volatile Organic Compound (VOC) emissions of equal to or greater than twenty-five (25) tons per year and are not regulated by other rules in 326 IAC 8. Based on the calculations (see TSD Appendix A) and the analysis of applicable state regulations (see State Rule Applicability section of TSD), the thermal chip dryer is subject to the requirements of 326 IAC 8-1-6, since the potential VOC emissions are 525.85 tons per year and this emission unit is not regulated by other rules in 326 IAC 8. Therefore, the Permittee is required to control VOC emissions from the thermal chip dryer pursuant to the provisions of 326 IAC 8-1-6 (BACT).

Summary of the Best Available Control Technology (BACT) Process
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BACT is a mass emission limitation based on the maximum degree of pollution reduction of emissions, which is achievable on a case-by-case basis. BACT analysis takes into account the energy, environmental, and economic impacts on the source. These reductions may be determined through the application of available control techniques, process design, work practices, and operational limitations.

Federal guidance on BACT requires an evaluation that follows a “top down” process. In this approach, the applicant identifies the best-controlled similar source on the basis of controls required by regulation or controls achieved in practice. The highest level of control is then evaluated for technical and economic feasibility.

The five (5) basic steps of a top-down BACT analysis are listed below:

Step 1: Identify Potential Control Technologies

The first step is to identify potentially “available” control options for each emission unit and for each pollutant under review. Available options should consist of a list of those technologies with a potentially practical application to the emissions unit in question. The list should include lowest achievable emission rate (LAER) technologies and controls applied to similar source categories.

Step 2: Eliminate Technically Infeasible Options

The second step is to eliminate technically infeasible options from further consideration. To be considered feasible, a technology must be both available and applicable. It is important in this step that any presentation of a technical argument for eliminating a technology from further consideration be documented based on physical, chemical, engineering, and source-specific factors related to safe and successful use of the controls. Innovative control means a control that has not been demonstrated in a commercial application on similar units. Only available and proven control technologies are evaluated. A control technology is considered available when there are sufficient data indicating that the technology results in confirmed reductions in emissions of regulated pollutants.

Step 3: Rank the Remaining Control Technologies by Control Effectiveness

The third step is to rank the technologies not eliminated in Step 2 in order of descending control effectiveness for each pollutant of concern. The ranked alternatives are reviewed in terms of environmental, energy, and economic impacts specific to the proposed modification. If the analysis determines that the evaluated alternative is not appropriate as BACT due to any of the impacts, then the next most effective is evaluated. This process is repeated until a control alternative is chosen as BACT. If the highest ranked technology is proposed as BACT, it is not necessary to perform any further technical or economic evaluation.

Step 4: Evaluate the Most Effective Controls and Document the Results

The fourth step entails an evaluation of energy, environmental, and economic impacts for determining a final level of control. The evaluation begins with the most stringent control option and continues until a technology under consideration cannot be eliminated based on adverse energy, environmental, or economic impacts.

Step 5: Select BACT

The fifth and final step is to select as BACT the most effective of the remaining technologies under consideration for each pollutant of concern. For the technologies determined to be feasible, there may be several different limits that have been set as BACT for the same control technology. The final BACT determination would be the technology with the most stringent corresponding limit that is economically feasible. BACT must be no less stringent than the level of control required by any applicable New Source Performance Standard (NSPS) and National Emissions Standard for Hazardous Air Pollutants (NESHAP) or state regulatory standards applicable to the emission units included in the permits.

The Office of Air Quality (OAQ) makes BACT determinations by following the five steps identified above.

A summary of the BACT review for the thermal chip dryer is provided below. This BACT determination is based on the following information:

- (1) BACT analysis information submitted by Metal Technologies Auburn, LLC;
- (2) The EPA RACT/BACT/LAER (RBLCL) Clearinghouse; and
- (3) State and local air quality permits.

VOC BACT Analysis

Step 1 – Identify All Potentially Available Control Options

Based on the information reviewed for this BACT determination, the following potentially available control technologies were identified for controlling VOC emissions from the thermal chip dryer:

- (1) Regenerative/Recuperative Thermal Oxidizer:

Thermal oxidation is the process of oxidizing organic contaminants in a waste gas stream by raising the temperature above the auto ignition point in the presence of oxygen for sufficient time to completely oxidize the organic contaminants to carbon dioxide and water. The residence time, temperature, flow velocity and mixing, and the oxygen concentration in the combustion chamber affect the oxidation rate and destruction efficiency. Thermal oxidizers typically require combustion of an auxiliary fuel (e.g., natural gas) to maintain combustion chamber temperature high enough to completely oxidize the contaminant gases. Thermal oxidizers are typically designed to have a residence time of one second or less and combustion chamber temperatures between 1,200 and 2,000°F.

A regenerative thermal oxidizer uses a high-density media such as a packed ceramic bed, which was heated in a previous cycle, to preheat the incoming waste gas stream, resulting in improved oxidizer efficiency and significant fuel cost savings. Process gases pass through the RTO inlet isolation damper before entering the inlet of the RTO. Upon entering the RTO, the gases pass up through a heat recovery section (pre-heating mode), enter the combustion chamber where the VOCs are destroyed and then pass through another heat recovery section (heat recovery mode), and exit the system via the exhaust duct. A regenerative thermal oxidizer can be configured to have a two pass or three pass system, where the heat regeneration beds are passed by the gases either 2 or 3 times. For this application the theoretical thermal efficiency is increased from 90% for a two-pass system to 95% for a three pass system. However, the three pass system initial cost is higher and the required fan energy is also higher.

Thermal recuperative oxidizers have a primary and/or secondary heat exchanger within the system. The difference between a recuperative oxidizer and a regenerative oxidizer is simply where the reclaimed heat is used. Essentially, the regenerative oxidizer puts the heat back into the process of destroying the VOCs, whereas a recuperative oxidizer routes the heat to another process instead.

(2) Carbon Adsorption:

Carbon adsorption is a process, by which VOC is retained on a granular carbon surface, which is highly porous and has a very large surface-to-volume ratio. Adsorption is rapid and removes most of the VOC in the stream. Eventually, the adsorbent becomes saturated with the vapors and the system's efficiency drops. The adsorbent must be regenerated or replaced soon after efficiency begins to decline. In regenerative systems, the adsorbent is reactivated with steam or hot air and the absorbate (solvent) is recovered for reuse or disposal. Non-regenerative systems require the removal of the adsorbent and replacement with fresh or previously regenerated carbon.

Step 2 – Eliminate Technically Infeasible Control Options

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined no control options are technically infeasible.

Step 3 – Rank Remaining Control Technologies by Control Effectiveness

IDEM, OAQ has ranked the technically feasible control technologies and combinations of control technologies as follows:

Control Technology	Overall Control Efficiency (%)
Thermal Oxidizer	98%
Carbon Adsorption	94%

These overall control efficiencies assume 100% capture efficiency.

IDEM, OAQ is aware that the above-mentioned control technologies may periodically achieve control efficiencies that exceed the listed values under certain operating conditions. However, one factor to consider when evaluating BACT is that the BACT limit must be achievable on a consistent basis under normal operational conditions. BACT limitations should not necessarily reflect the highest possible control efficiency achievable by the technology on which the emission limitation is based. The permitting authority has the discretion to base the emission limitation on a control efficiency that can be lower than the optimal level. There are several reasons why the permitting authority might choose to do this. One reason is that the control efficiency achievable using the technology may fluctuate, so that it would not always achieve its optimal control efficiency. In that case, setting the emission limitation to reflect the highest control efficiency would make violations of the permit unavoidable. To account for this possibility, a permitting authority must be allowed a certain degree of discretion to set the emission limitation at a level that does not necessarily reflect the highest possible control efficiency, but will allow the Permittee to achieve compliance consistently. While IDEM, OAQ recognizes that a greater control efficiency may be achievable as an average during compliance testing, IDEM, OAQ allows sources to include a safety factor, or margin of error, to allow for minor variations in the operation of the emission units and the control device.

Step 4 – Evaluate the Most Effective Controls and Document Results

A review of EPA's RACT/BACT/LAER Clearinghouse (RBLC) and Indiana Air Permits identified the previous BACT determinations summarized in the table below for sources that operate under the SIC Code 3321 (Gray and Ductile Iron Foundries) or for process type codes 81.490 (Other Iron Foundry Processes), and keyword search for thermal chip dryer. No thermal chip dryers with BACTs for VOC were found in the RBLC. The sources are arranged by limits in descending order.

Plant	RBLC ID or Permit #	Date Issued and State	Facility	BACT Determination
Metal Technologies Auburn, LLC Gray and Ductile Iron Foundry	033-35828-00042	Pending IN	Thermal Chip Dryer	Thermal Oxidizer with overall VOC control efficiency of 98% VOC emissions shall not exceed 0.16 pounds of VOC per ton of metal chips processed while operating at maximum capacity of 15 tons per hour (equates to 10.51 tons of VOC per year) (BACT - State)
Superior Aluminum Alloys LLC Secondary Aluminum Production	003-9243-00286	05/01/1998 IN	Scrap Aluminum Dryer	Thermal Oxidizer with minimum VOC capture efficiency of 99% and minimum VOC destruction efficiency of 99% (98% overall control efficiency) (BACT - State)
NIKKEI MC Aluminum America, Inc. Secondary Aluminum Production	005-5548-00043	12/11/1996 IN	Thermal Chip Dryers #1 and #2	Afterburner with overall VOC control efficiency of 95% (BACT - State)
OmniSource Corp Aluminum, Copper, and Other Metal Alloys Recycling Operation	003-8920-00283	02/19/1998 IN	Rotary Chip Dryer	Afterburner with minimum VOC capture efficiency of 95% and minimum VOC destruction efficiency of 90% (85% overall control efficiency) (BACT - State)
Wabash Alloys, LLC Secondary Aluminum Production	169-6359-00010	12/22/2006 IN	Scrap Dryers #4 and #5	Afterburner VOC emissions shall not exceed 0.26 pounds of VOC per ton of charge (BACT - State)
Recycling Services of Indiana Secondary Aluminum Processing	093-7461-00032	09/01/1999 IN	Rotating Drum Dryer	Afterburner VOC emissions shall not exceed 9.93 pounds of VOC per hour (BACT - State)

The proposed BACT for the thermal chip dryer is comparable to the most stringent BACT established as shown in the table above. Therefore, no further economic, energy and environmental impacts are considered.

Step 5 – Select BACT

Pursuant to 326 IAC 8-1-6, based on the BACT analysis mentioned above, IDEM, OAQ has determined that the following requirements represent BACT for the thermal chip dryer:

- (a) The thermal chip dryer (EU-32) shall use a thermal oxidizer to control VOC emissions with an overall control efficiency equal to or greater than 98% (VOC capture efficiency of 100% and minimum VOC destruction efficiency of 98%).

- (b) The VOC emission rate after controls from the thermal chip dryer and exhausted to Stack S-32b shall not exceed 0.16 pounds per ton of metal chips processed.

Compliance with these limits equates to 10.51 tons of VOC emitted (excluding natural gas combustion emissions from the retort burners, which exhaust through Stack S-32a) per twelve (12) consecutive month period, based on the thermal chip dryer operating at a maximum capacity of 15 tons of metal chips per hour.



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

Notice of Public Comment

July 9, 2015

Metal Technologies Auburn, LLC

033-35828-00042 & 033-35881-00042

Dear Concerned Citizen(s):

You have been identified as someone who could potentially be affected by this proposed air permit. The Indiana Department of Environmental Management, in our ongoing efforts to better communicate with concerned citizens, invites your comment on the draft permit.

Enclosed is a Notice of Public Comment, which has been placed in the Legal Advertising section of your local newspaper. The application and supporting documentation for this proposed permit have been placed at the library indicated in the Notice. These documents more fully describe the project, the applicable air pollution control requirements and how the applicant will comply with these requirements.

If you would like to comment on this draft permit, please contact the person named in the enclosed Public Notice. Thank you for your interest in the Indiana's Air Permitting Program.

Please Note: *If you feel you have received this Notice in error, or would like to be removed from the Air Permits mailing list, please contact Patricia Pear with the Air Permits Administration Section at 1-800-451-6027, ext. 3-6875 or via e-mail at PPEAR@IDEM.IN.GOV. If you have recently moved and this Notice has been forwarded to you, please notify us of your new address and if you wish to remain on the mailing list. Mail that is returned to IDEM by the Post Office with a forwarding address in a different county will be removed from our list unless otherwise requested.*

Enclosure
PN AAA Cover.dot 6/13/13





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AFFECTED STATE NOTIFICATION OF PUBLIC COMMENT PERIOD DRAFT INDIANA AIR PERMIT

July 9, 2015

A 30-day public comment period has been initiated for:

Permit Number: 033-35828-00042 & 033-35881-00042

Applicant Name: Metal Technologies Auburn, LLC

Location: Auburn, DeKalb County, Indiana

The public notice, draft permit and technical support documents can be accessed via the **IDEM Air Permits Online** site at:

<http://www.in.gov/ai/appfiles/idem-caats/>

Questions or comments on this draft permit should be directed to the person identified in the public notice by telephone or in writing to:

Indiana Department of Environmental Management
Office of Air Quality, Permits Branch
100 North Senate Avenue
Indianapolis, IN 46204

Questions or comments regarding this email notification or access to this information from the EPA Internet site can be directed to Chris Hammack at chammack@idem.IN.gov or (317) 233-2414.

Affected States Notification.dot 3/13/2013



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July 9, 2015

Mr. Dan Plant
Metal Technologies Auburn, LLC
1401 S Grandstaff Drive
Auburn, IN 46706

Re: Public Notice
Metal Technologies Auburn, LLC
Permit Level: Significant Source Modification &
Significant Permit Modification
Permit Number: 033-35828-00042 &
033-35881-00042

Dear Mr. Plant:

Enclosed is a copy of your draft Significant Source & Permit Modifications, Technical Support Document, emission calculations, and the Public Notice which will be printed in your local newspaper.

The Office of Air Quality (OAQ) has prepared two versions of the Public Notice Document. The abbreviated version will be published in the newspaper, and the more detailed version will be made available on the IDEM's website and provided to interested parties. Both versions are included for your reference. The OAQ has requested that the Auburn Evening Star in Auburn, Indiana publish the abbreviated version of the public notice no later than July 14, 2015. You will not be responsible for collecting any comments, nor are you responsible for having the notice published in the newspaper.

OAQ has submitted the draft permit package to the Eckhart Public Library, 603 South Jackson Street in Auburn, Indiana. As a reminder, you are obligated by 326 IAC 2-1.1-6(c) to place a copy of the complete permit application at this library no later than ten (10) days after submittal of the application or additional information to our department. We highly recommend that even if you have already placed these materials at the library, that you confirm with the library that these materials are available for review and request that the library keep the materials available for review during the entire permitting process.

Please review the enclosed documents carefully. This is your opportunity to comment on the draft permit and notify the OAQ of any corrections that are needed before the final decision. Questions or comments about the enclosed documents should be directed to Brian Williams, Indiana Department of Environmental Management, Office of Air Quality, 100 N. Senate Avenue, Indianapolis, Indiana, 46204 or call (800) 451-6027, and ask for extension 4-5375 or dial (317) 234-5375.

Sincerely,

Greg Hotopp

Greg Hotopp
Permits Branch
Office of Air Quality

Enclosures

PN Applicant Cover letter-2014. Dot4/10/14



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July 9, 2015

To: Eckhart Public Library

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

Subject: **Important Information to Display Regarding a Public Notice for an Air Permit**

Applicant Name: Metal Technologies Auburn, LLC
Permit Number: 033-35828-00042 & 033-35881-00042

Enclosed is a copy of important information to make available to the public. This proposed project is regarding a source that may have the potential to significantly impact air quality. Librarians are encouraged to educate the public to make them aware of the availability of this information. The following information is enclosed for public reference at your library:

- Notice of a 30-day Period for Public Comment
- Request to publish the Notice of 30-day Period for Public Comment
- Draft Permit and Technical Support Document

You will not be responsible for collecting any comments from the citizens. Please refer all questions and request for the copies of any pertinent information to the person named below.

Members of your community could be very concerned in how these projects might affect them and their families. **Please make this information readily available until you receive a copy of the final package.**

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. Questions pertaining to the permit itself should be directed to the contact listed on the notice.

Enclosures
PN Library.dot 6/13/2013



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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

ATTENTION: PUBLIC NOTICES, LEGAL ADVERTISING

July 9, 2015

Auburn Evening News
118 West Ninth Street
Auburn, IN 46706

Enclosed, please find one Indiana Department of Environmental Management Notice of Public Comment for Metal Technologies Auburn, LLC, DeKalb County, Indiana.

Since our agency must comply with requirements which call for a Notice of Public Comment, we request that you print this notice one time, no later than July 14, 2015.

Please send a notarized form, clippings showing the date of publication, and the billing to the Indiana Department of Environmental Management, Accounting, Room N1345, 100 North Senate Avenue, Indianapolis, Indiana, 46204.

To ensure proper payment, please reference account # 100174737.

We are required by the Auditor's Office to request that you place the Federal ID Number on all claims. If you have any conflicts, questions, or problems with the publishing of this notice or if you do not receive complete public notice information for this notice, please call Greg Hotopp at 800-451-6027 and ask for extension 4-3493 or dial 317-234-3493.

Sincerely,

Greg Hotopp


Greg Hotopp
Permit Branch
Office of Air Quality

Permit Level: Significant Source & Permit Modifications
Permit Number: 033-35828-00042 & 033-35881-00042

Enclosure

PN Newspaper.dot 6/13/2013

Mail Code 61-53

IDEM Staff	GHOTOPP 7/9/2015 Metal Technologies Auburn, LLC 033-35828/35881-00042 Draft			AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: CERTIFICATE OF MAILING ONLY	

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handling Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee	Remarks
1		Dan Plant Metal Technologies Auburn, LLC 1401 S Grandstaff Drive Auburn IN 46706 (Source CAATS)										
2		Jeffrey L Turner Secretary Metal Technologies Auburn, LLC 1401 S Grandstaff Drive Auburn IN 46706 (RO CAATS)										
3		Mr. Steve Christman NISWMD 2320 W 800 S, P.O. Box 370 Ashley IN 46705 (Affected Party)										
4		Ms. Karen Sponhower 803 S. Van Buren Auburn IN 46706 (Affected Party)										
5		Ms. Diane Leroy 303 N. Jackson St. Auburn IN 46706 (Affected Party)										
6		Mr. Barry Fordanish R#3 1480 CR 66 Auburn IN 46706 (Affected Party)										
7		Auburn City Council and Mayors Office P.O. Box 506 Auburn IN 46706-0506 (Local Official)										
8		Dekalb County Health Department 220 E 7th St #110 Auburn IN 46706 (Health Department)										
9		Daniel & Sandy Trimmer 15021 Yellow River Road Columbia City IN 46725 (Affected Party)										
10		Brown & Sons Fuel Co. P.O. Box 665 Kendallville IN 46755 (Affected Party)										
11		Mr. Marty K. McCurdy 2550 County Road 27 Waterloo IN 46793 (Affected Party)										
12		Eckhart Public Library 603 South Jackson Street Auburn IN 46706 (Library)										
13		DeKalb County Building Department 301 S Union St Auburn IN 46706 (Local Official)										
14												
15												

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