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

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

TO: Interested Parties / Applicant

DATE: November 7, 2013

RE: Waupaca Foundry / 123-33300-00019

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

Notice of Decision: Approval – Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-17-3-4 and 326 IAC 2, this permit modification is effective immediately, unless a petition for stay of effectiveness is filed and granted, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3-7 and IC 13-15-7-3 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

(1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
(2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
(3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

(1) the name and address of the person making the request;
(2) the interest of the person making the request;
(3) identification of any persons represented by the person making the request;
(4) the reasons, with particularity, for the request;
(5) the issues, with particularity, proposed for considerations at any hearing; and
(6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

Pursuant to 326 IAC 2-7-18(d), any person may petition the U.S. EPA to object to the issuance of a Title V operating permit or modification within sixty (60) days of the end of the forty-five (45) day EPA review period. Such an objection must be based only on issues that were raised with reasonable specificity during the public comment period, unless the petitioner demonstrates that it was impractible to raise such issues, or if the grounds for such objection arose after the comment period.

To petition the U.S. EPA to object to the issuance of a Title V operating permit, contact:

U.S. Environmental Protection Agency
401 M Street
Washington, D.C. 20406

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

IDEM

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Bryant Esch
Waupaca Foundry, Inc Plant 5
PO Box 249
Waupaca, WI, 54981

November 7, 2013

Re: 123-33300-00019
Significant Permit Modification to
Part 70 Renewal No.: T123-27047-00019

Dear Mr. Esch:

Waupaca Foundry, Inc Plant 5 was issued a Part 70 Operating Permit Renewal No. T123-27047-00019 on July 23, 2009 for a stationary gray and ductile iron foundry located at 9856 State Highway 66, Tell City, Indiana 47586. An application requesting changes to this permit was received on June 7, 2013. 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.

For your convenience, the entire Part 70 Operating Permit Renewal as modified is attached.

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's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

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

Sincerely,

Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Attachment(s): Updated Permit, Technical Support Document and Appendix A

MS/ss

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

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Governor

Thomas W. Easterly
Commissioner

Part 70 Operating Permit Renewal
OFFICE OF AIR QUALITY

Waupaca Foundry, Inc Plant 5
9856 State Highway 66
Tell City, Indiana 47586

(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.: T123-27047-00019	
Issued by: Matt Stuckey, Branch Chief Permits Branch Office of Air Quality	Issuance Date: July 23, 2009 Expiration Date: July 23, 2014

Significant Permit Modification No. 123-28470-00019, issued on November 20, 2009.
Significant Permit Modification No. 123-29497, issued on June 1, 2011
Minor Permit Modification No. 123-31720-00019, issued on June 29, 2012
Administrative Amendment No.123-32226-00019, issued on August 27, 2012

Significant Permit Modification No.: 123-33300-00019	
Issued by: Matt Stuckey, Chief Permits Branch Office of Air Quality	Issuance Date: November 7, 2013 Expiration Date: July 23, 2014

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Part 70 Usage Report
Quarterly Deviation and Compliance Monitoring Report
Fugitive Dust Control Plan

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(15)][326 IAC 2-7-1(22)]

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

Source Address:	9856 State Highway 66, Tell City, Indiana 47586
General Source Phone Number:	715-258-6611
SIC Code:	3321
County Location:	Perry
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(15)]

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

Phase I

(a) One (1) gray iron cupola, identified as P30, constructed in 1996, with a maximum melt rate of 100 tons per hour, using one (1) baghouse (C09A) for particulate control, one (1) incinerator (C11A) for carbon monoxide control and VOC emissions control, and one (1) dry alkaline injection system (C12A) for sulfur dioxide control, exhausting to stack S09;

(b) Four (4) production lines, each constructed in 1996, modified in 2010**,** consisting of the following:

(1) Line 1 (modified in 1998 and approved for modification in 2007)

(A) One (1) pouring/mold cooling operation, identified as P01, with a maximum throughput of 38 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stacks S01 and S04;

(B) One (1) shakeout operation, identified as P02, with a maximum throughput of 38 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;

(C) One (1) cast cooling operation, identified as P03, with a maximum throughput of 28 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stacks S01 and S04;

(D) One (1) pick & sort operation, identified as P04, with a maximum throughput of 38 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;

(E) One (1) cleaning & grinding operation, identified as P05, with a maximum throughput of 27 tons per hour, using a mechanical blaster, using one (1) baghouse (C07) for particulate control, exhausting to stack S07;

(2) Line 2
- (A) One (1) pouring/mold cooling operation, identified as P06, with a maximum throughput of 17 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;
- (B) One (1) shakeout operation, identified as P07, with a maximum throughput of 17 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;
- (C) One (1) cast cooling operation, identified as P08, with a maximum throughput of 17 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;
- (D) One (1) pick & sort operation, identified as P09, with a maximum throughput of 17 tons per hour, using one (1) baghouse (C07) for particulate control, exhausting to stack S07;
- (E) One (1) cleaning & grinding operation, identified as P10, with a maximum throughput of 17 tons per hour, using a mechanical blaster, using one (1) baghouse (C07) for particulate control, exhausting to stack S07;

(3) Line 3
- (A) One (1) pouring/mold cooling operation, identified as P11, with a maximum throughput of 17 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;
- (B) One (1) shakeout operation, identified as P12, with a maximum throughput of 17 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;
- (C) One (1) cast cooling operation, identified as P13, with a maximum throughput of 17 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;
- (D) One (1) pick & sort operation, identified as P14, with a maximum throughput of 17 tons per hour, using one (1) baghouse (C07) for particulate control, exhausting to stack S07;
- (E) One (1) cleaning & grinding operation, identified as P15, with a maximum throughput of 17 tons per hour, using a mechanical blaster, using one (1) baghouse (C07) for particulate control, exhausting to stack S07;

(4) Line 4
- (A) One (1) pouring/mold cooling operation, identified as P16, with a maximum throughput of 27 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;
- (B) One (1) shakeout operation, identified as P17, with a maximum throughput of 27 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;
- (C) One (1) cast cooling operation, identified as P18, with a maximum throughput of 27 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;
- (D) One (1) pick & sort operation, identified as P19, with a maximum throughput of 27 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;
- (E) One (1) cleaning & grinding operation, identified as P20, with a maximum throughput of 27 tons per hour, using a mechanical blaster, using one (1) baghouse (C07) for particulate control, exhausting to stack S07;

(c) Sand handling operations and ancillary operations, each constructed in 1996, consisting of the following:

(1) One (1) return sand handling & screen operation, identified as P21, with a maximum throughput of 522 tons per hour, using three (3) baghouses (C01, C02,

C03) for particulate control, exhausting to stack S01;

(2) One (1) sand cooling & water addition operation, identified as P22, with a maximum throughput of 522 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;

(3) One (1) sand mulling & handling operation, identified as P23, with a maximum throughput of 522 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;

(4) One (1) spent sand handling & processing operation, identified as P24, with a maximum throughput of 54 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;

(5) Air make-up units, identified as P52, with a maximum combined heat input capacity of 65.6 million British thermal units (MMBtu) per hour, combusting natural gas, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;

(6) One (1) metallic returns handling operation, identified as P25, with a maximum throughput of 33 tons per hour, using one(1) baghouse (C07) for particulate control, exhausting to stack S07;

(7) One (1) core sand handling operation, identified as P40, with a maximum throughput of 16 tons per hour, using one (1) baghouse (C08) for particulate control, exhausting to stack S08;

(8) One (1) core manufacturing operation, identified as P41, with a maximum throughput of 16 tons per hour, exhausting to stack S11;

(9) One (1) core machine & oven operation, identified as P51, with a maximum heat input capacity of 16.8 MMBtu per hour, combusting natural gas, exhausting to stack S11;

(10) One (1) ladle preheating operation, identified as P53, with a maximum heat input capacity of 11.5 MMBtu per hour, combusting natural gas, exhausting to stack S12;

(11) One (1) ladle filling & iron transport operation, identified as P85, with a maximum throughput of 100 tons per hour, using one (1) baghouse (C44) for particulate control, exhausting to stack S44;

(12) One (1) ladle filling & iron transport operation, identified as P85, with a maximum throughput of 100 tons per hour;

(13) One (1) Phase 1 Melt Area Ladle Cleaning, identified as P86, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using one (1) baghouse (C44) as control, and exhausting to stack S44;

(14) One (1) Line 1 ladle cleaning operation, identified as P86A, approved for modification in 2013, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using Baghouses C01, C02, and C03 as control, and exhausting to stack S01;

(15) One (1) Line 2 ladle cleaning operation, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using no control, and exhausting inside the building;

(16) One (1) Line 3 ladle cleaning operation, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using no control, and exhausting inside the building;

(17) One (1) Line 4 ladle cleaning operation, identified as P86B, approved for modification in 2013, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using Baghouses C01, C02, and C03 as control, and exhausting to stack S01;

(18) One (1) 16 ton iron bath desulfurization ladle operation, constructed in 2010, identified as P34, with a maximum throughput of 100 tons per hour, using one (1) baghouse (C44) for particulate matter control and exhausting through stack S44.

(d) Two (2) paint booths, one identified as P26A constructed in 2007 and modified in 2008,

and one identified as P26B, approved for construction in 2008, used to coat metal castings for rust protection, using spray guns with a combined maximum capacity of 16 (sixteen) gallons per hour, using overspray filters for PM control, exhausting to stacks S26A and S26B, respectively.

Phase II

(a) One (1) cupola iron melting system, identified as P33, constructed in 1998, with a maximum melt rate of 100 tons of iron per hour. VOC and CO emissions are controlled by one (1) recuperative incinerator, identified as C11B. Sulfur dioxide emissions are controlled by one (1) lime injection system (or equivalent), identified as C12B Particulate matter emissions are controlled by one (1) baghouse system, identified as C09B. The gases are then exhausted to stack S09;

(b) Four (4) production lines, each constructed in 1998, modified in 2010**,** consisting of the following:

(1) Line 5

(A) One (1) pouring/mold cooling operation, identified as P60, with a maximum production capacity of 28 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C15. The gases are then exhausted to Stack S15;

(B) One (1) shakeout operation, identified as P61, with a maximum throughout capacity of 28 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C15, that exhaust to Stack S15 or by one (1) baghouse system, identified as C16, that exhaust to Stack S16;

(C) One (1) cast cooling operation, identified as P62, with a maximum capacity of 28 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C15. The gases are then exhausted to Stack S15.

(D) One (1) pick and sort operation, identified as P63, with a maximum throughput capacity of 28 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C16. The gases are then exhausted to Stack S16;

(E) One (1) cleaning and grinding operation, identified as P64, with a maximum throughput capacity of 28 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C16. The gases are then exhausted to Stack S16;

(2) Line 6

(A) One (1) pouring/mold cooling operation, identified as P65, with a maximum production capacity of 20 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C15. The gases are then exhausted to Stack S15;

(B) One (1) shakeout operation, identified as P66, with a maximum throughput capacity of 20 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C15, that exhaust to Stack S15 or by one (1) baghouse system, identified as C16, that exhaust to Stack S16;

(C) One (1) cast cooling operation, identified as P67, with a maximum capacity of 20 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C15, that exhaust to Stack S15 or by one (1) baghouse system, identified as C16, that exhaust to Stack S16;

(D) One (1) pick and sort operation, identified as P68, with a maximum throughput capacity of 20 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C16. The gases

are then exhausted to Stack S16;

(E) One (1) cleaning and grinding operation, identified as P69, with a maximum throughput capacity of 20 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C16. The gases are then exhausted to Stack S16;

(3) Line 7

(A) One (1) pouring/mold cooling operation, identified as P70, with a maximum production capacity of 33 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C15. The gases are then exhausted to Stack S15;

(B) One (1) shakeout operation, identified as P71, with a maximum production capacity of 33 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C15, that exhaust to Stack S15 or by one (1) baghouse system, identified as C16, that exhaust to Stack S16;

(C) One (1)cast cooling operation, identified as P72, with a maximum production capacity of 33 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C15, that exhaust to Stack S15 or by one (1) baghouse system, identified as C16, that exhaust to Stack S16;

(D) One (1) pick and sort operation, identified as P73, with a maximum throughput capacity of 33 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C16. The gases are then exhausted to Stack S16;

(E) One (1) cleaning and grinding operation, identified as P74, with a maximum throughput capacity of 33 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C16. The gases are then exhausted to Stack S16;

(4) Line 8

(A) One (1) pouring/mold cooling operation, identified as P75, with a maximum production capacity of 20 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C15. The gases are then exhausted to Stack S15;

(B) One (1) shakeout operation, identified as P76, with a maximum throughput capacity of 20 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C16. The gases are then exhausted to Stack S16;

(C) One (1) cast cooling operation, identified as P77, with a maximum capacity of 20 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C16. The gases are then exhausted to Stack S16;

(D) One (1) pick and sort operation, identified as P78, with a maximum throughput capacity of 20 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C16. The gases are then exhausted to Stack S16; and

(E) One (1) cleaning and grinding operation, identified as P79, with a maximum throughput capacity of 20 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C16. The gases are then exhausted to Stack S16.

(c) Sand handling operations and ancillary operations, each constructed in 1998, modified in 2010, consisting of the following:

(1) One (1) return sand handling and screening operation, identified as P80, with a

maximum throughput capacity of 660 tons of sand per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C15, that exhaust to Stack S15 or by one (1) baghouse system, identified as C16, that exhaust to Stack S16;

(2) One (1) sand mulling and handling operation, identified as P81, with a maximum capacity of 660 tons of sand per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C15. The gases are then exhausted to Stack S15;

(3) One (1) sand blending and cooling operation, identified as P82, with a maximum capacity of 660 tons of sand per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C15. The gases are then exhausted to Stack S15;

(4) One (1) spent sand and dust handling operation, identified as P83, with a maximum throughput capacity of 55 tons of sand per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C15. The gases are then exhausted to Stack S15;

(5) One (1) metal returns handling operation, identified as P84, with a maximum capacity of 44 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C15, that exhaust to Stack S15 or by one (1) baghouse system, identified as C16, that exhaust to Stack S16;

(6) One (1) enclosed cupola charge make-up and handling unit with a maximum charge of 114.0 tons per hour;

(7) One (1) ladle filling and iron transport operation with a maximum capacity of 188 tons of iron per hour;

(8) One (1) Phase 2 Melt Area Ladle Cleaning, identified as P86, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using one (1) baghouse (C44) as control, and exhausting to stack S44;

(9) One (1) Line 5 ladle cleaning operation, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using no control, and exhausting inside the building;

(10) One (1) Line 6 ladle cleaning operation, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using no control, and exhausting inside the building;

(11) One (1) Line 7 ladle cleaning operation, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using no control, and exhausting inside the building;

(12) One (1) Line 8 ladle cleaning operation, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using no control, and exhausting inside the building;

(13) One (1) Phase 2 Ductile Iron Treatment Ladle Cleaning, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, with approximately 25% of emissions controlled by Baghouse C15, and exhausting to stack S15, and with approximately 75% emissions uncontrolled, and exhausting inside the building;

Note: The ductile treatment operation includes locations where treatment occurs and iron is transferred. Fumes in the treatment area are captured by Baghouse C15 but those in the metal transfer area are not captured.

(14) Two (2) ductile iron treatment stations, both identified as P35, each with a maximum production capacity of 50 tons per hour. Particulate matter emissions are controlled by two (2) baghouse systems identified as C15 and C35. The gases from both baghouses are then exhausted to Stack S15;

(15) One (1) phenolic-urethane core sand handling system, identified as P42, constructed in 1998 and modified in 2008, with a maximum production capacity of 32 tons of cores per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C08, that exhausts to Stack S08;

(16) One (1) phenolic-urethane core making process, identified as P43, with a

maximum production capacity of 20 tons of cores per hour. Volatile organic compound emissions are controlled by one (1) packed bed scrubber (or equivalent), identified as C14. The gases are then exhausted to Stack S14;

(17) One (1) phenolic-urethane core making process, identified as P44, consisting of 2 mixers and 2 core machines, each with a maximum capacity of 3 tons per hour. DMIPA emissions are controlled by one (1) packed bed scrubber, identified as C14. The gases are then exhausted to Stack S14;

(18) Raw material handling including iron handling at a maximum rate of 150 tons per hour, alloys handling at a maximum rate of 1.5 tons per hour, coke handling at a maximum rate of 15 tons per hour, and limestone handling at a maximum rate of 4.5 tons per hour;

(19) Natural gas fired air make-up units equipped with low-NOx burners, identified as P54, with a maximum heat input rate of 80 MMBtu per hour exhausting to Stack S15.

(20) One (1) pattern shop, identified as P50, controlled by a baghouse, exhausting to stack S08.

(d) One (1) autogrinder operation, to be constructed in 2008, identified as P87, with a maximum capacity of 22.5 tons of castings per hour, with emissions controlled by existing Baghouse C16 and exhausting to stack S16 [326 IAC 6-3-2].

(e) Two (2) autogrinder machines, to be constructed in 2012, identified as P87A, with a maximum capacity of 1.02 tons of castings per hour, each, with emissions voluntarily controlled by Baghouse C87A and exhausting into the building [326 IAC 6-3-2].

Core Room Expansion I

(a) One (1) phenolic-urethane core sand handling system, identified as P46, constructed in 2005 and modified in 2008, with a maximum production capacity of 51 tons of cores per hour. Particulate matter emissions are controlled by one (1) baghouse, identified as C18, and exhausting inside the building;

(b) One (1) phenolic-urethane core making process, identified as P47, to begin construction in 2005, consisting of 3 mixers and 3 core machines, each with a maximum capacity of 15 tons per hour. DMIPA catalyst emissions are controlled by one (1) packed bed scrubber, identified as C17. The gases are then exhausted to Stack S17;

(c) Three (3) natural gas-fired core drying ovens and natural gas-fired air make-up units, identified as P48, to begin construction in 2005, with the core drying ovens having a combined maximum heat input capacity of 9.0 MMBtu per hour and the air make-up units having a combined maximum heat input capacity of 3.2 MMBtu per hour, exhausting inside the building.

Core Room Expansion II

(a) one (1) phenolic-urethane core machine, identified as P45A, to be constructed in 2008, with a maximum capacity of 6 tons per hour, with emissions controlled by existing scrubber C14 and exhausting through stack S14;

(b) one (1) phenolic-urethane core machine, identified as P45B, to be constructed in 2008, with a maximum capacity of 6 tons per hour, with emissions controlled by existing scrubber C17 and exhausting through stack S17; and

(c) two (2) natural gas-fired core dry oven, to be constructed in 2008, identified as P48A and P48B, with a maximum capacity of 2.5 MMBtu/hr each, with emissions exhausting in to the building.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

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

(a) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6; [326 IAC 8-3-2] [326 IAC 8-3-5]

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) The Part 70 Operating Permit, T123-27047-00019, is issued for a fixed term of five (5) years 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 or of permits issued pursuant to Title IV of the Clean Air Act and 326 IAC 21 (Acid Deposition Control).

(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:

(i) it contains a certification by a "responsible official", as defined by 326 IAC 2-7-1 (34), and

(ii) the certification is 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(34).

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(34).

B.10 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)][326 IAC 2-7-6(1) and (6)][326 IAC 1-6-3]

(a) 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 time frame specified in Section D, 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(34).

(b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMPs 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(34).

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

B.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 and Southwest Regional Office, no later than 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 Section), or
Telephone Number: 317-233-0178 (ask for Compliance Section)
Facsimile Number: 317-233-6865
Southwest Regional Office phone: (812) 380-2305; fax: (812) 380-2304**.**

(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

no later than 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(34).

(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)(9) 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 T123-27047-00019 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 combined permit, all previous registrations and permits are superseded by this combined new source review and part 70 operating permit, except for permits issued pursuant to Title IV of the Clean Air Act and 326 IAC 21 (Acid Deposition Control)

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 requirement of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

(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(34).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section (PASS), 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] [40 CFR 72]

(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) Pursuant to 326 IAC 2-7-11(b) and 326 IAC 2-7-12(a), administrative Part 70 operating permit amendments and permit modifications for purposes of the acid rain portion of a Part 70 permit shall be governed by regulations promulgated under Title IV of the Clean Air Act. [40 CFR 72]

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

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

Any such application shall be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).

(d) 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),(c), or (e) 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 (PASS), 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),(c), or (e). 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), (c)(1), and (e)(2).

(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(34).

(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.

(f) This condition does not apply to emission trades of SO_2 or NO_X under 326 IAC 21 or 326 IAC 10-4.

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 (PASS), Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The application which shall be submitted by the Permittee does require 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).

(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) 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 Fugitive Particulate Matter Emission Limitations [326 IAC 6-5]

Pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations), fugitive particulate matter emissions shall be controlled according to the plan dated September 24, 2008 or the most current plan which has been submitted to IDEM. The plan is included as Attachment A.

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

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted. 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.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

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

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

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

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

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

(c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).

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

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Asbestos Section, Office of Air Quality
100 North Senate Avenue
MC 61-52 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 by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

(a) Compliance testing on new emissions units shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up, if specified in Section D of this approval.

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(34).

(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(34).

(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. The extension request 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(34).

Compliance Requirements [326 IAC 2-1.1-11]

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

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

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

C.11 Compliance Monitoring [326 IAC 2-7-5(3)][326 IAC 2-7-6(1)]

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

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

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

The notification which shall be submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

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

C.12 Maintenance of Continuous Opacity Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]

(a) The Permittee shall install, calibrate, maintain, and operate all necessary continuous opacity monitoring systems (COMS) and related equipment.

(b) All COMS shall meet the performance specifications of 40 CFR 60, Appendix B, Performance Specification No. 1, and are subject to monitor system certification requirements pursuant to 326 IAC 3-5.

(c) In the event that a breakdown of a COMS occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem.

(d) Whenever a COMS is malfunctioning or is down for maintenance or repairs for a period of twenty-four (24) hours or more and a backup COMS is not online within twenty-four (24) hours of shutdown or malfunction of the primary COMS, the Permittee shall provide a certified opacity reader, who may be an employee of the Permittee or an independent contractor, to self-monitor the emissions from the emission unit stack.

(1) Visible emission readings shall be performed in accordance with 40 CFR 60, Appendix A, Method 9, for a minimum of five (5) consecutive six (6) minute averaging periods beginning not more than twenty-four (24) hours after the start of the malfunction or down time.

(2) Method 9 opacity readings shall be repeated for a minimum of five (5) consecutive six (6) minute averaging periods at least twice per day during daylight operations, with at least four (4) hours between each set of readings, until a COMS is online.

(3) Method 9 readings may be discontinued once a COMS is online.

(4) Any opacity exceedances determined by Method 9 readings shall be reported with the Quarterly Opacity Exceedances Reports.

(e) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous opacity monitoring system pursuant to 326 IAC 3-5, (and 40 CFR 60 and/or 40 CFR 63).

C.13 Maintenance of Continuous Emission Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]

(a) The Permittee shall install, calibrate, maintain, and operate all necessary continuous emission monitoring systems (CEMS) and related equipment.

(b) All continuous emission monitoring systems shall meet all applicable performance specifications of 40 CFR 60 or any other performance specification, and are subject to monitor system certification requirements pursuant to 326 IAC 3-5-3.

(c) In the event that a breakdown of a continuous emission monitoring system occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem.

(d) Whenever a continuous emission monitor other than an opacity monitor is malfunctioning or is down for maintenance or repairs, the following shall be used as an alternative to continuous data collection:

(1) The relevant requirements of 40 CFR 75-Missiong Data Substitute Procedure shall be used to provide substitute data except when demonstrating Compliance.

(e) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous emission monitoring system pursuant to 326 IAC 2-2-3.

C.14 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.

(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.15 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 prepared and submitted written emergency reduction plans (ERPs) consistent with safe operating procedures on.

(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.16 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.17 Response to Excursions or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]

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

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

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

(1) initial inspection and evaluation;

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

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

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

(1) monitoring results;

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

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

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

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

C.18 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(34).

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

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

Pursuant to 326 IAC 2-6-3(a)(1), the Permittee shall submit no later than July 1 of each year 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:

(a) Indicate estimated actual emissions of all pollutants listed in 326 IAC 2-6-4(a);

(b) 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(34).

C.20 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. 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 40 CFR 51.165(a)(6)(vi)(A), 40 CFR 51.165(a)(6)(vi)(B), 40 CFR 51.166(r)(6)(vi)(a), and/or 40 CFR 51.166(r)(6)(vi)(b)) that a “project” (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(ll)) 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(ee) and/or 326 IAC 2-3-1(z)) may result in significant emissions increase and the Permittee elects to utilize the “projected actual emissions” (as defined in 326 IAC 2-2-1(rr) and/or 326 IAC 2-3-1(mm)), the Permittee shall comply with following:

(1) Before beginning actual construction of the “project” (as defined in

326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(ll)) 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(rr)(2)(A)(iii) and/or 326 IAC 2-3-1 (mm)(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 40 CFR 51.165(a)(6)(vi)(A) and/or 40 CFR 51.166(r)(6)(vi)(a)) that a "project" (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(ll)) 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(ee) and/or 326 IAC 2-3-1(z)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(rr) and/or 326 IAC 2-3-1(mm)), 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.21 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11][326 IAC 2-2] [326 IAC 2-3]

(a) 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(34). 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) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

(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 (qq) and/or 326 IAC 2-3-1 (ll)) 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 (xx) and/or 326 IAC 2-3-1 (qq), 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 within 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 project.

Reports required in this part shall be submitted to:

Indiana Department of Environmental Management
Air Compliance Section, 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.22 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 the standards for recycling and emissions reduction:

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

MELTING OPERATION
Phase I

One (1) gray iron cupola, identified as P30, constructed in 1996, with a maximum melt rate of 100 tons per hour, using one (1) baghouse (C09A) for particulate control, one (1) incinerator (C11A) for carbon monoxide control and volatile organic compound emissions control, and one (1) lime injection system (C12A) using dry injection system for sulfur dioxide control, exhausting to stack S09;

Phase II

One (1) cupola iron melting system, identified as P33, constructed in 1998, with a maximum melt rate of 100 tons of iron per hour. VOC and CO emissions are controlled by one (1) recuperative incinerator, identified as C11B. Sulfur dioxide emissions are controlled by one (1) lime injection system (or equivalent), identified as C12B Particulate matter emissions are controlled by one (1) baghouse system, identified as C09B. The gases are then exhausted to stack S09.

(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 PSD BACT for Particulate [326 IAC 2-2-3(a)(3)]

(a) Pursuant to CP-123-8451-00019, issued on February 4, 1998 and 326 IAC 2-2-3(a)(3) (Prevention of Significant Deterioration (PSD) Rules), the particulate matter emissions from the cupolas shall be limited to 0.078 pounds per ton of iron and 12.48 pounds per hour.

(b) Pursuant to CP-123-4593-00019, issued on January 19, 1996, visible emissions from the cupola stack S09 shall not exceed 10 % opacity.

(c) Pursuant to CP-123-4593-00019, issued on January 19, 1996, visible emissions from any building opening shall not exceed 3% opacity.

D.1.2 PSD BACT for Lead [326 IAC 2-2-3(a)(3)] [326 IAC 2-4.1-1]

Pursuant to CP-123-8451-00019, issued on February 4, 1998 and 326 IAC 2-2-3(a)(3), the lead (Pb) emissions from both cupolas combined shall be limited to 0.54 pounds per hour.

D.1.3 PSD BACT for Beryllium [326 IAC 2-2-3(a)(3)] [326 IAC 2-4.1-1]

Pursuant to CP-123-8451-00019, issued on February 4, 1998 and 326 IAC 2-2-3(a)(3), the beryllium (Be) emissions from both cupolas combined shall be limited to 0.0016 pounds per hour.

D.1.4 PSD BACT for Sulfur Dioxide [326 IAC 2-2-3(a)(3)]

(a) Pursuant to PSD/SSM 123-29490-00019 and 326 IAC 2-2-3(a)(3), the sulfur dioxide (SO_2) emissions from the cupolas shall be limited to 0.22 pounds per ton of metal melted based on a 30-day rolling average and 44.0 pounds per hour based on a 3-hour rolling average.

(b) Pursuant to PSD/SSM 123-29490-00019 and 326 IAC 2-2-3(a)(3), coke usage shall not exceed 240 tons per day for each cupola.

D.1.5 PSD BACT for Volatile Organic Compound [326 IAC 2-2-3(a)(3)] [326 IAC 8-1-6]

Pursuant to PSD/SSM 123-29490-00019, 326 IAC 2-2-3(a)(3) and 326 IAC 8-1-6 (General Reduction Requirements for New Facilities), the volatile organic compound (VOC) emissions from the cupolas shall be limited to 0.02 pounds per ton of iron and 4.0 pounds per hour.

D.1.6 PSD BACT for Carbon Monoxide [326 IAC 2-2-3(a)(3)] [326 IAC 9-1-2]

(a) Pursuant to PSD/SSM 123-29490-00019 and 326 IAC 2-2-3(a)(3), the carbon monoxide (CO) emissions from the cupolas shall be limited to 0.4 pounds per ton of iron and 80.0 pounds per hour.

(b) Pursuant to 326 IAC 9-1-2 (Carbon Monoxide Emission Limits), the carbon monoxide emissions from the cupolas shall be controlled by the recuperative incinerator/heat recovery systems, which shall maintain a minimum temperature of one thousand three hundred (1,300) degrees Fahrenheit for a minimum retention time of three-tenths (0.3) second.

D.1.7 PSD BACT for Nitrogen Oxide [326 IAC 2-2-3(a)(3)]

Pursuant to PSD/SSM 123-29490-00019 and 326 IAC 2-2-3(a)(3), the nitrogen oxide (NO_X) emissions from the cupolas shall be limited to 0.44 pounds per ton of iron and 88.0 pounds per hour.

D.1.8 Operating Requirements [326 IAC 2-2-3(a)(3)]

Pursuant to PSD/SSM 123-29490-00019, and 326 IAC 2-2-3(a)(3), each cupola shall be limited to a maximum melt rate of 100 tons per hour, based on a 24 hour average.

D.1.9 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan (PMP) is required for this unit and its control device. 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.1.10 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) Within one hundred and eighty (180) days, after the Phase 1 cupola (P30) achieves a melt rate greater than 80 tons per hour, in order to determine compliance with Conditions D.1.1, D.1.2, and D.1.3, the Permittee shall perform PM, opacity, lead and beryllium testing on both cupolas, identified as P30 and P33 utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every two and half (2.5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligations with regard to the performance testing required by this condition.

(b) Within one hundred and eighty (180) days, after the Phase 1 cupola (P30) achieves a melt rate greater than 80 tons per hour, in order to determine compliance with Conditions D.1.4, D.1.5, D.1.6 and D.1.7, the Permittee shall perform SO2, VOC, NOx, and CO, testing on both cupolas, identified as P30 and P33 utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every two and half (2.5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligations with regard to the performance testing required by this condition.

D.1.11 Particulate Matter (PM/PM-10) Controls [326 IAC 2-7-6(6)]

(a) Pursuant to CP123-8451-00019 issued February 4, 1998, the PM emissions from the cupola for Phase I shall be controlled by baghouse C09A (Stack S09).

(b) Pursuant to CP123-8451-00019 issued February 4, 1998, the PM emissions from the cupola for Phase II shall be controlled by baghouse C09B (Stack S09).

(c) 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.1.12 Sulfur Dioxide Control

Pursuant to CP123-8451-00019 issued February 4, 1998, the SO_2 emissions from the Phase I and II cupolas (P30 and P33) shall be controlled by dry scrubbing systems using a dry lime or other equivalent alkaline reagent located prior to the baghouse.

D.1.13 VOC, CO, and NOx Control [326 IAC 2-2-3]

(a) Pursuant to CP123-8451-00019 issued February 4, 1998, the waste gas stream of the Phase I and Phase II cupolas (P30 and P33) shall be equipped with recuperative incinerator/heat recovery systems with low NOx burners prior to the dry scrubber/baghouse system.

(b) Pursuant to CP123-8451-00019 issued February 4, 1998, the recuperative incinerator shall only use natural gas fuel as the auxiliary fuel. Propane may be used as a backup fuel.

D.1.14 Continuous Emissions Monitoring and Continuous Opacity Monitoring [326 IAC 2-7-6(6)]

(a) The baghouses C09A and C09B controlling particulate matter emissions from the phase 1 and 2 cupolas P30 and P33, shall be equipped with a bag leak detection system. These systems shall be operated pursuant to site-specific monitoring plan and corrective action plan required under 40 CFR 63.7710(b)(4) and (5).

(b) Pursuant to CP123-8451 issued February 4, 1998, compliance with the SO_2 limits for the Phase I and Phase II cupolas in Condition D.1.4 shall be demonstrated by installing and operating a SO_2 continuous emissions monitoring system (CEMS) for the Phase 1 and Phase 2 cupolas exhausting to stack S09. The SO_2 CEMS shall be certified according to procedures contained in 326 IAC 3 and 40 CFR 75 as applicable. The continuous monitoring system shall be equipped with a flow monitor to provide data in pounds of SO_2 per hour. The SO_2 emissions on a per ton of iron basis shall be calculated by using the emissions rate information divided by the cupola production data, and shall be based on a 30 day rolling average.

D.1.15 Recuperative Incinerator Temperature

A continuous monitoring system shall be calibrated, maintained, and operated on each of the cupolas for measuring temperature of the cupola gas stream. For the purposes of this condition, continuous shall mean no less often than once per 15 minute. The Permittee shall maintain the hourly average temperature of the cupola gas stream at 1400 ^{0}F or at a temperature determined from the latest stack testing. This minimum temperature requirements applies at all times during operation of either of the cupolas, except for the following:

(a) periods when the cupola blast air is turned off;
(b) periods when the blast air has been turned on for less than 30 consecutive minutes; and

(c) during the last 30 minutes of operation of the cupola.

The Permittee shall monitor the times that the cupola blast air is turned on and off for each cupola.

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

D.1.16 Dry Alkaline Injection Parametric Monitoring

Whenever the SO_2 continuous emissions monitoring system (CEMS) is malfunctioning or down for repairs or adjustments, the following shall be used to provide information related to SO2 emissions:

(a) If the CEMS is down for less than twenty-four (24) hours, the Permittee shall substitute an average of the quality-assured data from the hour immediately before and the hour immediately after the missing data period for each hour of missing data.

(b) If the CEMS is down for twenty-four (24) hours or more, the Permittee shall record the alkaline dust injection rate of each dry alkaline injection system at least once per hour until the SO_2 CEMS is back online. When for any one reading the alkaline dust injection rate is below the minimum alkaline dust injection rate determined from the most recent compliant stack test, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. An alkaline dust injection rate reading that is below the above mentioned minimum is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

D.1.17 Recuperative Incinerator Failure Detection

(a) Charging of the cupola shall cease immediately until the failed units have been repaired or replaced.

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

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

D.1.18 Record Keeping Requirement

(a) To document compliance with Conditions D.1.4, the Permittee shall maintain records of the coke input to each cupola for each day. Records shall be taken daily and shall be complete and sufficient to establish compliance with the coke input limit established in Condition D.1.4(b).

(b) To document compliance with Conditions D.1.15 and D.1.16, the Permittee shall maintain records of the following:

(1) records of the injection rate of each alkali injection system once per hour as required by Condition D.1.16; and

(2) records of the temperature readings for each recuperative incinerator (reduced to hourly averages) and all times when the blast air is turned on and off, in order to demonstrate compliance with Condition D.1.15.

(c) In order to document compliance with D.1.8, records shall be kept of the total iron throughput to each cupola each day of operation, and of the total hours of operation of each cupola each day of operation.

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

D.1.19 Reporting Requirements

The Permittee shall submit a quarterly excess emissions report, if applicable, based on the continuous emissions monitor system (CEMS) data for SO_2, pursuant to 326 IAC 3-5-7. These reports shall be submitted within thirty (30) calendar days following the end of each calendar quarter and in accordance with Section C - General Reporting Requirements of this permit.

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Facilities exhausting to stacks S01, S04, or S07

Phase I

(b) Four (4) production lines, each constructed in 1996, consisting of the following:

(1) Line 1
- (a) One (1) pouring/mold cooling operation, identified as P01, with a maximum throughput of 38 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stacks S01 and S04;
- (b) One (1) shakeout operation, identified as P02, with a maximum throughput of 38 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;
- (c) One (1) cast cooling operation, identified as P03, with a maximum throughput of 27 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stacks S01 and S04;
- (d) One (1) pick & sort operation, identified as P04, with a maximum throughput of 38 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01; and
- (e) One (1) cleaning & grinding operation, identified as P05, with a maximum throughput of 27 tons per hour, using a mechanical blaster, using one (1) baghouse (C07) for particulate control, exhausting to stack S07.

(2) Line 2
- (a) One (1) pouring/mold cooling operation, identified as P06, with a maximum throughput of 17 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;
- (b) One (1) shakeout operation, identified as P07, with a maximum throughput of 17 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;
- (c) One (1) cast cooling operation, identified as P08, with a maximum throughput of 17 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;
- (d) One (1) pick & sort operation, identified as P09, with a maximum throughput of 17 tons per hour, using one (1) baghouse (C07) for particulate control, exhausting to stack S07; and
- (e) One (1) cleaning & grinding operation, identified as P10, with a maximum throughput of 17 tons per hour, using a mechanical blaster, using one (1) baghouse (C07) for particulate control, exhausting to stack S07.

(3) Line 3
- (a) One (1) pouring/mold cooling operation, identified as P11, with a maximum throughput of 17 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;
- (b) One (1) shakeout operation, identified as P12, with a maximum throughput of 17 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;
- (c) One (1) cast cooling operation, identified as P13, with a maximum throughput of 17 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;
- (d) One (1) pick & sort operation, identified as P14, with a maximum throughput of 17 tons per hour, using one (1) baghouse (C07) for particulate control, exhausting to stack

S07; and

(e) One (1) cleaning & grinding operation, identified as P15, with a maximum throughput of 17 tons per hour, using a mechanical blaster, using one (1) baghouse (C07) for particulate control, exhausting to stack S07.

(4) Line 4

(a) One (1) pouring/mold cooling operation, identified as P16, with a maximum throughput of 27 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;

(b) One (1) shakeout operation, identified as P17, with a maximum throughput of 27 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;

(c) One (1) cast cooling operation, identified as P18, with a maximum throughput of 27 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;

(d) One (1) pick & sort operation, identified as P19, with a maximum throughput of 27 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01; and

(e) One (1) cleaning & grinding operation, identified as P20, with a maximum throughput of 27 tons per hour, using a mechanical blaster, using one (1) baghouse (C07) for particulate control, exhausting to stack S07.

(c) Sand handling operations and ancillary operations

(1) One (1) return sand handling & screen operation, identified as P21, with a maximum throughput of 522 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;

(2) One (1) sand cooling & water addition operation, identified as P22, with a maximum throughput of 522 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;

(3) One (1) sand mulling & handling operation, identified as P23, with a maximum throughput of 522 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;

(4) One (1) spent sand handling & processing operation, identified as P24, with a maximum throughput of 54 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;

(5) Air make-up units, identified as P52, with a maximum combined heat input capacity of 65.6 million British thermal units (MMBtu) per hour, combusting natural gas, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;

(6) One (1) metallic returns handling operation, identified as P25, with a maximum throughput of 33 tons per hour, using one(1) baghouse (C07) for particulate control, exhausting to stack S07;

(14) One (1) Line 1 ladle cleaning operation, identified as P86A, approved for modification in 2013, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using Baghouses C01, C02, and C03 as control, and exhausting to stack S01;

(17) One (1) Line 4 ladle cleaning operation, identified as P86B, approved for modification in 2013, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using Baghouses C01, C02, and C03 as control, and exhausting to stack S01;

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

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

D.2.1 PSD BACT for Particulate Matter [326 IAC 2-2-3(a)(3)]

(a) Pursuant to CP-123-4593-00019, issued on January 19, 1996, CP-123-8451-00019, issued on February 4, 1998, Amendment 123-9740-00019, issued May 22, 1998, and 326 IAC 2-2-3(a)(3) (Prevention of Significant Deterioration (PSD) Rules), the particulate matter emissions from the following processes shall be limited as shown in the table below:

Stack ID	Process	Process ID	Emission Limitation for Individual Processes (lb/hr)	Particulate Emission Limitation for stack (gr/dscf)	Particulate Emission Limitation for stack (lb/hr)
S01	Line 1 Pouring/Mold Cooling	P01		0.005	32.01
	Line 1 Shakeout	P02			
	Line 1 Cast Cooling	P03			
	Line 1 Pick and Sort	P04			
	Line 2 Pouring/Mold Cooling	P06	1.50		
	Line 2 Shakeout	P07	1.71		
	Line 2 Cast Cooling	P08	1.93		
	Line 3 Pouring/Mold Cooling	P11	1.50		
	Line 3 Shakeout	P12	1.71		
	Line 3 Cast Cooling	P13	0.43		
	Line 4 Pouring/Mold Cooling	P16	2.44		
	Line 4 Shakeout	P17	1.71		
	Line 4 Cast Cooling	P18	0.43		
	Line 4 Pick and Sort	P19	1.71		
	Return Sand Handling/ Screening	P21			
	Sand Cooling/Water Addition	P22			
	Sand Mulling/Handling	P23			
	Spent Sand Handling/Processing	P24	2.74		
	Air makeup units	P52		0.90 lb/hr and 3.94 tons/yr	
S04	Line 1 Pouring/Mold Cooling	P01		0.005	1.72
	Line 1 Cast Cooling	P03			

Stack ID	Process	Process ID	Emission Limitation for Individual Processes (lb/hr)	Particulate Emission Limitation for stack (gr/dscf)	Particulate Emission Limitation for stack (lb/hr)
S07	Line 1 Cleaning/Grinding	P05		0.005	7.8
	Line 2 Pick and Sort	P09	1.71		
	Line 2 Cleaning/Grinding	P10	0.69		
	Line 3 Pick and Sort	P14	2.10		
	Line 3 Cleaning/Grinding	P15	0.69		
	Metallic Returns Handling	P25	1.29		
	Line 4 Cleaning/Grinding	P20	0.69		

(b) Pursuant to CP123-4593-00019 issued on January 19, 1996, visible emissions from any baghouse stack shall not exceed ten percent (10%) opacity.

(c) Pursuant to PSD/SSM No. 123-33284-00019 and 326 IAC 2-2 (Prevention of Significant Deterioration):

(1) The Line 1 ladle cleaning operation, identified as P86A, and the Line 4 ladle cleaning operation, identified as P86B, shall operate only when other production facilities exhausting to stack S01 are not in operation.

(2) The PM, PM10, and PM2.5 emissions exhausting to Stack S01 from the Line 1 ladle cleaning operation, identified as P86A, shall be controlled by a baghouse(s).

(3) The PM, PM10, and PM2.5 emissions exhausting to Stack S01 from the Line 4 ladle cleaning operation, identified as P86B, shall be controlled by a baghouse(s).

(4) The particulate emissions from the following processes shall not exceed the following limitations as shown in the table below:

Stack ID	**Process**	**Process ID**	**Emission Limitation for Individual Processes (lb/hr)**			**Particulate Emission Limitation for Stack (gr/dscf)**	**Opacity Limitation for Stack**
			PM	**PM10**	**PM2.5**		
S01	Line 1 ladle cleaning operation	P86A	0.64	0.64	0.64	0.005	10%
	Line 4 ladle cleaning operation	P86B	0.64	0.64	0.64		

D.2.2 PSD BACT for Lead [326 IAC 2-2-3(a)(3)]

Pursuant to CP-123-4593-00019, issued on January 19, 1996, CP-123-8451-00019, issued on February 4, 1998, Amendment 123-9740-00019, issued May 22, 1998, and 326 IAC 2-2-3(a)(3) (Prevention of Significant Deterioration (PSD) Rules) and revised by

PSD/SSM 123-25303-00019, the lead (Pb) emissions from the following processes shall be limited as shown in the table below:

Stack ID	Process	Process ID	Lead Emission Limit (lb/hr)
S01	Line 1 Pouring/Mold Cooling	P01	0.032
	Line 1 Shakeout	P02	
	Line 1 Cast Cooling	P03	
	Line 1 Pick and Sort	P04	
	Line 2 Pouring/Mold Cooling	P06	
	Line 2 Shakeout	P07	
	Line 2 Cast Cooling	P08	
	Line 3 Pouring/Mold Cooling	P11	
	Line 3 Shakeout	P12	
	Line 3 Cast Cooling	P13	
	Line 4 Pouring/Mold Cooling	P16	
	Line 4 Shakeout	P17	
	Line 4 Cast Cooling	P18	
	Line 4 Pick and Sort	P19	
	Return Sand Handling/ Screening	P21	
	Sand Cooling/Water Addition	P22	
	Sand Mulling/Handling	P23	
	Spent Sand Handling/Processing	P24	
	Air makeup units	P52	
S04	Line 1 Pouring/Mold Cooling	P01	0.002
	Line 1 Cast Cooling	P03	
S07	Line 1 Cleaning/Grinding	P05	0.008
	Line 2 Pick and Sort	P09	
	Line 2 Cleaning/Grinding	P10	
	Line 3 Pick and Sort	P14	
	Line 3 Cleaning/Grinding	P15	
	Metallic Returns Handling	P25	
	Line 4 Cleaning/Grinding	P20	

D.2.3 PSD BACT for Beryllium [326 IAC 2-2-3(a)(3)]

Pursuant to CP-123-4593-00019, issued on January 19, 1996, CP-123-8451-00019, issued on February 4, 1998, Amendment 123-9740-00019, issued May 22, 1998, and 326 IAC 2-2-3(a)(3) (Prevention of Significant Deterioration (PSD) Rules) and revised by PSD/SSM 123-25303-00019, the beryllium (Be) emissions from the following processes shall be limited as shown in the table below:

Stack ID	Process	Process ID	Beryllium Emission Limit (lb/hr)
S01	Line 1 Pouring/Mold Cooling	P01	0.0006
	Line 1 Shakeout	P02	
	Line 1 Cast Cooling	P03	
	Line 1 Pick and Sort	P04	
	Line 2 Pouring/Mold Cooling	P06	
	Line 2 Shakeout	P07	
	Line 2 Cast Cooling	P08	
	Line 3 Pouring/Mold Cooling	P11	
	Line 3 Shakeout	P12	
	Line 3 Cast Cooling	P13	
	Line 4 Pouring/Mold Cooling	P16	
	Line 4 Shakeout	P17	
	Line 4 Cast Cooling	P18	
	Line 4 Pick and Sort	P19	
	Return Sand Handling/ Screening	P21	
	Sand Cooling/Water Addition	P22	
	Sand Mulling/Handling	P23	
	Spent Sand Handling/Processing	P24	
S04	Line 1 Pouring/Mold Cooling	P01	0.00003
	Line 1 Cast Cooling	P03	
S07	Line 1 Cleaning/Grinding	P05	0.00016
	Line 2 Pick and Sort	P09	
	Line 2 Cleaning/Grinding	P10	
	Line 3 Pick and Sort	P14	
	Line 3 Cleaning/Grinding	P15	
	Metallic Returns Handling	P25	

Stack ID	Process	Process ID	Beryllium Emission Limit (lb/hr)
	Line 4 Cleaning/Grinding	P20	

D.2.4 PSD BACT for Volatile Organic Compound [326 IAC 2-2-3(a)(3)]

Pursuant to PSD/SSM 123-29490-00019 and 326 IAC 2-2-3 (Prevention of Significant Deterioration (PSD)), the following limit is determined as Best Available Control Technology (BACT) for volatile organic compounds (VOC) for the Pouring/Mold Cooling and shakeout Operation for Phase 1 Lines 1 to 4 exhausting through stack S01 and S04.

The combined VOC emissions from the pouring/mold cooling and shakeout operation shall be controlled by mold vent off-gas ignition and shall not exceed 1.4 pounds per ton of iron poured and 138.6 lbs/hour, combined for both stacks, identified as S01 and S04.

D.2.5 PSD BACT for Carbon Monoxide [326 IAC 2-2-3(a)(3)]

Pursuant to PSD/SSM 123-29490-00019 and 326 IAC 2-2-3(a)(3), the carbon monoxide (CO) emissions from the following processes shall be limited as shown in the table below:

Stack ID	Process	Process ID	CO Emission Limits for Individual Processes (lb/ton)	CO Emission Limits for Stacks (lb/hr)
S01	Line 1 Pouring/Mold Cooling	P01	5.0	510.0
	Line 1 Shakeout	P02	1.0	
	Line 1 Cast Cooling	P03		
	Line 1 Pick and Sort	P04		
	Line 2 Pouring/Mold Cooling	P06	5.0	
	Line 2 Shakeout	P07	1.0	
	Line 2 Cast Cooling	P08		
	Line 3 Pouring/Mold Cooling	P11	5.0	
	Line 3 Shakeout	P12	1.0	
	Line 3 Cast Cooling	P13		
	Line 4 Pouring/Mold Cooling	P16	5.0	
	Line 4 Shakeout	P17	1.0	
	Line 4 Cast Cooling	P18		
	Line 4 Pick and Sort	P19		
	Return Sand Handling/ Screening	P21		
	Sand Cooling/Water Addition	P22		
	Sand Mulling/Handling	P23		
	Spent Sand Handling/Processing	P24		

	Air makeup units	P52	18.2 lbs/hr	
S04	Line 1 Pouring/Mold Cooling	P01	5.0	84.0
	Line 1 Cast Cooling	P03		

D.2.6 PSD BACT for Sulfur Dioxide [326 IAC 2-2-3(a)(3)]

Pursuant to PSD/SSM 123-29490-00019 and 326 IAC 2-2-3(a)(3), the sulfur dioxide (SO2) emissions from the following processes shall be limited as shown in the table below:

Stack ID	Process	Process ID	SO_2 Emission Limits (lb/ton)	SO_2 Emission Limits for Stacks (lb/hr)
S01	Line 1 Pouring/Mold Cooling	P01	0.02	1.68
	Line 1 Shakeout	P02		
	Line 1 Cast Cooling	P03		
	Line 1 Pick and Sort	P04		
	Line 2 Pouring/Mold Cooling	P06		
	Line 2 Shakeout	P07		
	Line 2 Cast Cooling	P08		
	Line 3 Pouring/Mold Cooling	P11		
	Line 3 Shakeout	P12		
	Line 3 Cast Cooling	P13		
	Line 4 Pouring/Mold Cooling	P16		
	Line 4 Shakeout	P17		
	Line 4 Cast Cooling	P18		
	Line 4 Pick and Sort	P19		
	Return Sand Handling/ Screening	P21		
	Sand Cooling/Water Addition	P22		
	Sand Mulling/Handling	P23		
	Spent Sand Handling/Processing	P24		
	Air Makeup Units	P52		
S04	Line 1 Pouring/Mold Cooling	P01	0.02	0.3
	Line 1 Cast Cooling	P03		

D.2.7 PSD BACT for Nitrogen Oxide [326 IAC 2-2-3(a)(3)]

Pursuant to PSD/SSM 123-29490-00019 and 326 IAC 2-2-3(a)(3), the (NOX) emissions

from the following processes shall be limited as shown in the table below:

Stack ID	Process	Process ID	NOx Emission Limits (lb/ton)	NOx Emission Limits for Stacks (lb/hr)
S01	Line 1 Pouring/Mold Cooling	P01	0.01	0.89
	Line 1 Shakeout	P02		
	Line 1 Cast Cooling	P03		
	Line 1 Pick and Sort	P04		
	Line 2 Pouring/Mold Cooling	P06		
	Line 2 Shakeout	P07		
	Line 2 Cast Cooling	P08		
	Line 3 Pouring/Mold Cooling	P11		
	Line 3 Shakeout	P12		
	Line 3 Cast Cooling	P13		
	Line 4 Pouring/Mold Cooling	P16		
	Line 4 Shakeout	P17		
	Line 4 Cast Cooling	P18		
	Line 4 Pick and Sort	P19		
	Return Sand Handling/ Screening	P21		
	Sand Cooling/Water Addition	P22		
	Sand Mulling/Handling	P23		
	Spent Sand Handling/Processing	P24		
	Air Makeup Units	P52		
S04	Line 1 Pouring/Mold Cooling	P01	0.01	0.1
	Line 1 Cast Cooling	P03		

D.2.8 Operating Conditions [326 IAC 2-2-3)]

Pursuant to PSD/SSM 123-29490-00019 and 326 IAC 2-2-3(a)(3), the following limitations shall apply:

(a) the return sand handling/screening process, identified as P21, shall be limited to a maximum throughput capacity of 522 tons of sand per hour;

(b) the sand cooling/water addition process, identified as P22, shall be limited to a maximum throughput capacity of 522 tons of sand per hour;

(c) the sand mulling/handling process, identified as P23, shall be limited to a maximum throughput capacity of 522 tons of sand per hour; and

D.2.9 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan (PMP) is required for this unit and its control device. 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.2.10 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) Within one hundred and eighty (180) days, after the Phase 1 cupola (P30) achieves a melt rate greater than 80 tons per hour, the Permittee shall perform PM, opacity, lead and beryllium testing on the facilities exhausting to stacks S01, S04 and S07 using methods as approved by the Commissioner, in order to demonstrate compliance with the total stack limits listed in Conditions D.2.1, D.2.2, and D.2.3. These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligations with regard to the performance testing required by this condition. All facilities exhausting to the same stack shall be in operation during the stack test in order for the test to be considered a valid test.

(b) Within one hundred and eighty (180) days, after the Phase 1 cupola (P30) achieves a melt rate greater than 80 tons per hour, the Permittee shall perform VOC, CO, SO2 and NOx testing on the emission units exhausting to stacks S01 and S04 simultaneously using Method 25, 25A, or other methods approved by the Commissioner, in order to demonstrate compliance with the total stack limit listed in Conditions D.2.4, D.2.5, D.2.6 and D.2.7. These tests shall be repeated at least once every five (5) years from the date of the last valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligations with regard to the performance testing required by this condition. All facilities exhausting to the same stack shall be in operation during the stack test in order for the test to be considered a valid test. If the VOC emissions normally exhausted to SO4 are directed to S01 during the stack test, then only S01 is required to be tested.

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D.2.11 Particulate Matter (PM/PM-10) Control [326 IAC 2-7-6(6)]

(a) Pursuant to CP123-8451-00019 issued on February 4, 1998, the PM emissions for Lines 1-4 shall be controlled by four (4) baghouses C01, C02, C03 (Stack S01) and C07 (Stack S07) at all times when these processes are in operation.

(b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

(c) Pursuant to the Agreed Order for Case # 2005-14739-A, dated June 28, 2007, Baghouse C07 shall be equipped with duo-density bags having a minimum 18-ounce per square yard density. An alternative bag material may be used if approved by IDEM.

(d) In order to comply with Condition D.2.1(c), the baghouse(s) for PM, PM10, and

PM2. 5 control shall be in operation at all times when the Line 1 ladle cleaning operation, identified as P86A, is in operation.

(e) In order to comply with Condition D.2.1(c), the baghouse(s) for PM, PM10, and PM2. 5 control shall be in operation at all times when the Line 4 ladle cleaning operation, identified as P86B, is in operation.

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

D.2.12 Visible Emission Notations

(a) Visible emission notations of each baghouse stack exhaust shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

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

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

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

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

D.2.13 Baghouse Parametric Monitoring

Pursuant to the Agreed Order for Case # 2005-14739-A, dated June 28, 2007, instead of the pressure drop monitoring, Baghouse C07 shall be equipped with a bag leak detection system. This system shall be operated pursuant to the site-specific monitoring plan and correction action plan required under 40 CFR 63.7710(b)(4) and (5).

D.2.14 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 line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag 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.2.15 Record Keeping Requirements

(a) To document compliance with Condition D.2.12 the Permittee shall maintain records of visible emission notations of each baghouse stack exhaust once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(b) To document compliance with Condition D.2.13, the Permittee shall keep a log of the calibration test results for baghouse CO7 leak detector.

(c) To document compliance with the schedule outlined in Condition D.2.4, the Permittee shall submit an annual emission reduction report to IDEM summarizing activities undertaken to evaluate and reduce VOC emissions from these lines.

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

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:
Facilities Exhausting to Stacks S15 and S16
Phase II

(1) Line 5
- (A) One (1) pouring/mold cooling operation, identified as P60, with a maximum production capacity of 28 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C15. The gases are then exhausted to Stack S15;
- (B) One (1) shakeout operation, identified as P61, with a maximum throughout capacity of 28 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C15, that exhaust to Stack S15 or by one (1) baghouse system, identified as C16,that exhaust to Stack S16;
- (C) One (1) cast cooling operation, identified as P62, with a maximum capacity of 28 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C15. The gases are then exhausted to Stack S15.
- (D) One (1) pick and sort operation, identified as P63, with a maximum throughput capacity of 28 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C16. The gases are then exhausted to Stack S16;
- (E) One (1) cleaning and grinding operation, identified as P64, with a maximum throughput capacity of 28 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C16. The gases are then exhausted to Stack S16;

(2) Line 6
- (A) One (1) pouring/mold cooling operation, identified as P65, with a maximum production capacity of 20 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C15. The gases are then exhausted to Stack S15;
- (B) One (1) shakeout operation, identified as P66, with a maximum throughput capacity of 20 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C15, that exhaust to Stack S15 or by one (1) baghouse system, identified as C16, that exhaust to Stack S16;
- (C) One (1) cast cooling operation, identified as P67, with a maximum capacity of 20 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C15, that exhaust to Stack S15 or by one (1) baghouse system, identified as C16, that exhaust to Stack S16;
- (D) One (1) pick and sort operation, identified as P68, with a maximum throughput capacity of 20 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C16. The gases are then exhausted to Stack S16;
- (E) One (1) cleaning and grinding operation, identified as P69, with a maximum throughput capacity of 20 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C16. The gases are then exhausted to Stack S16;

(3) Line 7
- (A) One (1) pouring/mold cooling operation, identified as P70, with a maximum production capacity of 33 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C15. The gases are then exhausted to Stack S15;
- (B) One (1) shakeout operation, identified as P71, with a maximum production capacity of 34 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C15, that exhaust to Stack S15 or by one (1) baghouse system, identified as C16, that exhaust to Stack S16;
- (C) One (1) cast cooling operation, identified as P72, with a maximum production capacity of 33 tons per hour. Particulate matter emissions are controlled by one (1) baghouse

system, identified as C15, that exhaust to Stack S15 or by one (1) baghouse system, identified as C16, that exhaust to Stack S16;

(D) One (1) pick and sort operation, identified as P73, with a maximum throughput capacity of 33 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C16. The gases are then exhausted to Stack S16;

(E) One (1) cleaning and grinding operation, identified as P74, with a maximum throughput capacity of 33 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C16. The gases are then exhausted to Stack S16;

(4) Line 8

(A) One (1) pouring/mold cooling operation, identified as P75, with a maximum production capacity of 20 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C15. The gases are then exhausted to Stack S15;

(B) One (1) shakeout operation, identified as P76, with a maximum throughput capacity of 20 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C16. The gases are then exhausted to Stack S16;

(C) One (1) cast cooling operation, identified as P77, with a maximum capacity of 20 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C16. The gases are then exhausted to Stack S16;

(D) One (1) pick and sort operation, identified as P78, with a maximum throughput capacity of 20 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C16. The gases are then exhausted to Stack S16; and

(E) One (1) cleaning and grinding operation, identified as P79, with a maximum throughput capacity of 20 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C16. The gases are then exhausted to Stack S16.

Phase II

Sand Handling Operations and Ancillary Operations:

(1) One (1) return sand handling and screening operation, identified as P80, with a maximum throughput capacity of 660 tons of sand per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C15, that exhaust to Stack S15 or by one (1) baghouse system, identified as C16, that exhaust to Stack S16;

(2) One (1) sand mulling and handling operation, identified as P81, with a maximum capacity of 660 tons of sand per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C15. The gases are then exhausted to Stack S15;

(3) One (1) sand blending and cooling operation, identified as P82, with a maximum capacity of 660 tons of sand per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C15. The gases are then exhausted to Stack S15;

(4) One (1) spent sand and dust handling operation, identified as P83, with a maximum throughput capacity of 55 tons of sand per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C15. The gases are then exhausted to Stack S15;

(5) One (1) metal returns handling operation, identified as P84, with a maximum capacity of 44 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C15, that exhaust to Stack S15 or by one (1) baghouse system, identified as C16, that exhaust to Stack S16;

(6) One (1) Tumbleblast shotblast machine, identified as P55, with a maximum capacity of 20 tons of metal castings per hour, with emissions controlled by existing baghouse C15, and exhausting to stack S15.

(d) One (1) autogrinder operation, to be constructed in 2008, identified as P87, with a maximum capacity of 22.5 tons of castings per hour, with emissions controlled by existing Baghouse C16 and exhausting to stack S16.

Ductile Iron Treatment Operations

(1) Two (2) ductile iron treatment stations, both identified as P35, each with a maximum production capacity of 50 tons per hour. Particulate matter emissions are controlled by two (2) baghouse systems identified as C15 and C35. The gases from both baghouses are then exhausted to Stack S15;

Combustion Units

(1) Natural gas fired air make-up units equipped with low-NOx burners, identified as P54, with a maximum heat input rate of 80 MMBtu per hour exhausting to Stack S15.

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

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

D.3.1 PSD BACT for Particulate Matter [326 IAC 2-2-3(a)(3)]

(a) Pursuant to PSD/SSM 123-29490-00019 and 326 IAC 2-2-3(a)(3) (Prevention of Significant Deterioration (PSD) Rules), the particulate matter emissions from the following operations shall be limited as shown in the table below:

Stack ID	Process	Process ID	PM Emission Limitation (gr/dscf)	PM Emission Limitation (lbs/hr)
S15	Return Sand Handling/ Screening	P80	0.005	30.9
	Sand Mulling and Handling	P81		
	Sand Blending and Cooling	P82		
	Spent Sand and Dust Handling	P83		
	Metal Returns Handling System	P84		
	Line 5 Pouring/Mold Cooling	P60		
	Line 5 Shakeout	P61		
	Line 5 Cast Cooling	P62		
	Line 6 Pouring/Mold Cooling	P65		
	Line 6 Shakeout	P66		
	Line 6 Cast Cooling	P67		
	Line 7 Pouring/Mold Cooling	P70		
	Line 7 Shakeout	P71		
	Line 7 Cast Cooling	P72		
	Line 8 Pouring/Mold Cooling	P75		
	shotblast machine	P55		
	ductile iron treatment stations #1 and #2	P35		

Stack ID	Process	Process ID	PM Emission Limitation (gr/dscf)	PM Emission Limitation (lbs/hr)
S16	Return Sand Handling/ Screening	P80	0.005	17.2
	Line 5 Pick and Sort	P63		
	Line 5 Cleaning/ Grinding	P64		
	Line 6 Shakeout	P66		
	Line 6 Cast Cooling	P67		
	Line 6 Pick and Sort	P68		
	Line 6 Cleaning/ Grinding	P69		
	Line 7 Shakeout	P71		
	Line 7 Cast Cooling	P72		
	Line 7 Pick and Sort	P73		
	Line 7 Cleaning/ Grinding	P74		
	Line 8 Shakeout	P76		
	Line 8 Cast Cooling	P77		
	Line 8 Pick and Sort	P78		
	Line 8 Cleaning/ Grinding	P79		

(b) Pursuant to CP123-4593-00019 issued on January 19, 1996, visible emissions from any baghouse stack shall not exceed ten percent (10%) opacity.

D.3.2 PSD BACT for Lead [326 IAC 2-2-3(a)(3)] [326 IAC 2-4.1-1]

(a) Pursuant to CP-123-8451-00019, issued on February 4, 1998, Amendment 123-9740-00019, issued May 22, 1998, SSM123-12331-00019 issued on January 31, 2001, and 326 IAC 2-2-3(a)(3) and revised by PSD/SSM 123-25303-00019, the lead (Pb) emissions from the following operations shall be limited as shown in the table below:

Stack ID	Process	Process ID	Lead Emission Limitation for stack (lb/hr)
S15	Line 5 Pouring/Mold Cooling	P60	0.035
	Line 5 Shakeout	P61	
	Line 5 Cast Cooling	P62	
	Line 6 Pouring/Mold Cooling	P65	
	Line 6 Shakeout	P66	
	Line 6 Cast Cooling	P67	
	Line 7 Pouring/Mold Cooling	P70	
	Line 7 Shakeout	P71	
	Line 7 Cast Cooling	P72	
	Line 8 Pouring/Mold Cooling	P75	
	shotblast machine	P55	
	Metal Returns Handling System	P84	
	Return Sand Handling/Screening	P80	
	Sand Mulling and Handling	P81	
	Sand Blending and Cooling	P82	
	Spent Sand and Dust Handling	P83	
S16	Line 5 Shakeout	P61	0.018
	Line 5 Pick and Sort	P63	
	Line 5 Cleaning/ Grinding	P64	
	Line 6 Shakeout	P66	
	Line 6 Cast Cooling	P67	
	Line 6 Pick and Sort	P68	
	Line 6 Cleaning/ Grinding	P69	
	Line 7 Shakeout	P71	
	Line 7 Cast Cooling	P72	
	Line 7 Pick and Sort	P73	
	Line 7 Cleaning/ Grinding	P74	

Stack ID	Process	Process ID	Lead Emission Limitation for stack (lb/hr)
	Line 8 Shakeout	P76	
	Line 8 Cast Cooling	P77	
	Line 8 Pick and Sort	P78	
	Line 8 Cleaning/ Grinding	P79	
	Return Sand Handling/Screening	P80	
	Metal Returns Handling System	P84	

(b) Pursuant to PSD/SSM 123-29490-00019 and 326 IAC 2-2-3 (Prevention of Significant Deterioration (PSD)), the following limit is determined as Best Available Control Technology (BACT) for lead (Pb) for the P35-ductile iron treatment stations #1 and #2, exhausting through stack S15.

The lead emissions from the P35-ductile iron treatment stations #1 and #2 shall be controlled by a fabric filter baghouse and the lead emissions shall not exceed 1,000 ppm and 0.0047 pounds per hour.

D.3.3 PSD BACT for Beryllium [326 IAC 2-2-3(a)(3)] [326 IAC 2-4.1-1]

(a) Pursuant to CP-123-8451-00019, issued on February 4, 1998, Amendment 123-9740-00019, issued May 22, 1998, SSM123-12331-00019 issued on January 31, 2001, and 326 IAC 2-2-3(a)(3) and revised by PSD/SSM 123-25303-00019, the beryllium (Be) emissions from the processes listed below shall be limited as shown in the table below:

Stack ID	Process	Process ID	Beryllium Emission Limitation for stack (lb/hr)
S15	Line 5 Pouring/Mold Cooling	P60	0.00069
	Line 5 Shakeout	P61	
	Line 5 Cast Cooling	P62	
	Line 6 Pouring/Mold Cooling	P65	
	Line 6 Shakeout	P66	
	Line 6 Cast Cooling	P67	
	Line 7 Pouring/Mold Cooling	P70	
	Line 7 Shakeout	P71	
	Line 7 Cast Cooling	P72	
	Line 8 Pouring/Mold Cooling	P75	

Stack ID	Process	Process ID	Beryllium Emission Limitation for stack (lb/hr)
	shotblast machine	P55	
	Metal Returns Handling System	P84	
	Return Sand Handling/Screening	P80	
	Sand Mulling and Handling	P81	
	Sand Blending and Cooling	P82	
	Spent Sand and Dust Handling	P83	
S16	Line 5 Shakeout	P61	0.00036
	Line 5 Pick and Sort	P63	
	Line 5 Cleaning/ Grinding	P64	
	Line 6 Shakeout	P66	
	Line 6 Cast Cooling	P67	
	Line 6 Pick and Sort	P68	
	Line 6 Cleaning/ Grinding	P69	
	Line 7 Shakeout	P71	
	Line 7 Cast Cooling	P72	
	Line 7 Pick and Sort	P73	
	Line 7 Cleaning/ Grinding	P74	
	Line 8 Shakeout	P76	
	Line 8 Cast Cooling	P77	
	Line 8 Pick and Sort	P78	
	Line 8 Cleaning/ Grinding	P79	
	Return Sand Handling/Screening	P80	
	Metal Returns Handling System	P84	

(b) Pursuant to PSD/SSM 123-29490-00019 and 326 IAC 2-2-3 (Prevention of Significant Deterioration (PSD)), the following limit is determined as Best Available Control Technology (BACT) for beryllium (Be) for the P35-ductile iron treatment stations #1 and #2, exhausting through stack S15.

The beryllium emissions from the P35-ductile iron treatment stations #1 and #2 shall be controlled by a fabric filter baghouse and the beryllium emissions shall not exceed 20 ppm and 0.00009 pounds per hour.

D.3.4 PSD BACT for Sulfur Dioxide [326 IAC 2-2-3(a)(3)]

Pursuant to PSD/SSM 123-29490-00019 and 326 IAC 2-2-3(a)(3), the sulfur dioxide (SO_2) emissions from the following processes shall be limited as shown in the table below:

Stack ID	Process	Process ID	SO_2 Emission Limitation (lb/ton)	SO_2 Emission Limitation for stack (lb/hr)
S15	Line 5 Pouring/Mold Cooling	P60	0.02	2.02
	Line 6 Pouring/Mold Cooling	P65		
	Line 7 Pouring/Mold Cooling	P70		
	Line 8 Pouring/Mold Cooling	P75		

D.3.5 PSD BACT for Volatile Organic Compound [326 IAC 2-2-3(a)(3)] [326 IAC 8-1-6]

Pursuant to PSD/SSM 123-29490-00019, 326 IAC 2-2-3(a)(3) and 326 IAC 8-1-6 (General Reduction Requirements for New Facilities), the volatile organic compound (VOC) emissions from the following processes shall be limited as shown in the table below:

The following limit is determined as Best Available Control Technology (BACT) for volatile organic compounds (VOC) for the Pouring/Mold Cooling and Shakeout Operations for Phase 2 Lines 5 to 8 exhausting through Stacks S15 and S16.

The combined VOC emissions from the pouring/mold cooling and shakeout operation shall be controlled by mold vent off-gas ignition and shall not exceed 1.4 pounds per ton of iron poured and 141.4 lbs/hour, combined for both stacks, identified as S15 and S16.

D.3.6 PSD BACT for Carbon Monoxide [326 IAC 2-2-3(a)(3)]

Pursuant to PSD/SSM 123-29490-00019 and 326 IAC 2-2-3(a)(3), the carbon monoxide (CO) emissions from the following processes shall be limited as shown in the table below:

Stack ID	Process	Process ID	CO Emission Limitations for individual processes (lb/ton iron)	CO Emission Limitations for Stacks (lbs/hr)
S15	Line 5 Pouring/Mold Cooling	P60	5.0	546
	Line 5 Shakeout	P61	1.0	
	Line 6 Pouring/Mold Cooling	P65	5.0	
	Line 6 Shakeout	P66	1.0	
	Line 7 Pouring/Mold Cooling	P70	5.0	
	Line 7 Shakeout	P71	1.0	
	Line 8 Pouring/Mold Cooling	P75	5.0	
	P54 Natural Gas Air Make-up	P54		
	P53B Phase ll Ladle Preheating	P53B		
S16	Line 5 Shakeout	P61	1.0	60.0
	Line 6 Shakeout	P66	1.0	
	Line 7 Shakeout	P71	1.0	
	Line 8 Shakeout	P76	1.0	

D.3.7 PSD BACT for NOx [326 IAC 2-2-3(a)(3)]

(a) Pursuant to PSD/SSM 123-29490-00019, and 326 IAC 2-2-3(a)(3), the (NO_X) emissions from the following processes shall be limited as shown in the table below:

Stack ID	Process	Process ID	NOx Emission Limitations for individual processes (lb/ton iron)	NOx Emission Limitations for Stacks (lbs/hr)
S15	Line 5 Pouring/Mold Cooling	P60	0.01	1.01
	Line 6 Pouring/Mold Cooling	P65		
	Line 7 Pouring/Mold Cooling	P70		
	Line 8 Pouring/Mold Cooling	P75		
	P54 Natural Gas Air Make-up	P54		
	P53B Phase ll Ladle Preheating	P53B		

(b) Pursuant to CP-123-8451-00019, issued on February 4, 1998, and 326 IAC 2-2-3(a)(3), the natural gas fired air makeup units, identified as P54, shall be equipped with low-NOx burners and shall be limited to a maximum heat input rate of 80 MMBtu per hour.

D.3.8 Operating Requirements [326 IAC 2-2-3(a)(3)]

(a) Pursuant to PSD/SSM 123-29490-00019 and 326 IAC 2-2-3(a)(3), the maximum production rate of both ductile iron treatment stations identified as P35 shall not exceed a combined total of 100 tons of iron per hour, based on a 24 hour average.

(b) Pursuant to PSD/SSM 123-29490-00019 and 326 IAC 2-2-3(a)(3), the sand handling operations shall comply with the following limitations:

(1) the return sand handling/screening process, identified as P80, shall be limited to a maximum throughput capacity of 660 tons of sand per hour;

(2) the sand mulling/handling process, identified as P81, shall be limited to a maximum throughput capacity of 660 tons of sand per hour.

(3) the sand blending and cooling process, identified as P82, shall be limited to a maximum throughput capacity of 660 tons of sand per hour; and

(4) the spent sand and dust handling system, identified as P83, shall be limited to a maximum throughput capacity of 55 tons of sand per hour.

(c) Pursuant to CP-123-8451-00019, issued on February 4 1998 and 326 IAC 2-2-3(a)(3), the metal returns handling system, identified as P84, shall be limited to a maximum capacity of 44 tons per hour.

D.3.9 PSD Minor Limit [326 IAC 2-2]

The PM and PM10 emissions from the autogrinder process exhausting to stack S16 shall not exceed 1.0 pounds per hour.

Compliance with these limits will limit the potential PM and PM10 emissions from the sand handling operations and the autogrinder to less than 25 and 15 tons per year and render the requirements of 326 IAC 2-2 not applicable to the sand handling operations and the autogrinder constructed in 2008.

D.3.10 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the autogrinder operation identified as P87 shall not exceed 33.0 pounds per hour when operating at a process weight rate of 22.5 tons per hour. This limit was calculated using the following equations:

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

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

D.3.11 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan (PMP) is required for this unit and its control device. 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.3.12 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) Within one hundred and eighty (180) days, after the Phase 2 cupola (P33) achieves a melt rate greater than 80 tons per hour, the Permittee shall perform, lead, and beryllium testing on the processes exhausting to stacks S15 and S16 using methods as approved by the Commissioner, in order to demonstrate compliance with the total stack limits specified in conditions D.3.2(a), and D.3.3(a). These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligations with regard to the performance testing required by this condition.

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(b) Within one hundred and eighty (180) days, after the Phase 2 cupola (P33) achieves a melt rate greater than 80 tons per hour, the Permittee shall perform, lead, and beryllium testing on the processes exhausting to stack S15 using methods as approved by the Commissioner, in order to demonstrate compliance with the total stack limits specified in Conditions D.3.2(b), and D.3.3(b). These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligations with regard to the performance testing required by this condition.

(c) Within one hundred and eighty (180) days, after the Phase 2 cupola (P33) achieves a melt rate greater than 80 tons per hour, the Permittee shall perform PM and opacity, testing on the processes exhausting to stacks S15 and S16 using methods as approved by the Commissioner, in order to demonstrate compliance with the total stack limits specified in Condition D.3.1. These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligations with regard to the performance testing required by this condition.

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(d) Within one hundred and eighty (180) days, after the Phase 2 cupola (P33) achieves a melt rate greater than 80 tons per hour, the Permittee shall perform SO2, VOC, CO and NOx, testing on the processes exhausting to stacks S15 and S16 using methods as approved by the Commissioner, in order to demonstrate compliance with the total stack limits specified in Conditions D.3.4, D.3.5, D.3.6 and D.3.7. These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligations with regard to the performance testing required by this condition.

D.3.13 Particulate Matter (PM/PM-10) [326 IAC 2-7-6(6)]

(a) Pursuant to CP-123-8451-00019, issued on February 4, 1998, and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD) Rules), the PM, lead, and beryllium emissions shall be controlled by baghouses C15 (Stack S15), and C16 (Stack S16) at all times when the associated processes are in operation.

(b) In order to comply with Conditions D.3.9 and D.3.10, the Baghouse C16 for particulate control shall be in operation and control emissions from the autogrinder identified as P87 at all times the autogrinder is in operation.

(c) 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.

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

D.3.14 Visible Emission Notations [40 CFR 64]

(a) Visible emission notations of each baghouse stack exhaust shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

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

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

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

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

D.3.15 Baghouse Parametric Monitoring [40 CFR 64]

(a) The Permittee shall record the pressure drop across the baghouse C15 used in conjunction with the processes listed in this section, at least once per day when the associated process is in operation. When for any one reading, the pressure drop across a baghouse is outside the normal range of 1.0 and 10.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable responsesteps in accordance with Section C- Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

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

(b) The baghouse C16 shall be equipped with a bag leak detection system. This system shall be operated pursuant to site-specific monitoring plan and corrective action plan required under 40 CFR 63.7710(b)(4) and (5).

D.3.16 Broken or Failed Bag Detection [40 CFR 64]

(a) For a single compartment baghouse controlling emissions from a process

operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

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

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.3.17 Record Keeping Requirement

(a) To document compliance with Conditions D.3.14 the Permittee shall maintain records of visible emission notations of each baghouse stack exhaust once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(b) To document compliance with Conditions D.3.15(a) the Permittee shall maintain records of the pressure drop across the baghouse C15 once per day. 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) Pursuant to CP123-8451-00019 issued on February 4, 1998, and to document compliance with Conditions D.3.7(b) the Permittee shall maintain records of the equipment installed and the type of fuel used in the air makeup units.

(d) In order to document compliance with D.3.8, records shall be kept of the total iron throughput to each ductile iron treatment station each day of operation, and of the total hours of operation of each ductile iron treatment station each day of operation.

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

SECTION D.4 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Facilities Exhausting to Stacks S08, S11, and S14

Phase I

(a) sand handling operations and ancillary operations, each constructed in 1996, consisting of the following:

(1) One (1) core sand handling operation, identified as P40, with a maximum throughput of 16 tons per hour, using one (1) baghouse (C08) for particulate control, exhausting to stack S08;

(2) One (1) core manufacturing operation, identified as P41, with a maximum throughput of 16 tons per hour, exhausting to stack S11;

(3) One (1) core machine & oven operation, identified as P51, with a maximum heat input capacity of 16.8 MMBtu per hour, combusting natural gas, exhausting to stack S11;

(4) One (1) pattern shop, identified as P50, controlled by a baghouse, exhausting inside the building.

Phase II

(b) sand handling operations and ancillary operations, each constructed in 1998, consisting of the following:

(1) One (1) phenolic-urethane core sand handling system, identified as P42, constructed in 1998 and modified in 2008, with a maximum production capacity of 32 tons of cores per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C08, that exhausts to Stack S08;

(2) One (1) phenolic-urethane core making process, identified as P43, consisting of 6 mixers and 6 core machines, with a total maximum production capacity of 20 tons of cores per hour. DMIPA emissions are controlled by one (1) packed bed scrubber, identified as C14. The gases are then exhausted to Stack S14;

(3) One (1) phenolic-urethane core making process, identified as P44, consisting of 2 mixers and 2 core machines, each with a maximum capacity of 3 tons per hour. DMIPA emissions are controlled by one (1) packed bed scrubber, identified as C14. The gases are then exhausted to Stack S14;

Core Room Expansion II

(a) one (1) phenolic-urethane core machine, identified as P45A, to be constructed in 2008, with a maximum capacity of 6 tons per hour, with emissions controlled by existing scrubber C14 and exhausting through stack S14; and

(b) one (1) phenolic-urethane core machine, identified as P45B, to be constructed in 2008, with a maximum capacity of 6 tons per hour, with emissions controlled by existing scrubber C17 and exhausting through stack S17.

(c) two (2) natural gas-fired core dry oven, to be constructed in 2008, identified as P48A and P48B, with a maximum capacity of 2.5 MMBtu/hr each, with emissions exhausting in to the building.

(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 Particulate Matter Emissions Limitations [326 IAC 2-2-3(a)(3)]

(a) Pursuant to CP-123-4593-00019, issued on January 19, 1996, CP-123-8451-00019, issued on February 4, 1998, and 326 IAC 2-2-3(a)(3) (Prevention of Significant Deterioration (PSD) Rules), the particulate matter emissions from the following operations shall be limited to the following:

Stack ID	Process	Process ID	PM Emission Limitations for individual processes (gr/dscf) unless otherwise specified	PM Emission Limitations for Stacks (lb/hr) and (tons/yr)
S08	Core Sand Handling	P40	0.005	0.6 lb/hr
S08	Phenolic-Urethane Core Sand Handling System	P42	0.005	
S11	Core Machines & Ovens	P51	0.23 lb/hr and 1.0 ton/yr	0.23 lb/hr and 1.0 tons/yr

(b) Pursuant to CP123-4593-00019 issued on January 19, 1996, visible emissions from any baghouse stack shall not exceed ten percent (10%) opacity.

D.4.2 VOC BACT Limits [326 IAC 2-2-3(a)(3)] [326 IAC 8-1-6]

Pursuant to CP-123-4593-00019, issued on January 19, 1996, CP-123-8451-00019, issued on February 4, 1998, SSM 123-12948-00019, issued on June 5, 2001, SSM 123-16456, issued on May 13, 2003, and SSM 123-26878-00019, issued in 2008, 326 IAC 8-1-6 (BACT), and 326 IAC 2-2-3(a)(3) (Prevention of Significant Deterioration (PSD) Rules), the Permittee shall comply with the following requirements:

(a) The VOC emissions from the core machines and ovens identified as P51 shall not exceed 0.10 pounds per hour and 0.43 tons per year.

(b) The VOC emissions from the core manufacturing process identified as P41 shall not exceed 4.6 pounds per hour and 20.2 tons per year.

(c) The volatile organic compound (VOC) emissions, not including dimethylisopropylamine (DMIPA), from both of the phenolic-urethane core machines, identified as P44, shall not exceed 1.836 pounds per hour (total for both machines combined) and 0.010 pounds per pound of binder used.

(d) The volatile organic compound (VOC) emissions from both of the mixers, identified as P44, shall not exceed 0.324 pounds per hour (total for both mixers combined) and 0.002 pounds per pound of binder used.

(e) The amount of binder used in both mixers, identified as P44, combined shall not exceed 390 tons per 12 consecutive month period with compliance determined at the end of each month.

(f) The amount of cores produced by both core machines, identified as P44, combined shall not exceed 26,000 tons per 12 consecutive month period with compliance determined at the end of each month.

(g) The total VOC emissions (including DMIPA) from the mixers and core machines identified as P43 shall not exceed 0.4 pound per ton of cores.

(h) The scrubber controlling the DMIPA emissions from the core machines identified as P43**,** P44, P45A, and P45B shall maintain a 100% capture of the DMIPA emissions, using a permanent total enclosure that complies with the requirements of 40 CFR Part 51, Appendix M, Method 24. The scrubber shall achieve at least 98% overall control efficiency of the DMIPA.

(i) The DMIPA emissions from the scrubber controlling the core machines identified as P43 and P44 shall not exceed 0.04 pound per ton of cores and 1.04 pounds per hour. Compliance with limit is also necessary to render the requirements of 326 IAC 2-4.1-1 (New Source Toxics Control) not applicable.

(j) The DMIPA emissions from the scrubber controlling the core machines identified as P45A and P45B shall not exceed 0.04 pound per ton of cores and 0.24 pounds per hour.

(k) The Permittee shall only use dimethylisopropylamine (DMIPA) as a catalyst for the core machines identified as P43, P44, P45A, and P45B.

D.4.3 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the sand handling operation identified as P42 shall not exceed 40.5 pounds per hour when operating at a process weight rate of 32 tons per hour. This limit was calculated using the following equations:

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:

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

D.4.4 PSD BACT for SO_2 [326 IAC 2-2-3(a)(3)]

Pursuant to CP-123-4593-00019, issued on January 19, 1996, CP-123-8451-00019, issued on February 4, 1998, and 326 IAC 2-2-3(a)(3) (Prevention of Significant Deterioration (PSD) Rules), the SO_2 emissions from the core machines and ovens identified as P51 and exhausting to stack S11 shall not exceed 0.01 pound per hour and 0.044 tons per year.

D.4.5 PSD BACT for NOx [326 IAC 2-2-3(a)(3)]

Pursuant to CP-123-4593-00019, issued on January 19, 1996, CP-123-8451-00019, issued on February 4, 1998, and 326 IAC 2-2-3(a)(3) (Prevention of Significant Deterioration (PSD) Rules), the NOx emissions from the core machines and ovens identified as P51 and exhausting to stack S11 shall not exceed 2.35 pounds per hour and 10.3 tons per year.

D.4.6 PSD BACT for CO [326 IAC 2-2-3(a)(3)]

Pursuant to CP-123-4593-00019, issued on January 19, 1996, CP-123-8451-00019, issued on February 4, 1998, and 326 IAC 2-2-3(a)(3) (Prevention of Significant Deterioration (PSD) Rules), the CO emissions from the core machines and ovens

identified as P51 and exhausting to stack S11 shall not exceed 0.59 pound per hour and 2.58 tons per year.

D.4.7 Operating Requirements [326 IAC 2-2-3(a)(3)]

(a) Pursuant to CP123-4593-00019 issued on January 19, 1996 and 326 IAC 2-2-3(a)(3), the core ovens shall use only natural gas as a fuel source.

(b) Pursuant to SSM 123-12948-00019, issued on June 5, 2001, and SSM 123-16456, issued on May 13, 2003, the combined maximum capacity of the core machines identified as P44 shall not exceed 6 tons of cores per hour, based on a 24 hour average.

(c) Pursuant to SSM 123-12948-00019, issued on June 5, 2001, and SSM 123-16456, issued on May 13, 2003, the combined maximum capacity of the core machines identified as P43 shall not exceed 20 tons of cores per hour, based on a 24 hour average.

D.4.8 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan (PMP) is required for this unit and its control device. 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.4.9 Control of Hazardous Air Pollutants (HAPs) [326 IAC 2-2-3(a)(3)] [326 IAC 2-7-6(6)]

(a) Pursuant to SSM 123-12948-00019, issued on June 5, 2001, SSM 123-16456-00019, issued on May 13, 2003, CP123-4593-00019 issued on January 19, 1996 and 326 IAC 2-2-3(a)(3), the DMIPA emissions from the core machines identified as P43 and P44 shall be controlled by a scrubber C14 (Stack S14) at all times that any of the core machines is in operation.

(b) Pursuant to SSM 123-12948-00019, issued on June 5, 2001, SSM 123-16456-00019, issued on May 13, 2003, CP123-4593-00019 issued on January 19, 1996 and 326 IAC 2-2-3(a)(3), the PM emissions from the core sand handling operations identified as P40 and P42 shall be controlled by a baghouse (C08) at all times that the core sand handling operations are in operation.

(c) The PM emissions from the pattern shop identified as P50 shall be controlled by the baghouse at all times that the pattern shop is in operation.

(d) 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.4.10 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) In order to determine compliance with Condition D.4.2(h) and (i), the Permittee shall perform DMIPA testing by December 2014 on the scrubber controlling the core machines identified as P43 and P44 utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. 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 obligations with regard to the performance testing required by this condition.

(b) Within one hundred and eighty (180) days after the startup of the core machines, identified as P45A and P45B, in order to determine compliance with Condition D.4.2(j), the Permittee shall perform DMIPA testing on the core machines, utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of this valid compliance determination. 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 obligations 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.4.11 Packed Bed Scrubber Parametric Monitoring

(a) The Permittee shall monitor and record the pH of the scrubber solution and the pressure drop across the scrubber, identified as C14 at least once per day. When for any one reading, the pressure drop across the scrubber is outside the normal range of 0.5 to 5 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. When for any one reading, the pH level of the scrubbing liquid exceeds the normal maximum of 4.5 or a maximum established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

(b) The Permittee shall monitor the flow rate of the scrubbing liquid daily. When for any one reading, the flow rate is below the normal minimum of 235 gallons per minute or a minimum established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

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

D.4.12 Packed Bed Scrubber Failure Detection

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

D.4.13 Visible Emission Notations

(a) Visible emission notations of each baghouse stack exhaust shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

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

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

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

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

D.4.14 Baghouse Parametric Monitoring

The Permittee shall record the pressure drop across each of the baghouses used in conjunction with the processes listed in this section, at least once per day when the associated process is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 and 10.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

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

D.4.15 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 line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag 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.4.16 Record keeping Requirement

(a) To document compliance with Condition D.4.2(e), the Permittee shall maintain records of the binder usage in the two core mixers associated with the core making process identified as P44 each month.

(b) To document compliance with Condition D.4.2(f), the Permittee shall maintain records of the core production from the two core machines associated with the core making process identified as P44 each month.

(c) To document compliance with Condition D.4.11(a), the Permittee shall maintain records of the pressure drop and pH readings of the scrubber once per day. The Permittee shall include in its daily record when a reading is not taken and the reason for the lack of reading (e.g. the process did not operate that day).

(d) To document compliance with Condition D.4.11(b), the Permittee shall maintain records of the flow rate of the scrubber. The Permittee shall include in its daily record when a reading is not taken and the reason for the lack of reading (e.g. the process did not operate that day).

(e) To document compliance with Conditions D.4.13 the Permittee shall maintain records of visible emission notations of each baghouse stack exhaust once per day. 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).

(f) To document compliance with Conditions D.4.14 the Permittee shall maintain records of the pressure drop across each baghouse once per day. 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).

(g) In order to document compliance with D.4.7(b) and (c), records shall be kept of the core production of P43 and P44 each day of operation, and of the total hours of operation of P43 and P44 each day of operation.

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

D.4.17 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.4.2 (e) and (f) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The reports submitted by the Permittee do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

SECTION D.5 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Phase I

(c) Sand handling operations and ancillary operations, each constructed in 1996, consisting of the following:

(10) One (1) ladle preheating operation, identified as P53, with a maximum heat input capacity of 11.5 MMBtu per hour, combusting natural gas, exhausting to stack S12;
(2) One (1) charge and make-up operation, identified as P32, with a maximum throughput of 80 tons per hour, using one (1) baghouse (C44) for particulate control, exhausting to stack S44;
(11) One (1) ladle filling & iron transport operation, identified as P85, with a maximum throughput of 100 tons per hour, using one (1) baghouse (C44) for particulate control, exhausting to stack S44; and
(12) One (1) ladle filling & iron transport operation, identified as P85, with a maximum throughput of 100 tons per hour;
(13) One (1) Phase 1 Melt Area Ladle Cleaning, identified as P86, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using one (1) baghouse (C44) as control, and exhausting to stack S44;
(15) One (1) Line 2 ladle cleaning operation, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using no control, and exhausting inside the building;
(16) One (1) Line 3 ladle cleaning operation, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using no control, and exhausting inside the building;
(18) One (1) 16 ton iron bath desulfurization ladle operation, constructed in 2010, identified as P34, with a maximum throughput of 100 tons per hour, using one (1) baghouse (C44) for particulate matter control and exhausting through stack S44.

Phase II

(c) Sand handling operations and ancillary operations, each constructed in 1998, modified in 2010, consisting of the following:

(6) One (1) enclosed cupola charge make-up and handling unit with a maximum charge of 114.0 tons per hour;
(7) One (1) ladle filling and iron transport operation with a maximum capacity of 188 tons of iron per hour;
(8) One (1) Phase 2 Melt Area Ladle Cleaning, identified as P86, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using one (1) baghouse (C44) as control, and exhausting to stack S44;
(9) One (1) Line 5 ladle cleaning operation, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using no control, and exhausting inside the building;
(10) One (1) Line 6 ladle cleaning operation, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using no control, and exhausting inside the building;
(11) One (1) Line 7 ladle cleaning operation, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using no control, and exhausting inside the building;
(12) One (1) Line 8 ladle cleaning operation, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using no control, and exhausting

inside the building;

(13) One (1) Phase 2 Ductile Iron Treatment Ladle Cleaning, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, with approximately 25% of emissions controlled by Baghouse C15, and exhausting to stack S15, and with approximately 75% emissions uncontrolled, and exhausting inside the building;

Note: The ductile treatment operation includes locations where treatment occurs and iron is transferred. Fumes in the treatment area are captured by Baghouse C15 but those in the metal transfer area are not captured.

(18) Raw material handling including iron handling at a maximum rate of 188 tons per hour, alloys handling at a maximum rate of 1.5 tons per hour, coke handling at a maximum rate of 15 tons per hour, and limestone handling at a maximum rate of 4.5 tons per hour; and

(4) One (1) ladle preheating operation, identified as P53B, with a maximum heat input capacity of 11.5 MMBtu per hour, combusting natural gas, exhausting to stack S13.

(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 BACT for Particulate Matter [326 IAC 2-2-3(a)(3)] [326 IAC 6-3-2]

Pursuant to CP-123-4593-00019, issued on January 19, 1996, PSD/SSM 123-29490-00019 and 326 IAC 2-2-3(a)(3) (Prevention of Significant Deterioration (PSD) Rules), the following conditions shall apply:

(a) the particulate matter emissions from the baghouse C44 controlling the charge makeup operations, the molten iron handling operations, and the ladle cleaning operations shall not exceed 0.005 gr/dscf and 6.86 pounds per hour;

(b) the particulate matter emissions from the ladle preheating operation identified as P53 shall not exceed 0.16 pound per hour;

(c) visible emissions from any baghouse stack shall not exceed ten percent (10%) opacity;

(d) visible emissions from any building opening shall not exceed three percent (3%) opacity.

(e) the PM emissions from the desulfurization operation identified as P34 shall not exceed 0.64 pounds per hour.

D.5.2 PSD BACT for Lead [326 IAC 2-2-3(a)(3)] [326 IAC 2-4.1-1]

(a) Pursuant to CP-123-8451-00019 issued on February 4, 1998, and 326 IAC 2-2-3(a)(3), the lead (Pb) emissions from the charge makeup operations, the molten iron handling operations, and the ladle cleaning operations shall not exceed 0.00004 pound per hour.

(b) Pursuant to PSD/SSM 123-29490-00019 and 326 IAC 2-2-3 (Prevention of Significant Deterioration (PSD)), the following limit is determined as Best Available Control Technology (BACT) for lead (Pb) for the P34-Desulfurization exhausting through stack S44.

The lead emissions from the P34-Desulfurization shall be controlled by a fabric filter baghouse and the lead emissions shall not exceed 1,000

ppm and 0.00064 pounds per hour.

D.5.3 PSD BACT for Beryllium [326 IAC 2-2-3(a)(3)] [326 IAC 2-4.1-1]

(a) Pursuant to CP-123-4593-00019, issued on January 19, 1996, CP-123-8451-00019, issued on February 4, 1998, and 326 IAC 2-2-3(a)(3) (Prevention of Significant Deterioration (PSD) Rules), the beryllium emissions from the charge makeup operation P32 shall not exceed 0.0000026 pounds per hour.

(b) Pursuant to PSD/SSM 123-29490-00019 and 326 IAC 2-2-3 (Prevention of Significant Deterioration (PSD)), the following limit is determined as Best Available Control Technology (BACT) for beryllium (Be) for the P34-Desulfurization, exhausting through stack S44.

The beryllium emissions from the P34-Desulfurization shall be controlled by a fabric filter baghouse and the beryllium emissions shall not exceed 20 ppm and 0.00001 pounds per hour.

D.5.4 PSD BACT for VOC [326 IAC 2-2-3(a)(3)] [326 IAC 8-1-6]

Pursuant to CP-123-4593-00019, issued on January 19, 1996, CP-123-8451-00019, issued on February 4, 1998, 326 IAC 8-1-6 (BACT), and 326 IAC 2-2-3(a)(3) (Prevention of Significant Deterioration (PSD) Rules), the VOC emissions from the ladle preheating station P53 shall not exceed 0.06621 pound per hour.

D.5.5 CO Emissions [326 IAC 2-2-3(a)(3)]

Pursuant to CP-123-4593-00019, issued on January 19, 1996, CP-123-8451-00019, issued on February 4, 1998, and 326 IAC 2-2-3(a)(3) (Prevention of Significant Deterioration (PSD) Rules), the CO emissions from the ladle preheating station P53 shall not exceed 0.40 pounds per hour.

D.5.6 PSD BACT for NOx [326 IAC 2-2-3(a)(3)]

Pursuant to CP-123-4593-00019, issued on January 19, 1996 and 326 IAC 2-2-3(a)(3) (Prevention of Significant Deterioration (PSD) Rules), the NOx emissions from the ladle preheating station P53 shall not exceed 1.61 pounds per hour.

D.5.7 PSD BACT for SO_2 [326 IAC 2-2-3(a)(3)]

Pursuant to CP-123-4593-00019, issued on January 19, 1996 and 326 IAC 2-2-3(a)(3) (Prevention of Significant Deterioration (PSD) Rules), the SO2 emissions from the ladle preheating station P53 shall not exceed 0.00685 pounds per hour.

D.5.8 Operating Conditions [326 IAC 2-2-3(a)(3)]

Pursuant to CP-123-8451-00019, issued on February 4, 1998 and 326 IAC 2-2-3(a)(3) (Prevention of Significant Deterioration (PSD) Rules), the following limitations shall apply to the Phase II operations:

(a) the ladle filling and iron transport station shall be limited to a maximum capacity of 150 tons of iron per hour;

(b) the ladle cleaning station shall be limited to a maximum usage of 13.2 burn bars per hour;

(c) the raw material handling operations shall be limited to a maximum rate of 150 tons per hour for the iron handling, a maximum rate of 1.5 tons per hour for the alloys handling, a maximum rate of 15 tons per hour for the coke handling, and a maximum rate of 4.5 tons per hour for the limestone handling; and

(d) the enclosed cupola charge make-up and handling unit shall be limited to a maximum charge of 91.2 tons per hour.

D.5.9 Prevention of Significant Deterioration (PSD) Minor Limits [326 IAC 2-2]

Pursuant to PSD/Significant Source Modification No. 123-29490-00019, the Permittee shall comply with the following:

(a) PM10 emissions from the P34 - Desulfurization Ladle shall not exceed 0.64 pounds per hour.

Compliance with these limits will ensure that the PM10 emissions from the proposed modification (P34 - Desulfurization Ladle) and the PM10 emissions from the Actual To Projected Actual emission increase for existing units are less than 15 tons per twelve (12) consecutive month period and render the requirements of 326 IAC 2-2 (PSD) not applicable to this modification for PM10.

D.5.10 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan (PMP) is required for this unit and its control device. 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.5.11 Particulate Matter (PM/PM-10) [326 IAC 2-7-6(6)]

(a) Pursuant to CP-123-8451-00019, issued on February 4, 1998, and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD) Rules), the PM, lead, and beryllium emissions from the charge make-up operation, identified as P32 shall be controlled by baghouse C44 at all times when the 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.5.12 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(e), D.5.2(b), D.5.3(b) and

D.5.9(a), within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after initial startup, the Permittee shall conduct PM, PM10, lead and beryllium stack testing on P34 exhuasting to stack S44 utilizing methods as approved by the commissioner. This test shall be repeated at least once every five 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 obligations with regard to the performance testing required by this condition**.**

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

D.5.13 Visible Emission Notations

(a) Visible emission notations of the baghouse C44 stack exhaust shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

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

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

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

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

D.5.14 Baghouse Parametric Monitoring

The Permittee shall record the pressure drop across the baghouse C44 used in conjunction with the charge makeup operation, at least once per day when the process is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 and 10.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

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

D.5.15 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 line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag 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.5.16 Record keeping Requirement

(a) To document compliance with Conditions D.5.13 the Permittee shall maintain records of visible emission notations of the baghouse stack exhaust once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(b) To document compliance with Conditions D.5.14 the Permittee shall maintain records of the pressure drop across each baghouse once per day. 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) Section C - General Record Keeping Requirements, contains the Permittee's obligation with regard to the records required by this condition.

SECTION D.6 EMISSIONS UNIT OPERATION CONDITIONS

Emission Unit Description:

Core Room Expansion I

(a) One (1) phenolic-urethane core sand handling system, identified as P46, constructed in 2005 and modified in 2008, with a maximum production capacity of 51 tons of cores per hour. Particulate matter emissions are controlled by one (1) baghouse, identified as C18, and exhausting inside the building;

(b) One (1) phenolic-urethane core making process, identified as P47, to begin construction in 2005, consisting of 3 mixers and 3 core machines, each with a maximum capacity of 15 tons per hour. DMIPA catalyst emissions are controlled by one (1) packed bed scrubber, identified as C17. The gases are then exhausted to Stack S17;

(c) Three (3) natural gas-fired core drying ovens and natural gas-fired air make-up units, identified as P48, to begin construction in 2005, with the core drying ovens having a combined maximum heat input capacity of 9.0 MMBtu per hour and the air make-up units having a combined maximum heat input capacity of 3.2 MMBtu per hour, exhausting inside the building.

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

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

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

The PM and PM10 emissions from the core sand handling process and the core drying ovens shall be limited to less than 5.7 lbs/hr and 3.4 lbs/hr, respectively.

Compliance with these limits will limit the PM and PM10 emissions from the core sand handling and the core drying ovens to less than 25 and 15 tons per year, respectively and render the requirements of 326 IAC 2-2 (PSD) not applicable to these emission units.

D.6.2 VOC Emission Limitations [326 IAC 8-1-6][326 IAC 2-2]

Pursuant to 326 IAC 8-1-6 (New Facilities, General Reduction Requirements) the Best Available Control Technology (BACT) for the phenolic-urethane core making process, identified as P47, is as follows:

(a) A packed bed scrubber system with a minimum DMIPA (a VOC) overall control efficiency of 98% shall be used to control DMIPA (a VOC) emissions from the three (3) core machines.

(b) The non-DMIPA volatile organic compound (VOC) emissions from the three (3) phenolic-urethane core machines, identified as P47, shall not exceed 0.01 pound per pound of binder used.

(c) The non-DMIPA volatile organic compound (VOC) emissions from the three (3) mixers, identified as P47, shall not exceed 0.002 pound per pound of binder used.

(d) The amount of binder used in all three (3) mixers, identified as P47, combined shall not exceed 5,910,000 pounds per 12 consecutive month period, with

compliance determined at the end of each month.

(e) The amount of cores produced by all three (3) core machines, identified as P47, combined shall not exceed 197,000 tons per 12 consecutive month period, with compliance determined at the end of each month.

(f) The total DMIPA (a VOC) emissions from the mixers and core machines identified as P47 shall not exceed 0.04 pound per ton of cores.

(g) The scrubber controlling the DMIPA emissions from the core machines identified as P47 shall have a 100% capture of the DMIPA emissions. The scrubber shall achieve at least 98% overall control efficiency of the DMIPA.

(h) The Permittee shall use only low VOC content resins in the core making process.

Compliance with the above limits will also limit emissions of VOC to less than the PSD significant level of 40 tons per year so that the installation of units P46, P47, and P48 is not subject to 326 IAC 2-2 (PSD).

D.6.3 Particulate Emission Limitations for 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 core sand handling system (P46) shall not exceed 44.8 pounds per hour when operating at a process weight rate of 51 tons per hour. The pounds per hour limitation was calculated using the following equation:

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

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

D.6.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan (PMP) is required for the core sand handling process and the phenolic-urethane core making process and its control device. Section B - Preventive Maintenance Plan contains the Permittee's obligations with regard to the preventive maintenance plan required by this condition.

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

D.6.5 Particulate Control [326 IAC 2-7-6(6)]

(a) In order to comply with conditions D.6.1 and D.6.3, the baghouse C18 for particulate control shall be in operation and control emissions from the core sand handling system (P46) at all times that the core sand handling system (P46) 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.6.6 VOC Control

In order to comply with condition D.6.2, the packed bed scrubber C17 for DMIPA emissions control shall be in operation at control DMIPA emissions from the core machines identified as P47 at all times that any of the core machines is in operation.

D.6.7 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

In order to determine compliance with Condition D.6.2(g), the Permittee shall perform DMIPA testing by November 2014 on the scrubber controlling the core machines identified as P47 utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligations 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.6.8 Packed Bed Scrubber Parametric Monitoring

(a) The Permittee shall monitor and record the pH of the scrubber solution and the pressure drop across the scrubber, identified as C17 at least once per day. When for any one reading, the pressure drop across the scrubber is outside the normal range of 0.5 to 5 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. When for any one reading, the pH level of the scrubbing liquid exceeds the normal maximum of 4.5 or a maximum established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

(b) The Permittee shall monitor the flow rate of the scrubbing liquid daily. When for any one reading, the flow rate is below the normal minimum of 254 gallons per minute or a minimum established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

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

D.6.9 Packed Bed Scrubber Failure Detection

(a) For a scrubber 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 scrubber controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the

event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

D.6.10 Parametric Monitoring

The Permittee shall record the pressure drop across the baghouse used in conjunction with the core sand handling system (P46), at least once per day when the process is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 and 10.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

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

D.6.11 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 line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag 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.6.12 Record Keeping Requirements

(a) To document compliance with Condition D.6.2(d), the Permittee shall maintain records of the binder usage in the three core mixers associated with the core making process identified as P47 each month.

(b) To document compliance with Condition D.6.2(e), the Permittee shall maintain records of the core production from the three core machines associated with the core making process identified as P47 each month.

(c) To document compliance with Condition D.6.8(a), the Permittee shall maintain records of the pressure drop and pH readings of the scrubber once per day. The Permittee shall include in its daily record when a reading is not taken and the reason for the lack of reading (e.g. the process did not operate that day).

(d) To document compliance with Condition D.6.8(b), the Permittee shall maintain records of the flow rate of the scrubber. The Permittee shall include in its daily record when a reading is not taken and the reason for the lack of reading (e.g. the process did not operate that day).

(e) To document compliance with Condition D.6.10, the Permittee shall maintain records of the pressure drop across the baghouse once per day. 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) Section C - General Record Keeping Requirements, contains the Permittee's obligation with regard to the records required by this condition.

D.6.13 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.6.2(d) and D.6.2(e) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

SECTION D.7 EMISSIONS UNIT OPERATION CONDITIONS

Emission Unit Description

(a) Two (2) paint booths, one identified as P26A constructed in 2007 and modified in 2008, and one identified as P26B, approved for construction in 2008, used to coat metal castings for rust protection, using spray guns with a combined maximum capacity of sixteen (16) gallons per hour, using overspray filters for PM control, exhausting to stacks S26A and S26B, respectively

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

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

D.7.1 PSD Minor Limit (PSD) [326 IAC 2-2] Volatile Organic Compound (VOC) [326 IAC 8-1-6]

(a) The VOC emissions from the paint booths P26A and P26B shall not exceed 1.4 pounds of VOC per gallon of paint used.

(b) The paint input to booths P26A and P26B shall not exceed 25,000 gallons of paint per twelve (12) consecutive month period.

Compliance with the above limits in addition to the limits in Condition D.4.2 (h) and (j) shall limit the VOC emissions for this modification to less than 40 tons per year and render the requirements of 326 IAC 2-2 not applicable. Compliance with this limit will also render the requirements of 326 IAC 8-1-6 not applicable to the paint booths.

D.7.2 Volatile Organic Compound (VOC) [326 IAC 8-2-9]

(a) Pursuant to 326 IAC 8-2-9, the Permittee shall not allow the discharge into the atmosphere VOC in excess of three (3.5) pounds of VOC per gallon of coating, excluding water, as delivered to the applicator.

(b) Pursuant to 326 IAC 8-2-9(f), all solvents sprayed from the application equipment of paint booth P26 during cleanup or color changes shall be directed into containers. Said containers shall be closed as soon as the solvent spraying is complete. In addition, all waste solvent shall be disposed of in such a manner that minimizes evaporation.

D.7.3 Particulate [326 IAC 6-3-2(d)]

Pursuant to 326 IAC 6-3-2(d), particulate from paint booths P26A and P26B shall be controlled by a dry particulate filter, and the Permittee shall operate the control device in accordance with manufacturer's specifications.

Compliance Determination Requirements

D.7.4 Volatile Organic Compounds

Compliance with the VOC limitations contained in Condition D.1.7 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the "as supplied" and "as applied" VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

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

D.7.5 Particulate Monitoring

(a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters. To monitor the performance of the dry filters, weekly observations shall be made of the overspray from the surface coating booth stacks S26A and S26B while the booth is operation. If a condition exists which should result in a response step, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

(b) Monthly inspections shall be performed of the coating emissions from the stack and the presence of overspray on the rooftops and nearby ground. When there is a noticeable change in overspray emissions, or when evidence of overspray emissions is observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursion or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

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

D.7.6 Record Keeping Requirements

(a) To document compliance with Conditions 7.1 and 7.2, the Permittee shall maintain records of the VOC content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.

(b) To document compliance with Condition 7.1, the Permittee shall maintain a record of the amount of paint used per twelve consecutive month period.

(c) To document compliance with Condition D.7.2 and D.7.5, the Permittee shall maintain a log of weekly overspray observations, daily and monthly.

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

D.7.7 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.7.1(b) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

SECTION D.8 EMISSIONS UNIT OPERATION CONDITIONS

Emission Unit Description: Insignificant Activities

Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6.[326 IAC 8-3-2] [326 IAC 8-3-5].

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

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

D.8.1 Volatile Organic Compounds (VOC)

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), for cold cleaning operations constructed after January 1, 1980, the Permittee shall:

(a) Equip the cleaner with a cover;

(b) Equip the cleaner with a facility for draining cleaned parts;

(c) Close the degreaser cover whenever parts are not being handled in the cleaner;

(d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;

(e) Provide a permanent, conspicuous label summarizing the operation requirements;

(f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

D.8.2 Volatile Organic Compounds (VOC)

(a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), for cold cleaner degreaser operations without remote solvent reservoirs constructed after July 1, 1990, the Permittee shall ensure that the following control equipment requirements are met:

(1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:

(A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius ($38^{O}C$) (one hundred degrees Fahrenheit ($100^{O}F$));

(B) The solvent is agitated; or

(C) The solvent is heated.

(2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius ($38^{O}C$) (one hundred degrees Fahrenheit ($100^{O}F$)), then the drainage facility must be

internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

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

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

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

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

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

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

(b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), for a cold cleaning facility construction of which commenced after July 1, 1990, the Permittee shall ensure that the following operating requirements are met:

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

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

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

SECTION D.9 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: [326 IAC 2-7-5(14)

(a) Two (2) autogrinder machines, to be constructed in 2012, identified as P87A, with a maximum capacity of 1.02 tons of castings per hour, each, with emissions voluntarily controlled by Baghouse C87A and exhausting into the building [326 IAC 6-3-2].

(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.9.1 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2, the allowable particulate matter (PM) from the two (2) autogrinder machines identified as P87A shall not exceed 4.2 pounds per hour, each, when operating at a process weight rate of 1.02 tons per hour, each. This limit was calculated using the following equations:

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.9.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

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

SECTION E.1 EMISSIONS UNIT OPERATION CONDITIONS

Emission Unit Description:

Under the Iron and Steel Foundry NESHAP (40 CFR 63, Subpart EEEEE), the following emission units are considered as part of an existing affected source.

Phase 1

(a) One (1) gray iron cupola, identified as P30, constructed in 1996, with a maximum melt rate of 100 tons per hour, using one (1) baghouse (C09A) for particulate control, one (1) incinerator (C11A) for carbon monoxide control and VOC emissions control, and one (1) dry alkaline injection system (C12A) for sulfur dioxide control, exhausting to stack S09;

(b) Four (4) production lines, each constructed in 1996, consisting of the following:

(1) Line 1 (modified in 1998 and approved for modification in 2007)

(A) One (1) pouring/mold cooling operation, identified as P01, with a maximum throughput of 38 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stacks S01 and S04;
(B) One (1) shakeout operation, identified as P02, with a maximum throughput of 38 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;
(C) One (1) cast cooling operation, identified as P03, with a maximum throughput of 27 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stacks S01 and S04;
(D) One (1) pick & sort operation, identified as P04, with a maximum throughput of 38 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;
(E) One (1) cleaning & grinding operation, identified as P05, with a maximum throughput of 27 tons per hour, using a mechanical blaster, using one (1) baghouse (C07) for particulate control, exhausting to stack S07;

(2) Line 2

(A) One (1) pouring/mold cooling operation, identified as P06, with a maximum throughput of 17 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;
(B) One (1) shakeout operation, identified as P07, with a maximum throughput of 17 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;
(C) One (1) cast cooling operation, identified as P08, with a maximum throughput of 17 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;
(D) One (1) pick & sort operation, identified as P09, with a maximum throughput of 17 tons per hour, using one (1) baghouse (C07) for particulate control, exhausting to stack S07;
(E) One (1) cleaning & grinding operation, identified as P10, with a maximum throughput of 17 tons per hour, using a mechanical blaster, using one (1) baghouse (C07) for particulate control, exhausting to stack S07;

(3) Line 3
- (A) One (1) pouring/mold cooling operation, identified as P11, with a maximum throughput of 17 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;
- (B) One (1) shakeout operation, identified as P12, with a maximum throughput of 17 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;
- (C) One (1) cast cooling operation, identified as P13, with a maximum throughput of 17 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;
- (D) One (1) pick & sort operation, identified as P14, with a maximum throughput of 17 tons per hour, using one (1) baghouse (C07) for particulate control, exhausting to stack S07;
- (E) One (1) cleaning & grinding operation, identified as P15, with a maximum throughput of 17 tons per hour, using a mechanical blaster, using one (1) baghouse (C07) for particulate control, exhausting to stack S07;

(4) Line 4
- (A) One (1) pouring/mold cooling operation, identified as P16, with a maximum throughput of 27 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;
- (B) One (1) shakeout operation, identified as P17, with a maximum throughput of 27 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;
- (C) One (1) cast cooling operation, identified as P18, with a maximum throughput of 27 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;
- (D) One (1) pick & sort operation, identified as P19, with a maximum throughput of 27 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;
- (E) One (1) cleaning & grinding operation, identified as P20, with a maximum throughput of 27 tons per hour, using a mechanical blaster, using one (1) baghouse (C07) for particulate control, exhausting to stack S07;

(c) Sand handling operations and ancillary operations, each constructed in 1996, consisting of the following:
- (1) One (1) return sand handling & screen operation, identified as P21, with a maximum throughput of 522 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;
- (2) One (1) sand cooling & water addition operation, identified as P22, with a maximum throughput of 522 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;
- (3) One (1) sand mulling & handling operation, identified as P23, with a maximum throughput of 522 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;
- (4) One (1) spent sand handling & processing operation, identified as P24, with a maximum throughput of 54 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;
- (5) Air make-up units, identified as P52, with a maximum combined heat input capacity of 65.6 million British thermal units (MMBtu) per hour, combusting natural gas, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;

(6) One (1) metallic returns handling operation, identified as P25, with a maximum throughput of 33 tons per hour, using one(1) baghouse (C07) for particulate control, exhausting to stack S07;

(7) One (1) core sand handling operation, identified as P40, with a maximum throughput of

16 tons per hour, using one (1) baghouse (C08) for particulate control, exhausting to stack S08;

(8) One (1) core manufacturing operation, identified as P41, with a maximum throughput of 16 tons per hour, exhausting to stack S11;

(9) One (1) core machine & oven operation, identified as P51, with a maximum heat input capacity of 16.8 MMBtu per hour, combusting natural gas, exhausting to stack S11;

(10) One (1) ladle preheating operation, identified as P53, with a maximum heat input capacity of 11.5 MMBtu per hour, combusting natural gas, exhausting to stack S12;

(11) One (1) ladle filling & iron transport operation, identified as P85, with a maximum throughput of 80 tons per hour, using one (1) baghouse (C44) for particulate control, exhausting to stack S44;

(12) One (1) ladle filling & iron transport operation, identified as P85, with a maximum throughput of 100 tons per hour;

(13) One (1) Phase 1 Melt Area Ladle Cleaning, identified as P86, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using one (1) baghouse (C44) as control, and exhausting to stack S44;

(14) One (1) Line 1 ladle cleaning operation, identified as P86A, approved for modification in 2013, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using Baghouses C01, C02, and C03 as control, and exhausting to stack S01;

(15) One (1) Line 2 ladle cleaning operation, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using no control, and exhausting inside the building;

(16) One (1) Line 3 ladle cleaning operation, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using no control, and exhausting inside the building;

(17) One (1) Line 4 ladle cleaning operation, identified as P86B, approved for modification in 2013, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using Baghouses C01, C02, and C03 as control, and exhausting to stack S01;

(18) One (1) 16 ton iron bath desulfurization ladle operation, constructed in 2010, identified as P34, with a maximum throughput of 100 tons per hour, using one (1) baghouse (C44) for particulate matter control and exhausting through stack S44.

Phase II

(a) One (1) cupola iron melting system, identified as P33, constructed in 1998, with a maximum melt rate of 100 tons of iron per hour. VOC and CO emissions are controlled by one (1) recuperative incinerator, identified as C11B. Sulfur dioxide emissions are controlled by one (1) lime injection system (or equivalent), identified as C12B Particulate matter emissions are controlled by one (1) baghouse system, identified as C09B. The gases are then exhausted to stack S09;

(b) Four (4) production lines, each constructed in 1998, consisting of the following:

(1) Line 5

(A) One (1) pouring/mold cooling operation, identified as P60, with a maximum production capacity of 28 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C15. The gases are then exhausted to Stack S15;

(B) One (1) shakeout operation, identified as P61, with a maximum throughout capacity of 28 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C15, that exhaust to Stack S15 or by one (1) baghouse system, identified as C16, that exhaust to Stack S16;

(C) One (1) cast cooling operation, identified as P62, with a maximum capacity of 28 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C15. The gases are then exhausted to Stack S15.

(D) One (1) pick and sort operation, identified as P63, with a maximum throughput capacity of 28 tons per hour. Particulate matter emissions are controlled by one

(1) baghouse system, identified as C16. The gases are then exhausted to Stack S16;

(E) One (1) cleaning and grinding operation, identified as P64, with a maximum throughput capacity of 28 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C16. The gases are then exhausted to Stack S16;

(2) Line 6

(A) One (1) pouring/mold cooling operation, identified as P65, with a maximum production capacity of 20 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C15. The gases are then exhausted to Stack S15;

(B) One (1) shakeout operation, identified as P66, with a maximum throughput capacity of 20 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C15, that exhaust to Stack S15 or by one (1) baghouse system, identified as C16, that exhaust to Stack S16;

(C) One (1) cast cooling operation, identified as P67, with a maximum capacity of 20 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C15, that exhaust to Stack S15 or by one (1) baghouse system, identified as C16, that exhaust to Stack S16;

(D) One (1) pick and sort operation, identified as P68, with a maximum throughput capacity of 20 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C16. The gases are then exhausted to Stack S16;

(E) One (1) cleaning and grinding operation, identified as P69, with a maximum throughput capacity of 20 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C16. The gases are then exhausted to Stack S16;

(3) Line 7

(A) One (1) pouring/mold cooling operation, identified as P70, with a maximum production capacity of 33 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C15. The gases are then exhausted to Stack S15;

(B) One (1) shakeout operation, identified as P71, with a maximum production capacity of 33 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C15, that exhaust to Stack S15 or by one (1) baghouse system, identified as C16, that exhaust to Stack S16;

(C) One (1)cast cooling operation, identified as P72, with a maximum production capacity of 33 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C15, that exhaust to Stack S15 or by one (1) baghouse system, identified as C16, that exhaust to Stack S16;

(D) One (1) pick and sort operation, identified as P73, with a maximum throughput capacity of 33 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C16. The gases are then exhausted to Stack S16;

(E) One (1) cleaning and grinding operation, identified as P74, with a maximum throughput capacity of 33 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C16. The gases are then exhausted to Stack S16;

(4) Line 8

(A) One (1) pouring/mold cooling operation, identified as P75, with a maximum production capacity of 20 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C15. The gases are then exhausted to Stack S15;

(B) One (1) shakeout operation, identified as P76, with a maximum throughput capacity of 20 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system,

identified as C16. The gases are then exhausted to Stack S16;

(C) One (1) cast cooling operation, identified as P77, with a maximum capacity of 20 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C16. The gases are then exhausted to Stack S16;

(D) One (1) pick and sort operation, identified as P78, with a maximum throughput capacity of 20 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C16. The gases are then exhausted to Stack S16; and

(E) One (1) cleaning and grinding operation, identified as P79, with a maximum throughput capacity of 20 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C16. The gases are then exhausted to Stack S16.

(c) Sand handling operations and ancillary operations, each constructed in 1998, modified in 2010 consisting of the following:

(1) One (1) return sand handling and screening operation, identified as P80, with a maximum throughput capacity of 660 tons of sand per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C15, that exhaust to Stack S15 or by one (1) baghouse system, identified as C16, that exhaust to Stack S16;

(2) One (1) sand mulling and handling operation, identified as P81, with a maximum capacity of 660 tons of sand per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C15. The gases are then exhausted to Stack S15;

(3) One (1) sand blending and cooling operation, identified as P82, with a maximum capacity of 660 tons of sand per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C15. The gases are then exhausted to Stack S15;

(4) One (1) spent sand and dust handling operation, identified as P83, with a maximum throughput capacity of 55 tons of sand per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C15. The gases are then exhausted to Stack S15;

(5) One (1) metal returns handling operation, identified as P84, with a maximum capacity of 50 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C15, that exhaust to Stack S15 or by one (1) baghouse system, identified as C16, that exhaust to Stack S16;

(6) One (1) enclosed cupola charge make-up and handling unit with a maximum charge of 114 tons per hour;

(7) One (1) ladle filling and iron transport operation with a maximum capacity of 188 tons of iron per hour;

(8) One (1) Phase 2 Melt Area Ladle Cleaning, identified as P86, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using one (1) baghouse (C44) as control, and exhausting to stack S44;

(9) One (1) Line 5 ladle cleaning operation, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using no control, and exhausting inside the building;

(10) One (1) Line 6 ladle cleaning operation, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using no control, and exhausting inside the building;

(11) One (1) Line 7 ladle cleaning operation, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using no control, and exhausting inside the building;

(12) One (1) Line 8 ladle cleaning operation, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using no control, and exhausting inside the building;

(13) One (1) Phase 2 Ductile Iron Treatment Ladle Cleaning, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, with approximately 25% of emissions controlled by Baghouse C15, and exhausting to stack S15, and with approximately 75% emissions uncontrolled, and exhausting inside the building;
Note: The ductile treatment operation includes locations where treatment occurs and

iron is transferred. Fumes in the treatment area are captured by Baghouse C15 but those in the metal transfer area are not captured.

(14) Two (2) ductile iron treatment stations, both identified as P35, each with a maximum production capacity of 50 tons per hour. Particulate matter emissions are controlled by two (2) baghouse systems identified as C15 and C35. The gases from both baghouses are then exhausted to Stack S15;

(15) One (1) phenolic-urethane core sand handling system, identified as P42, constructed in 1998 and modified in 2008, with a maximum production capacity of 32 tons of cores per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C08, that exhausts to Stack S08;

(16) One (1) phenolic-urethane core making process, identified as P43, with a maximum production capacity of 20 tons of cores per hour. Volatile organic compound emissions are controlled by one (1) packed bed scrubber (or equivalent), identified as C14. The gases are then exhausted to Stack S14;

(17) One (1) phenolic-urethane core making process, identified as P44, consisting of 2 mixers and 2 core machines, each with a maximum capacity of 3 tons per hour. DMIPA emissions are controlled by one (1) packed bed scrubber, identified as C14. The gases are then exhausted to Stack S14;

(18) Raw material handling including iron handling at a maximum rate of 150 tons per hour, alloys handling at a maximum rate of 1.5 tons per hour, coke handling at a maximum rate of 15 tons per hour, and limestone handling at a maximum rate of 4.5 tons per hour;

(19) Natural gas fired air make-up units equipped with low-NOx burners, identified as P54, with a maximum heat input rate of 80 MMBtu per hour exhausting to Stack S15.

(20) One (1) pattern shop, identified as P50, controlled by a baghouse, exhausting to stack S08.

Core Room Expansion

(a) One (1) phenolic-urethane core sand handling system, identified as P46, constructed in 2005 and modified in 2008, with a maximum production capacity of 51 tons of cores per hour. Particulate matter emissions are controlled by one (1) baghouse, identified as C18, exhausting inside the building;

(b) One (1) phenolic-urethane core making process, identified as P47, to begin construction in 2005, consisting of 3 mixers and 3 core machines, each with a maximum capacity of 15 tons per hour. DMIPA catalyst emissions are controlled by one (1) packed bed m scrubber, identified as C17. The gases are then exhausted to Stack S17.

National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements [326 IAC 2-7-5(1)]

E.1.1 General Provisions Relating to NESHAP Subpart EEEEE (National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries [326 IAC 20-1] [40 CFR Part 63, Subpart A]

(a) Pursuant to 40 CFR 63.3901, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1 as specified in Table 2 of 40 CFR Part 63, Subpart EEEEE in accordance with schedule in 40 CFR 63 Subpart EEEEE.

(b) Pursuant to 40 CFR 63.10, the Permittee shall submit all required notifications and reports to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue
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

E.1.2 NESHAP Subpart EEEEE Requirements [40 CFR 63, Subpart EEEEE]

Pursuant to 40 CFR 63, Subpart EEEEE, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart EEEEE, beginning April 23, 2007, as follows:

(1) 40 CFR 63.7680
(2) 40 CFR 63.7681
(3) 40 CFR 63.7682 (a)-(c)
(4) 40 CFR 63.7683 (a) (b) and (f)
(5) 40 CFR 63.7690 (a)(2), (a)(8), (b)(1), (b)(3) (5), (7)
(6) 40 CFR 63.7700 (a)-(c), (d)
(7) 40 CFR 63.7710 (a)-(b) (1), (b)(2)(3)-(6)
(8) 40 CFR 63.7720 (a)-(c)
(9) 40 CFR 63.7730 (a)-(b)
(10) 40 CFR 63.7731 (a)-(b)
(11) 40 CFR 63.7732 (a); (b)(1), (b)(3) (2), (c) (1),(2),(3),(d),(e)
(12) 40 CFR 63.7732 (f) and (h)
(13) 40 CFR 63.7733 (a), (f)
(14) 40 CFR 63.7734 (a),(2),(5), (7), (8), (b)(1)
(15) 40 CFR 63.7735 (a),(b)
(16) 40 CFR 63.7736 (a), (b), (c) and (d)
(17) 40 CFR 63.7740 (a), (b) and (e)
(18) 40 CFR 63.7741 (a), (b), (d) and (f)
(19) 40 CFR 63.7742 (a)-(c)
(20) 40 CFR 63.7743(a)(2),(5), (7), (8), (12), (b), (c) and (e)
(21) 40 CFR 63.7744 (a) and (b)
(22) 40 CFR 63.7745 (a) and (b)
(23) 40 CFR 63.7746 (a) and (b)
(24) 40 CFR 63.7747 (a)-(d)
(25) 40 CFR 63.7750 (a),(b),(d), and (e)
(26) 40 CFR 63.7751 (a)-(d)
(27) 40 CFR 63.7752 (a)-(c)
(28) 40 CFR 63.7753 (a)-(c)
(29) 40 CFR 63.7760
(30) 40 CFR 63.7761
(31) 40 CFR 63.7765
(32) Appendix - Table 1 to Subpart EEEEE of Part 63

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
PART 70 OPERATING PERMIT
CERTIFICATION

Source Name: Waupaca Foundry, Inc Plant 5
Source Address: 9856 State Highway 66, Tell City, Indiana 47586
Part 70 Permit No.: T123-27047-00019

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 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: Waupaca Foundry, Inc Plant 5
Source Address: 9856 State Highway 66, Tell City, Indiana 47586
Part 70 Permit No.: T123-27047-00019

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), no later than four (**4**) daytime 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 no later than 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: _____

A certification is not required for this report.

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

Part 70 Quarterly Report

Source Name: Waupaca Foundry, Inc. Plant 5
Source Address: 9856 State Highway 66, Tell City, IN 47586
Part 70 Permit No.: T123-9234-00019
Facility: core mixers identified as P44
Parameter: binder usage
Limit: 390 tons of binder per 12 consecutive month period

YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	Binder Usage This Month (tons)	Binder Usage Previous 11 Months (tons)	Binder Usage 12 Month Total (tons)
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.

Deviation has been reported on:

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

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

Part 70 Quarterly Report

Source Name: Waupaca Foundry, Inc. Plant 5
Source Address: 9856 State Highway 66, Tell City, IN 47586
Part 70 Permit No.: T123-9234-00019
Facility: two core machines, identified as P44
Parameter: core production
Limit: 26,000 tons of cores per 12 consecutive month period

YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	Cores Produced This Month (tons)	Cores Produced Previous 11 Months (tons)	12 Month Total Cores Produced (tons)
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.

Deviation has been reported on:

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

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

Part 70 Quarterly Report

Source Name: Waupaca Foundry, Inc. Plant 5
Source Address: 9856 State Highway 66, Tell City, IN 47586
Part 70 Permit No.: T123-9234-00019
Facility: Three (3) core sand mixers identified as P47
Parameter: binder usage
Limit: The amount of binder used in all three (3) mixers, identified as P47, combined shall not exceed 5,910,000 pounds per 12 consecutive month period, with compliance determined at the end of each month.

YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	Binder Usage This Month (pounds)	Binder Usage Previous 11 Months (pounds)	12 Month Total Binder Usage (pounds)
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

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

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

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

Part 70 Quarterly Report

Source Name: Waupaca Foundry, Inc. Plant 5
Source Address: 9856 State Highway 66, Tell City, IN 47586
Part 70 Permit No.: T123-9234-00019
Facility: Three (3) core machines identified as P47
Parameter: core production
Limit: The amount of cores produced by all three (3) core machines, identified as P47, combined shall not exceed 197,000 tons per 12 consecutive month period, with compliance determined at the end of each month.

YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	Cores Produced This Month (tons)	Cores Produced Previous 11 Months (tons)	12 Month Total Cores Produced (tons)
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

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

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

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

Part 70 Quarterly Report

Source Name: Waupaca Foundry, Inc. Plant 5
Source Address: 9856 State Highway 66, Tell City, IN 47586
Part 70 Permit No.: T123-9234-00019
Facility: Paint Booths identified as P26A and P26B
Parameter: VOC emissions
Limit: The total paint input from Paint Booths P26A and P26B shall not exceed 25,000 gallons per consecutive 12 month period with compliance determined at the end of each month.

YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	Paint Input This Month (gallons)	Paint Input Previous 11 Months (gallons)	12 Month Total of Paint Input (gallons)
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

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

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

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION
PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: Waupaca Foundry, Inc Plant 5
Source Address: 9856 State Highway 66, Tell City, Indiana 47586
Part 70 Permit No.: T123-27047-00019

Months: _____ to _ Year: _____

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

□ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

□ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

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

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

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: _____

Waupaca Foundry, Inc.
Plant 5
Fugitive Dust Control Plan
January 2008

Facility map layout

Waupaca Foundry, Inc. Plant 5
Fugitive Dust Control Plan
January 2008
Page 1 of 2

Introduction
The following serves as the Fugitive Dust Control Plan for Waupaca Foundry, Inc. Plant 5, as required by permit conditions and 326 IAC 6-5-1. The plan identifies areas or activities at Plant 5 that have the potential to create fugitive dust. The plan contents include those specified in 326 IAC 6-5-5.

Source Location
Waupaca Foundry, Inc., Plant 5
9856 State Road 66
Tell City, IN 47586

Operator
Waupaca Foundry, Inc., Plant 5
9856 State Road 66
Tell City, IN 47586

Potential Sources/Areas of Fugitive Dust
West side paved drive
Charge yard area paved drive
Phase I pelletizer building area
Phase II pelletizer building area
Phase I returns conveyor
Phase II returns conveyor
General paved areas
Brown field areas
Phase I commodities handling
Phase II commodities handling
Commodity piles
Laydown areas

Control Plan
Attachment A contains the written plan for each identified area. Attachment B contains the map showing the location of each of the areas or processes identified. The plan contains a description of the source, the number of vehicles or quantity of material handled, equipment used, control measures presently used, control measures proposed and the implementation schedule for any proposed control measures.

Fugitive Dust Control Plan
January 2008
Page 2 of 2

Performance Assessment
The performance of each control measure will be evaluated on a bi-monthly basis. The evaluations will be done as part of the housekeeping audit program. The audit results are discussed semi-annual at the Management Review Meeting with department heads. Modifications or adjustments to the Dust Control Plan will be made as necessary, based upon the findings of the performance assessment.

Records
All records or documents generated, as part of the Dust Control Program will be kept for a minimum of 3 years. The Environmental Department will maintain the records.

Statement of Commitment
Waupaca Foundry, Inc Plant 5 is committed to preventing the release of fugitive dust to the environment and agrees to provide the necessary resources, manpower and equipment to ensure the implementation and completeness of the above-mentioned Fugitive Dust Control Plan.

_____ _____
Philip J. Brickey, Date
Plant Manager
Waupaca Foundry, Inc., Plant 5

Waupaca Foundry, Inc. Plant 5
Fugitive Dust Control Plan

Source	West Side Paved Drive	Paved Areas Around Charge Yard
Source Description	This is a paved drive on the west side of the facility. The drive hosts waste hauling trucks and some traffic going to and from the shipping docks.	This is the paved surface between the building and the charge yard as well the apron approach to the Phase I and Phase II charge yards.
Map Identification	Area 1	Area 2
Quantity of Material or Volume of Traffic	25 trucks per day	50 trucks per day
Equipment Used to Maintain	Sweeper	Sweeper
Present Control	Sweeping schedule	Sweeping schedule
Proposed Control	Continue as noted	N/A
Control Frequency	Sweeping of paved areas will be done a weekly and as needed basis.	Sweeping will be done a weekly and as needed basis.
Implementation Schedule	The paved area is currently in the sweeping schedule.	The area is currently in the sweeping schedule.

Waupaca Foundry, Inc. Plant 5
Fugitive Dust Control Plan

Source	Phase I Pelletizer Building	Phase II Pelletizer Building
Source Description	The pelletizer building houses dust conditioning operations. The dust from the phase I production areas and cupola baghouses is transported to the annex for water conditioning with paddle mixers. During periods of excess system sand purging from the sand system there are weather conditions that cause system sand dust to migrate out the immediate door openings.	The pelletizer building houses dust conditioning operations. The dust from the phase II production area baghouses is transported to the annex for water conditioning with a paddle mixer. During periods of excess system sand purging from the sand system there are weather conditions that cause system sand dust to migrate out the immediate door openings.
Map Identification	Area 3	Area 4
Quantity of Material or Volume of Traffic	150 tons per day	100 tons per day
Equipment Used to Maintain	Sweeper	Sweeper
Present Control	Water spray for dust control on wheels Sweep adjacent to building. Follow procedure for the pelletizer operations	Water spray for dust control on wheels Sweep adjacent to building Follow procedure for the pelletizer operations.
Proposed Control	Dust suppression application for system sand.	Dust suppression application for system sand.
Control Frequency	Sweeping schedule is once a week and as needed	Sweeping schedule is once a week and as needed
Implementation Schedule	Dust suppression system installation to be completed by year-end.	Dust suppression system installation to be completed by year-end.

Waupaca Foundry, Inc. Plant 5
Fugitive Dust Control Plan

Source	Phase I returns conveyor	Phase II returns conveyor
Source Description	Returns include gating and risers from the casting operation. The returns are reused in the melt operation and are transported back to the charge yard from the plant. The returns tend to have residual sand adhering to the iron and have the potential to create dust when the returns fall to the ground. The sand also creates the potential for dust in the charging operation and for traffic in the area.	Returns include gating and risers from the casting operation. The returns are reused in the melt operation and are transported back to the charge yard from the plant. The returns tend to have residual sand adhering to the iron and have the potential to create dust when the returns fall to the ground. The sand also creates the potential for dust in the charging operation and for traffic in the area.
Map Identification	Area 5	Area 6
Quantity of Material or Volume of Traffic	300 - 400 tons per day	300 - 400 tons per day
Equipment Used to Maintain	Baghouse, Sweeper	Baghouse, Sweeper
Present Control	Baghouse, Sweeper	Baghouse, Sweeper
Proposed Control	Continuous cleaning drum to mechanically remove excess sand before the gating leaves the plant**.** Baghouse connection to Stack 10, Sweeping and cleaning of spillage between melt and building	Continuous cleaning drum to mechanically remove excess sand before the gating leaves the plant**.** Baghouse connection to Stack 10, Sweeping and cleaning of spillage between melt and building
Control frequency	Dust collection is on-line continuous Sweeping schedule is once a week and as needed	Dust collection is on-line continuous Sweeping schedule is once a week and as needed
Implementation Schedule	Complete	Complete

Waupaca Foundry, Inc. Plant 5
Fugitive Dust Control Plan

Source	General Paved Areas	Brown Space
Source Description	Existing paved roads around the facility.	There are certain areas around the property that are bare soil. These areas do not maintain any traffic or other activities. There is a potential for dust during dry and windy periods.
Map Identification	Area 7	Area 8A – Area by truck scales Area 8B – Area by natural gas incoming
Quantity of Material or Volume of Traffic	100 trucks per day	Not Applicable
Equipment Used to Maintain	Sweeper	Not Applicable
Present Control	Sweeper service	Vegetated
Proposed Control	This appears to be effective.	Maintain a lawn or other vegetation
Control Frequency	Sweep weekly or as needed.	Permanent.
Implementation Schedule	Complete and on-going	Complete

Waupaca Foundry, Inc. Plant 5
Fugitive Dust Control Plan

Source	Phase I Commodities	Phase II Commodities
Source Description	Bulk commodities used in the cupola melting operation include coke, limestone, silicon carbide, and other alloys. The commodities are delivered to a pit area via rail or truck where they are unloaded to a bin feed system which conveys the material to its respective holding bin adjacent to the charge yard. From the holding bins it is fed into the charge bucket situated in a tunnel below through a series of vibratory conveyors.	Bulk commodities used in the cupola melting operation include coke, limestone, silicon carbide, and other alloys. The commodities are delivered to a pit area via rail or truck where they are unloaded to a bin feed system which conveys the material to its respective holding bin adjacent to the charge yard. From the holding bins it is fed into the charge bucket situated in a tunnel below through a series of vibratory conveyors.
Map Identification	Area 9	Area 10
Quantity of Material or Volume of Traffic	200 -300 tons per day	200 -300 tons per day
Equipment Used to Maintain	None	None
Present Control	None	None
Proposed Control	Further evaluation and testing for need, control options will be reviewed. Performance of the system sand dust suppression application will be measured for feasibility for this project also.	Further evaluation and testing for need, control options will be reviewed. Performance of the system sand dust suppression application will be measured for feasibility for this project also.

Waupaca Foundry, Inc. Plant 5
Fugitive Dust Control Plan

Source	Excess Commodity Piles	
Source Description	The excess commodity piles are located to the east of the charge yard. The piles consist of coke, limestone, coke fines and other alloys that are used as back up or for start-up of either the Phase I or II cupola.	
Map Identification	Area 11	
Quantity of Material or Volume of Traffic	60 tons per pile	
Equipment Used to Maintain	Front end loader	
Present Control	Sweeping and housekeeping activities	
Control Frequency	Sweep weekly or as needed.	Permanent.
Implementation Schedule	Complete and on-going	Complete

Waupaca Foundry, Inc. Plant 5
Fugitive Dust Control Plan

Source	Laydown yards
Source Description	The laydown yards are areas located on the facility that are paved. They receive minimal traffic from forktrucks and some heavy trucks staging trailers.
Map Identification	Area 12A – located on west side Area 12B – located on north end
Quantity of Material or Volume of Traffic	20 trucks per day
Equipment Used to Maintain	Sweeper
Present Control	Sweep as necessary
Proposed Control	N/A
Control Frequency	Sweep as necessary
Implementation Schedule	N/A

Attachment A
to a Part 70 Operating Permit Renewal

40 CFR 63, Subpart EEEEE—National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries

Source Name:	Waupaca Foundry, Inc. Plant 5
Source Location:	9856 State Highway 66, Tell City, Indiana 47586
County:	Perry
SIC Code:	3321
Part 70 Operating Permit Renewal:	123-27047-00019
Permit Reviewer:	Josiah Balogun

Source: 69 FR 21923, Apr. 22, 2004, unless otherwise noted.

What this Subpart Covers

§ 63.7680 What is the purpose of this subpart?

This subpart establishes national emission standards for hazardous air pollutants (NESHAP) for iron and steel foundries. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emissions limitations, work practice standards, and operation and maintenance requirements in this subpart.

§ 63.7681 Am I subject to this subpart?

You are subject to this subpart if you own or operate an iron and steel foundry that is (or is part of) a major source of hazardous air pollutant (HAP) emissions. Your iron and steel foundry is a major source of HAP for purposes of this subpart if it emits or has the potential to emit any single HAP at a rate of 10 tons or more per year or any combination of HAP at a rate of 25 tons or more per year or if it is located at a facility that emits or has the potential to emit any single HAP at a rate of 10 tons or more per year or any combination of HAP at a rate of 25 tons or more per year as defined in §63.2.

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7218, February 7, 2008]

§ 63.7682 What parts of my foundry does this subpart cover?

(a) The affected source is each new or existing iron and steel foundry.

(b) This subpart covers emissions from metal melting furnaces, scrap preheaters, pouring areas, pouring stations, automated conveyor and pallet cooling lines, automated shakeout lines, and mold and core making lines. This subpart also covers fugitive emissions from foundry operations.

(c) An affected source is existing if you commenced construction or reconstruction of the affected source before December 23, 2002.

(d) An affected source is new if you commenced construction or reconstruction of the affected source on or after December 23, 2002. An affected source is reconstructed if it meets the definition of "reconstruction" in §63.2.

§ 63.7683 When do I have to comply with this subpart?

(a) Except as specified in paragraph (b) of this section, if you have an existing affected source, you must comply with each emissions limitation, work practice standard, and operation and maintenance requirement in this subpart that applies to you no later than April 23, 2007. Major source status for existing affected sources must be determined no later than April 23, 2007.

(b) If you have an existing affected source, you must comply with the work practice standards in §63.7700(b) or (c), as applicable, no later than April 22, 2005.

(c) If you have a new affected source for which the initial startup date is on or before April 22, 2004, you must comply with each emissions limitation, work practice standard, and operation and maintenance requirement in this subpart that applies to you by April 22, 2004.

(d) If you have a new affected source for which the initial startup date is after April 22, 2004, you must comply with each emissions limitation, work practice standard, and operation and maintenance requirement in this subpart that applies to you upon initial startup.

(e) If your iron and steel foundry is an area source that becomes a major source of HAP, you must meet the requirements of §63.6(c)(5).

(f) You must meet the notification and schedule requirements in §63.7750. Note that several of these notifications must be submitted before the compliance date for your affected source.

Emissions Limitations

§ 63.7690 What emissions limitations must I meet?

(a) You must meet the emissions limits or standards in paragraphs (a)(1) through (11) of this section that apply to you. When alternative emissions limitations are provided for a given emissions source, you are not restricted in the selection of which applicable alternative emissions limitation is used to demonstrate compliance.

(1) For each electric arc metal melting furnace, electric induction metal melting furnace, or scrap preheater at an existing iron and steel foundry, you must not discharge emissions through a conveyance to the atmosphere that exceed either the limit for particulate matter (PM) in paragraph (a)(1)(i) of this section or, alternatively the limit for total metal HAP in paragraph (a)(1)(ii) of this section:

(i) 0.005 grains of PM per dry standard cubic foot (gr/dscf), or

(ii) 0.0004 gr/dscf of total metal HAP.

(2) For each cupola metal melting furnace at an existing iron and steel foundry, you must not discharge emissions through a conveyance to the atmosphere that exceed either the limit for PM in paragraph (a)(2)(i) or (ii) of this section or, alternatively the limit for total metal HAP in paragraph (a)(2)(iii) or (iv) of this section:

(i) 0.006 gr/dscf of PM; or

(ii) 0.10 pound of PM per ton (lb/ton) of metal charged, or

(iii) 0.0005 gr/dscf of total metal HAP; or

(iv) 0.008 pound of total metal HAP per ton (lb/ton) of metal charged.

(3) For each cupola metal melting furnace or electric arc metal melting furnace at a new iron and steel foundry, you must not discharge emissions through a conveyance to the atmosphere that exceed either the limit for PM in paragraph (a)(3)(i) of this section or, alternatively the limit for total metal HAP in paragraph (a)(3)(ii) of this section:

(i) 0.002 gr/dscf of PM, or

(ii) 0.0002 gr/dscf of total metal HAP.

(4) For each electric induction metal melting furnace or scrap preheater at a new iron and steel foundry, you must not discharge emissions through a conveyance to the atmosphere that exceed either the limit for PM in paragraph (a)(4)(i) of this section or, alternatively the limit for total metal HAP in paragraph (a)(4)(ii) of this section:

(i) 0.001 gr/dscf of PM, or

(ii) 0.00008 gr/dscf of total metal HAP.

(5) For each pouring station at an existing iron and steel foundry, you must not discharge emissions through a conveyance to the atmosphere that exceed either the limit for PM in paragraph (a)(5)(i) of this section or, alternatively the limit for total metal HAP in paragraph (a)(5)(ii) of this section:

(i) 0.010 gr/dscf of PM, or

(ii) 0.0008 gr/dscf of total metal HAP.

(6) For each pouring area or pouring station at a new iron and steel foundry, you must not discharge emissions through a conveyance to the atmosphere that exceed either the limit for PM in paragraph (a)(6)(i) of this section or, alternatively the limit for total metal HAP in paragraph (a)(6)(ii) of this section:

(i) 0.002 gr/dscf of PM, or

(ii) 0.0002 gr/dscf of total metal HAP.

(7) For each building or structure housing any iron and steel foundry emissions source at the iron and steel foundry, you must not discharge any fugitive emissions to the atmosphere from foundry operations that exhibit opacity greater than 20 percent (6-minute average), except for one 6-minute average per hour that does not exceed 27 percent opacity.

(8) For each cupola metal melting furnace at a new or existing iron and steel foundry, you must not discharge emissions of volatile organic hazardous air pollutants (VOHAP) through a conveyance to the atmosphere that exceed 20 parts per million by volume (ppmv) corrected to 10 percent oxygen.

(9) As an alternative to the work practice standard in §63.7700(e) for a scrap preheater at an existing iron and steel foundry or in §63.7700(f) for a scrap preheater at a new iron and steel foundry, you must not discharge emissions of VOHAP through a conveyance to the atmosphere that exceed 20 ppmv.

(10) For one or more automated conveyor and pallet cooling lines that use a sand mold system or automated shakeout lines that use a sand mold system at a new iron and steel foundry, you must not discharge emissions of VOHAP through a conveyance to the atmosphere that exceed a flow-weighted average of 20 ppmv.

(11) For each triethylamine (TEA) cold box mold or core making line at a new or existing iron and steel foundry, you must meet either the emissions limit in paragraph (a)(11)(i) of this section or, alternatively the emissions standard in paragraph (a)(11)(ii) of this section:

(i) You must not discharge emissions of TEA through a conveyance to the atmosphere that exceed 1 ppmv, as determined according to theperformance test procedures in § 63.7732(g); or

(ii) You must reduce emissions of TEA from each TEA cold box mold or core making line by at least 99 percent, as determined according to the performance test procedures in § 63.7732(g).

(b) You must meet each operating limit in paragraphs (b)(1) through (5) of this section that applies to you.

(1) You must install, operate, and maintain a capture and collection system for all emissions sources subject to an emissions limit for VOHAP or TEA in paragraphs (a)(8) through (11) of this section.

(i) Each capture and collection system must meet accepted engineering standards, such as those published by the American Conference of Governmental Industrial Hygienists.

(ii) You must operate each capture system at or above the lowest value or settings established as operating limits in your operation and maintenance plan.

(2) You must operate each wet scrubber applied to emissions from a metal melting furnace, scrap preheater, pouring area, or pouring station subject to an emissions limit for PM or total metal HAP in paragraphs (a)(1) through (6) of this section such that the 3-hour average pressure drop and scrubber water flow rate does not fall below the minimum levels established during the initial or subsequent performance test.

(3) You must operate each combustion device applied to emissions from a cupola metal melting furnace subject to the emissions limit for VOHAP in paragraph (a)(8) of this section, such that the 15-minute average combustion zone temperature does not fall below 1,300 degrees Fahrenheit (°F). Periods when the cupola is off blast and for 15 minutes after going on blast from an off blast condition are not included in the 15-minute average.

(4) You must operate each combustion device applied to emissions from a scrap preheater subject to the emissions limit for VOHAP in paragraph (a)(9) of this section or from a TEA cold box mold or core making line subject to the emissions limit for TEA in paragraph (a)(11) of this section, such that the 3-hour average combustion zone temperature does not fall below the minimum level established during the initial or subsequent performance test.

(5) You must operate each wet acid scrubber applied to emissions from a TEA cold box mold or core making line subject to the emissions limit for TEA in paragraph (a)(11) of this section such that:

(i) The 3-hour average scrubbing liquid flow rate does not fall below the minimum level established during the initial or subsequent performance test; and

(ii) The 3-hour average pH of the scrubber blowdown, as measured by a continuous parameter monitoring system (CPMS), does not exceed 4.5 or the pH of the scrubber blowdown, as measured once every 8 hours during process operations, does not exceed 4.5.

(c) If you use a control device other than a baghouse, wet scrubber, wet acid scrubber, or combustion device, you must prepare and submit a monitoring plan containing the information listed in paragraphs (c)(1) through (5) of this section. The monitoring plan is subject to approval by the Administrator.

(1) A description of the device;

(2) Test results collected in accordance with §63.7732 verifying the performance of the device for reducing emissions of PM, total metal HAP, VOHAP, or TEA to the levels required by this subpart;

(3) A copy of the operation and maintenance plan required by §63.7710(b);

(4) A list of appropriate operating parameters that will be monitored to maintain continuous compliance with the applicable emissions limitation(s); and

(5) Operating parameter limits based on monitoring data collected during the performance test.

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7218, February 7, 2008]

Work Practice Standards

§ 63.7700 What work practice standards must I meet?

(a) For each segregated scrap storage area, bin or pile, you must either comply with the certification requirements in paragraph (b) of this section, or prepare and implement a plan for the selection and inspection of scrap according to the requirements in paragraph (c) of this section. You may have certain scrap subject to paragraph (b) of this section and other scrap subject to paragraph (c) of this section at your facility provided the scrap remains segregated until charge make-up.

(b) You must prepare and operate at all times according to a written certification that the foundry purchases and uses only metal ingots, pig iron, slitter, or other materials that do not include post-consumer automotive body scrap, post-consumer engine blocks, post-consumer oil filters, oily turnings, lead components, mercury switches, plastics, or free organic liquids. For the purpose of this paragraph (b), “free organic liquids” is defined as material that fails the paint filter test by EPA Method 9095A, “Paint Filter Liquids Test” (Revision 1, December 1996), as published in EPA Publication SW–846 “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods” (incorporated by reference—see §63.14). Any post-consumer engine blocks, post-consumer oil filters, or oily turnings that are processed and/or cleaned to the extent practicable such that the materials do not include lead components, mercury switches, chlorinated plastics, or free organic liquids can be included in this certification.

(c) You must prepare and operate at all times according to a written plan for the selection and inspection of iron and steel scrap to minimize, to the extent practicable, the amount of organics and HAP metals in the charge materials used by the iron and steel foundry. This scrap selection and inspection plan is subject to approval by the Administrator. You must keep a copy of the plan onsite and readily available to all plant personnel with materials acquisition or inspection duties. You must provide a copy of the material specifications to each of your scrap vendors. Each plan must include the information specified in paragraphs (c)(1) through (3) of this section.

(1) A materials acquisition program to limit organic contaminants according to the requirements in paragraph (c)(1)(i) or (ii) of this section, as applicable.

(i) For scrap charged to a scrap preheater, electric arc metal melting furnace, or electric induction metal melting furnace, specifications for scrap materials to be depleted (to the extent practicable) of the presence of used oil filters, chlorinated plastic parts, organic liquids, and a program to ensure the scrap materials are drained of free liquids; or

(ii) For scrap charged to a cupola metal melting furnace, specifications for scrap materials to be depleted (to the extent practicable) of the presence of chlorinated plastic, and a program to ensure the scrap materials are drained of free liquids.

(2) A materials acquisition program specifying that the scrap supplier remove accessible mercury switches from the trunks and hoods of any automotive bodies contained in the scrap and remove accessible lead components such as batteries and wheel weights. You must either obtain and maintain onsite a copy of the procedures used by the scrap supplier for either removing accessible mercury switches or for purchasing automobile bodies that have had mercury switches removed, as applicable, or document your attempts to obtain a copy of these procedures from the scrap suppliers servicing your area.

(3) Procedures for visual inspection of a representative portion, but not less than 10 percent, of all incoming scrap shipments to ensure the materials meet the specifications.

(i) The inspection procedures must identify the location(s) where inspections are to be performed for each type of shipment. Inspections may be performed at the scrap supplier's facility. The selected location(s) must provide a reasonable vantage point, considering worker safety, for visual inspection.

(ii) The inspection procedures must include recordkeeping requirements that document each visual inspection and the results.

(iii) The inspection procedures must include provisions for rejecting or returning entire or partial scrap shipments that do not meet specifications and limiting purchases from vendors whose shipments fail to meet specifications for more than three inspections in one calendar year.

(iv) If the inspections are performed at the scrap supplier's facility, the inspection procedures must include an explanation of how the periodic inspections ensure that not less than 10 percent of scrap purchased from each supplier is subject to inspection.

(d) For each furan warm box mold or core making line in a new or existing iron and steel foundry, you must use a binder chemical formulation that does not contain methanol as a specific ingredient of the catalyst formulation as determined by the Material Safety Data Sheet. This requirement does not apply to the resin portion of the binder system.

(e) For each scrap preheater at an existing iron and steel foundry, you must meet either the requirement in paragraph (e)(1) or (2) of this section. As an alternative to the requirement in paragraph (e)(1) or (2) of this section, you must meet the VOHAP emissions limit in §63.7690(a)(9).

(1) You must operate and maintain a gas-fired preheater where the flame directly contacts the scrap charged; or

(2) You must charge only material that is subject to and in compliance with the scrap certification requirement in paragraph (b) of this section.

(f) For each scrap preheater at a new iron and steel foundry, you must charge only material that is subject to and in compliance with the scrap certification requirement in paragraph (b) of this section. As an alternative to this requirement, you must meet the VOHAP emissions limit in §63.7690(a)(9).

[69 FR 21923, Apr. 22, 2004, as amended at 70 FR 29404, May 20, 2005; 73 FR 7218, February 7, 2008]

Operation and Maintenance Requirements

§ 63.7710 What are my operation and maintenance requirements?

(a) As required by §63.6(e)(1)(i), you must always operate and maintain your iron and steel foundry, including air pollution control and monitoring equipment, in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels required by this subpart.

(b) You must prepare and operate at all times according to a written operation and maintenance plan for each capture and collection system and control device for an emissions source subject to a PM, metal HAP, TEA, or VOHAP emissions limit in §63.7690(a). Your operation and maintenance plan also must include procedures for igniting gases from mold vents in pouring areas and pouring stations that use a sand mold system. This operation and maintenance plan is subject to approval by the Administrator. Each plan must contain the elements described in paragraphs (b)(1) through (6) of this section.

(1) Monthly inspections of the equipment that is important to the performance of the total capture system (i.e., pressure sensors, dampers, and damper switches). This inspection must include observations of the physical appearance of the equipment (e.g., presence of holes in the ductwork or hoods, flow constrictions caused by dents or accumulated dust in the ductwork, and fan erosion). The operation and maintenance plan must also include requirements to repair the defect or deficiency as soon as practicable.

(2) Operating limits for each capture system for an emissions source subject to an emissions limit or standard for VOHAP or TEA in §63.7690(a)(8) through (11). You must establish the operating according to the requirements in paragraphs (b)(2)(i) through (iii) of this section.

(i) Select operating limit parameters appropriate for the capture system design that are representative and reliable indicators of the performance of the capture system. At a minimum, you must use appropriate operating limit parameters that indicate the level of the ventilation draft and damper position settings for the capture system when operating to collect emissions, including revised settings for seasonal variations. Appropriate operating limit parameters for ventilation draft include, but are not limited to: volumetric flow rate through each separately ducted hood, total volumetric flow rate at the inlet to the control device to which the capture system is vented, fan motor amperage, or static pressure. Any parameter for damper position setting may be used that indicates the duct damper position related to the fully open setting.

(ii) For each operating limit parameter selected in paragraph (b)(2)(i) of this section, designate the value or setting for the parameter at which the capture system operates during the process operation. If your operation allows for more than one process to be operating simultaneously, designate the value or setting for the parameter at which the capture system operates during each possible configuration that you may operate (i.e., the operating limits with one furnace melting, two melting, as applicable to your plant).

(iii) Include documentation in your plan to support your selection of the operating limits established for your capture system. This documentation must include a description of the capture system design, a description of the capture system operating during production, a description of each selected operating limit parameter, a rationale for why you chose the parameter, a description of the method used to monitor the parameter according to the requirements of §63.7740(a), and the data used to set the value or setting for the parameter for each of your process configurations.

(3) Preventative maintenance plan for each control device, including a preventative maintenance schedule that is consistent with the manufacturer's instructions for routine and long-term maintenance.

(4) A site-specific monitoring plan for each bag leak detection system. For each bag leak detection system that operates on the triboelectric effect, the monitoring plan must be consistent with the recommendations contained in the U.S. Environmental Protection Agency guidance document “Fabric Filter Bag Leak Detection Guidance” (EPA–454/R–98–015). This baghouse monitoring plan is subject to approval by the Administrator. The owner or operator shall operate and maintain the bag leak detection system according to the site-specific monitoring plan at all times. The plan must address all of the items identified in paragraphs (b)(4)(i) through (v) of this section.

(i) Installation of the bag leak detection system.

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

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

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

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

(5) Corrective action plan for each baghouse. The plan must include the requirement that, in the event a bag leak detection system alarm is triggered, you must initiate corrective action to determine the cause of the alarm within 1 hour of the alarm, initiate corrective action to correct the cause of the problem within 24 hours of the alarm, and complete the corrective action as soon as practicable. Corrective actions taken may include, but are not limited to:

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

(ii) Sealing off defective bags or filter media.

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

(iv) Sealing off a defective baghouse compartment.

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

(vi) Making process changes.

(vii) Shutting down the process producing the PM emissions.

(6) Procedures for providing an ignition source to mold vents of sand mold systems in each pouring area and pouring station unless you determine the mold vent gases either are not ignitable, ignite automatically, or cannot be ignited due to accessibility or safety issues. You must document and maintain records of this determination. The determination of ignitability, accessibility, and safety may encompass multiple casting patterns provided the castings utilize similar sand-to-metal ratios, binder formulations, and coating materials. The determination of ignitability must be based on observations of the mold vents within 5 minutes of pouring, and the flame must be present for at least 15 seconds for the mold vent to be considered ignited. For the purpose of this determination:

(i) Mold vents that ignite more than 75 percent of the time without the presence of an auxiliary ignition source are considered to ignite automatically; and

(ii) Mold vents that do not ignite automatically and cannot be ignited in the presence of an auxiliary ignition source more than 25 percent of the time are considered to be not ignitable.

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7218, February 7, 2008]

General Compliance Requirements

§ 63.7720 What are my general requirements for complying with this subpart?

(a) You must be in compliance with the emissions limitations, work practice standards, and operation and maintenance requirements in this subpart at all times, except during periods of startup, shutdown, or malfunction.

(b) During the period between the compliance date specified for your iron and steel foundry in §63.7683 and the date when applicable operating limits have been established during the initial performance test, you must maintain a log detailing the operation and maintenance of the process and emissions control equipment.

(c) You must develop a written startup, shutdown, and malfunction plan according to the provisions in §63.6(e)(3). The startup, shutdown, and malfunction plan also must specify what constitutes a shutdown of a cupola and how to determine that operating conditions are normal following startup of a cupola.

[69 FR 21923, Apr. 22, 2004, as amended at 71 FR 20468, Apr. 20, 2006]

Initial Compliance Requirements

§ 63.7730 By what date must I conduct performance tests or other initial compliance demonstrations?

(a) As required by §63.7(a)(2), you must conduct a performance test no later than 180 calendar days after the compliance date that is specified in §63.7683 for your iron and steel foundry to demonstrate initial compliance with each emissions limitation in §63.7690 that applies to you.

(b) For each work practice standard in §63.7700 and each operation and maintenance requirement in §63.7710 that applies to you where initial compliance is not demonstrated using a performance test, you must demonstrate initial compliance no later than 30 calendar days after the compliance date that is specified for your iron and steel foundry in §63.7683.

(c) If you commenced construction or reconstruction between December 23, 2002 and April 22, 2004, you must demonstrate initial compliance with either the proposed emissions limit or the promulgated emissions limit no later than October 19, 2004 or no later than 180 calendar days after startup of the source, whichever is later, according to §63.7(a)(2)(ix).

(d) If you commenced construction or reconstruction between December 23, 2002 and April 22, 2004, and you chose to comply with the proposed emissions limit when demonstrating initial compliance, you must conduct a second performance test to demonstrate compliance with the promulgated emissions limit by October 19, 2007 or after startup of the source, whichever is later, according to §63.7(a)(2)(ix).

§ 63.7731 When must I conduct subsequent performance tests?

(a) You must conduct subsequent performance tests to demonstrate compliance with all applicable PM or total metal HAP, VOHAP, and TEA emissions limitations in §63.7690 for your iron and steel foundry no

less frequently than every 5 years and each time you elect to change an operating limit or to comply with a different alternative emissions limit, if applicable. The requirement to conduct performance tests every 5 years does not apply to an emissions source for which a continuous emissions monitoring system (CEMS) is used to demonstrate continuous compliance.

(b) You must conduct subsequent performance tests to demonstrate compliance with the opacity limit in §63.7690(a)(7) for your iron and steel foundry no less frequently than once every 6 months.

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7219, February 7, 2008]

§ 63.7732 What test methods and other procedures must I use to demonstrate initial compliance with the emissions limitations?

(a) You must conduct each performance test that applies to your iron and steel foundry based on your selected compliance alternative, if applicable, according to the requirements in §63.7(e)(1) and the conditions specified in paragraphs (b) through (i) of this section.

(b) To determine compliance with the applicable emissions limit for PM in §63.7690(a)(1) through (6) for a metal melting furnace, scrap preheater, pouring station, or pouring area, follow the test methods and procedures in paragraphs (b)(1) through (6) of this section.

(1) Determine the concentration of PM according to the test methods in 40 CFR part 60, appendix A that are specified in paragraphs (b)(1)(i) through (v) of this section.

(i) Method 1 or 1A to select sampling port locations and the number of traverse points in each stack or duct. Sampling sites must be located at the outlet of the control device (or at the outlet of the emissions source if no control device is present) prior to any releases to the atmosphere.

(ii) Method 2, 2A, 2C, 2D, 2F, or 2G to determine the volumetric flow rate of the stack gas.

(iii) Method 3, 3A, or 3B to determine the dry molecular weight of the stack gas.

(iv) Method 4 to determine the moisture content of the stack gas.

(v) Method 5, 5B, 5D, 5F, or 5I, as applicable, to determine the PM concentration. The PM concentration is determined using only the front-half (probe rinse and filter) of the PM catch.

(2) Collect a minimum sample volume of 60 dscf of gas during each PM sampling run. A minimum of three valid test runs are needed to comprise a performance test.

(3) For cupola metal melting furnaces, sample only during times when the cupola is on blast.

(4) For electric arc and electric induction metal melting furnaces, sample only during normal production conditions, which may include, but are not limited to the following cycles: Charging, melting, alloying, refining, slagging, and tapping.

(5) For scrap preheaters, sample only during normal production conditions, which may include, but are not limited to the following cycles: Charging, heating, and discharging.

(6) Determine the total mass of metal charged to the furnace or scrap preheater. For a cupola metal melting furnace at an existing iron and steel foundry that is subject to the PM emissions limit in §63.7690(a)(ii), calculate the PM emissions rate in pounds of PM per ton (lb/ton) of metal charged using Equation 1 of this section:

$$EF_{PM} = C_{PM} x \left(\frac{Q}{M_{charge}} \right) x \left(\frac{t_{test}}{7{,}000} \right) \qquad \text{(Eq. 1)}$$

Where:

EF_{PM} = Mass emissions rate of PM, pounds of PM per ton (lb/ton) of metal charged;

C_{PM} = Concentration of PM measured during performance test run, gr/dscf;

Q = Volumetric flow rate of exhaust gas, dry standard cubic feet per minute (dscfm);

M_{charge} = Mass of metal charged during performance test run, tons;

t_{test} = Duration of performance test run, minutes; and
7,000 = Unit conversion factor, grains per pound (gr/lb).

(c) To determine compliance with the applicable emissions limit for total metal HAP in § 63.7690(a)(1) through (6) for a metal melting furnace, scrap preheater, pouring station, or pouring area, follow the test methods and procedures in paragraphs (c)(1) through (6) of this section.

(1) Determine the concentration of total metal HAP according to the test methods in 40 CFR part 60, appendix A that are specified in paragraphs (c)(1)(i) through (v) of this section.

(i) Method 1 or 1A to select sampling port locations and the number of traverse points in each stack or duct. Sampling sites must be located at the outlet of the control device (or at the outlet of the emissions source if no control device is present) prior to any releases to the atmosphere.

(ii) Method 2, 2A, 2C, 2D, 2F, or 2G to determine the volumetric flow rate of the stack gas.

(iii) Method 3, 3A, or 3B to determine the dry molecular weight of the stack gas.

(iv) Method 4 to determine the moisture content of the stack gas.

(v) Method 29 to determine the total metal HAP concentration.

(2) A minimum of three valid test runs are needed to comprise a performance test.

(3) For cupola metal melting furnaces, sample only during times when the cupola is on blast.

(4) For electric arc and electric induction metal melting furnaces, sample only during normal production conditions, which may include, but are not limited to the following cycles: Charging, melting, alloying, refining, slagging, and tapping.

(5) For scrap preheaters, sample only during normal production conditions, which may include, but are not limited to the following cycles: Charging, heating, and discharging.

(6) Determine the total mass of metal charged to the furnace or scrap preheater during each performance test run and calculate the total metal HAP emissions rate (pounds of total metal HAP per ton (lb/ton) of metal charged) using Equation 2 of this section:

$$EF_{TMHAP} = C_{TMHAP} x \left(\frac{Q}{M_{charge}} \right) x \left(\frac{t_{test}}{7{,}000} \right) \qquad \text{(Eq. 2)}$$

Where:

EF_{TMHAP} = Emissions rate of total metal HAP, pounds of total metal HAP per ton (lb/ton) of metal charged;

C_{TMHAP} = Concentration of total metal HAP measured during performance test run, gr/dscf;

Q = Volumetric flow rate of exhaust gas, dscfm;

M_{charge} = Mass of metal charged during performance test run, tons;

t_{test} = Duration of performance test run, minutes; and

7,000 = Unit conversion factor, gr/lb.

(d) To determine compliance with the opacity limit in §63.7690(a)(7) for fugitive emissions from buildings or structures housing any iron and steel foundry emissions source at the iron and steel foundry, follow the procedures in paragraphs (d)(1) and (2) of this section.

(1) Using a certified observer, conduct each opacity test according to the requirements in EPA Method 9 (40 CFR part 60, appendix A) and §63.6(h)(5). The certified observer may identify a limited number of openings or vents that appear to have the highest opacities and perform opacity observations on the identified openings or vents in lieu of performing observations for each opening or vent from the building or structure. Alternatively, a single opacity observation for the entire building or structure may be performed, if the fugitive release points afford such an observation.

(2) During testing intervals when PM performance tests, if applicable, are being conducted, conduct the opacity test such the opacity observations are recorded during the PM performance tests.

(e) To determine compliance with the applicable VOHAP emissions limit in §63.7690(a)(8) for a cupola metal melting furnace or in §63.7690(a)(9) for a scrap preheater, follow the test methods and procedures in paragraphs (e)(1) through (4) of this section.

(1) Determine the VOHAP concentration for each test run according to the test methods in 40 CFR part 60, appendix A that are specified in paragraphs (b)(1)(i) through (v) of this section.

(i) Method 1 or 1A to select sampling port locations and the number of traverse points in each stack or duct. Sampling sites must be located at the outlet of the control device (or at the outlet of the emissions source if no control device is present) prior to any releases to the atmosphere.

(ii) Method 2, 2A, 2C, 2D, 2F, or 2G to determine the volumetric flow rate of the stack gas.

(iii) Method 3, 3A, or 3B to determine the dry molecular weight of the stack gas.

(iv) Method 4 to determine the moisture content of the stack gas.

(v) Method 18 to determine the VOHAP concentration. Alternatively, you may use Method 25 to determine the concentration of total gaseous nonmethane organics (TGNMO) or Method 25A to determine the concentration of total organic compounds (TOC), using hexane as the calibration gas.

(2) Determine the average VOHAP, TGNMO, or TOC concentration using a minimum of three valid test runs. Each test run must include a minimum of 60 continuous operating minutes.

(3) For a cupola metal melting furnace, correct the measured concentration of VOHAP, TGNMO, or TOC for oxygen content in the gas stream using Equation 3 of this section:

$$C_{VOHAP,10\%O_2} = C_{VOHAP}\left(\frac{10.9\%}{20.9\% - \%O_2}\right) \qquad \text{(Eq. 3)}$$

Where:

C_{VOHAP} = Concentration of VOHAP in ppmv as measured by Method 18 in 40 CFR part 60, appendix A or the concentration of TGNMO or TOC in ppmv as hexane as measured by Method 25 or 25A in 40 CFR part 60, appendix A; and

$\%O_2$ = Oxygen concentration in gas stream, percent by volume (dry basis).

(4) For a cupola metal melting furnace, measure the combustion zone temperature of the combustion device with the CPMS required in §63.7740(d) during each sampling run in 15-minute intervals. Determine and record the 15-minute average of the three runs.

(f) Follow the applicable procedures in paragraphs (f)(1) through (3) of this section to determine compliance with the VOHAP emissions limit in §63.7690(a)(10) for automated pallet cooling lines or automated shakeout lines.

(1) Follow these procedures to demonstrate compliance by direct measurement of total hydrocarbons (a surrogate for VOHAP) using a volatile organic compound (VOC) CEMS.

(i) Using the VOC CEMS required in §63.7740(g), measure and record the concentration of total hydrocarbons (as hexane) for 180 continuous operating minutes. You must measure emissions at the outlet of the control device (or at the outlet of the emissions source if no control device is present) prior to any releases to the atmosphere.

(ii) Reduce the monitoring data to hourly averages as specified in §63.8(g)(2).

(iii) Compute and record the 3-hour average of the monitoring data.

(2) As an alternative to the procedures in paragraph (f)(1) of this section, you may demonstrate compliance with the VOHAP emissions limit in §63.7690(a)(10) by establishing a site-specific TOC emissions limit that is correlated to the VOHAP emissions limit according to the procedures in paragraph (f)(2)(i) through (ix) of this section.

(i) Determine the VOHAP concentration for each test run according to the test methods in 40 CFR part 60, appendix A that are specified in paragraph (f)(2)(ii) through (vi) of this section.

(ii) Method 1 or 1A to select sampling port locations and the number of traverse points in each stack or duct. Sampling sites must be located at the outlet of the control device (or at the outlet of the emissions source if no control device is present) prior to any releases to the atmosphere.

(iii) Method 2, 2A, 2C, 2D, 2F, or 2G to determine the volumetric flow rate of the stack gas.

(iv) Method 3, 3A, or 3B to determine the dry molecular weight of the stack gas.

(v) Method 4 to determine the moisture content of the stack gas.

(vi) Method 18 to determine the VOHAP concentration. Alternatively, you may use Method 25 to determine the concentration of TGNMO using hexane as the calibration gas.

(vii) Using the CEMS required in §63.7740(g), measure and record the concentration of total hydrocarbons (as hexane) during each of the Method 18 (or Method 25) sampling runs. You must measure emissions at the outlet of the control device (or at the outlet of the emissions source if no control device is present) prior to any releases to the atmosphere.

(viii) Calculate the average VOHAP (or TGNMO) concentration for the source test as the arithmetic average of the concentrations measured for the individual test runs, and determine the average concentration of total hydrocarbon (as hexane) as measured by the CEMS during all test runs.

(ix) Calculate the site-specific VOC emissions limit using Equation 4 of this section:

$$VOC_{limit} = 20x\frac{C_{VOHAP,avg}}{C_{CEM}} \quad \text{(Eq. 4)}$$

Where:

$C_{VOHAP,avg}$ = Average concentration of VOHAP for the source test in ppmv as measured by Method 18 in 40 CFR part 60, appendix A or the average concentration of TGNMO for the source test in ppmv as hexane as measured by Method 25 in 40 CFR part 60, appendix A; and

C_{CEM} = Average concentration of total hydrocarbons in ppmv as hexane as measured using the CEMS during the source test.

(3) For two or more exhaust streams from one or more automated conveyor and pallet cooling lines or automated shakeout lines, compute the flow-weighted average concentration of VOHAP emissions for each combination of exhaust streams using Equation 5 of this section:

$$C_W = \frac{\sum_{i=1}^{n} C_i Q_i}{\sum_{i=1}^{n} Q_i} \quad \text{(Eq. 5)}$$

Where:

C_W = Flow-weighted concentration of VOHAP or VOC, ppmv (as hexane);

C_i = Concentration of VOHAP or VOC from exhaust stream ‘‘i’’, ppmv (as hexane);

n = Number of exhaust streams sampled; and

Q_i = Volumetric flow rate of effluent gas from exhaust stream ‘‘i,’’, dscfm.

(g) To determine compliance with the emissions limit or standard in §63.7690(a)(11) for a TEA cold box mold or core making line, follow the test methods in 40 CFR part 60, appendix A, specified in paragraphs (g)(1) through (4) of this section.

(1) Determine the TEA concentration for each test run according to the test methods in 40 CFR part 60, appendix A that are specified in paragraphs (g)(1)(i) through (v) of this section.

(i) Method 1 or 1A to select sampling port locations and the number of traverse points in each stack or duct. If you elect to meet the 99 percent reduction standard, sampling sites must be located both at the inlet to the control device and at the outlet of the control device prior to any releases to the atmosphere. If you elect to meet the concentration limit, the sampling site must be located at the outlet of the control device (or at the outlet of the emissions source if no control device is present) prior to any releases to the atmosphere.

(ii) Method 2, 2A, 2C, 2D, 2F, or 2G to determine the volumetric flow rate of the stack gas.

(iii) Method 3, 3A, or 3B to determine the dry molecular weight of the stack gas.

(iv) Method 4 to determine the moisture content of the stack gas.

(v) Method 18 to determine the TEA concentration. Alternatively, you may use NIOSH Method 2010 (incorporated by reference—see §63.14) to determine the TEA concentration provided the performance requirements outlined in section 13.1 of EPA Method 18 are satisfied. The sampling option and time must be sufficiently long such that either the TEA concentration in the field sample is at least 5 times the limit of detection for the analytical method or the test results calculated using the laboratory's reported analytical detection limit for the specific field samples are less than 1/5 of the applicable emissions limit. When using Method 18, the adsorbent tube approach, as described in section 8.2.4 of Method 18, may be required to achieve the necessary analytical detection limits. The sampling time must be at least 1 hour in all cases.

(2) If you use a wet acid scrubber, conduct the test as soon as practicable after adding fresh acid solution and the system has reached normal operating conditions.

(3) If you use a wet acid scrubber that is subject to the operating limit in §63.7690(b)(5)(ii) for pH level, determine the pH of the scrubber blowdown using the procedures in paragraph (g)(3)(i) or (ii) of this section.

(i) Measure the pH of the scrubber blowdown with the CPMS required in §63.7740(f)(2) during each TEA sampling run in intervals of no more than 15 minutes. Determine and record the 3-hour average; or

(ii) Measure and record the pH level using the probe and meter required in §63.7740(f)(2) once each sampling run. Determine and record the average pH level for the three runs.

(4) If you are subject to the 99 percent reduction standard, calculate the mass emissions reduction using Equation 6 of this section:

$$\%\text{reduction} = \frac{E_i - E_o}{E_i} \text{x} 100\% \qquad \text{(Eq. 6)}$$

Where:

E_i = Mass emissions rate of TEA at control device inlet, kilograms per hour (kg/hr); and

E_o = Mass emissions rate of TEA at control device outlet, kg/hr.

(h) To determine compliance with the PM or total metal HAP emissions limits in §63.7690(a)(1) through (6) when one or more regulated emissions sources are combined with either another regulated emissions

source subject to a different emissions limit or other non-regulated emissions sources, you may demonstrate compliance using one of the procedures in paragraphs (h)(1) through (3) of this section.

(1) Meet the most stringent applicable emissions limit for the regulated emissions sources included in the combined emissions stream for the combined emissions stream.

(2) Use the procedures in paragraphs (h)(2)(i) through (iii) of this section.

(i) Determine the volumetric flow rate of the individual regulated streams for which emissions limits apply.

(ii) Calculate the flow-weighted average emissions limit, considering only the regulated streams, using Equation 5 of this section, except C_w is the flow-weighted average emissions limit for PM or total metal HAP in the exhaust stream, gr/dscf; and C_i is the concentration of PM or total metal HAP in exhaust stream ''i'', gr/dscf.

(iii) Meet the calculated flow-weighted average emissions limit for the regulated emissions sources included in the combined emissions stream for the combined emissions stream.

(3) Use the procedures in paragraphs (h)(3)(i) through (iii) of this section.

(i) Determine the PM or total metal HAP concentration of each of the regulated streams prior to the combination with other exhaust streams or control device.

(ii) Measure the flow rate and PM or total metal HAP concentration of the combined exhaust stream both before and after the control device and calculate the mass removal efficiency of the control device using Equation 6 of this section, except E_i is the mass emissions rate of PM or total metal HAP at the control device inlet, lb/hr and E_o is the mass emissions rate of PM or total metal HAP at the control device outlet, lb/hr.

(iii) Meet the applicable emissions limit based on the calculated PM or total metal HAP concentration for the regulated emissions sources using Equation 7 of this section:

$$C_{released} = C_i x\left(1 - \frac{\%reduction}{100}\right) \qquad \text{(Eq. 7)}$$

Where:

$C_{released}$= Calculated concentration of PM (or total metal HAP) predicted to be released to the atmosphere from the regulated emissions source, gr/dscf; and

C_i= Concentration of PM (or total metal HAP) in the uncontrolled regulated exhaust stream, gr/dscf.

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

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7219, February 7, 2008]

§ 63.7733 What procedures must I use to establish operating limits?

(a) For each capture system subject to operating limits in §63.7690(b)(1)(ii), you must establish site-specific operating limits in your operation and maintenance plan according to the procedures in paragraphs (a)(1) through (3) of this section.

(1) Concurrent with applicable emissions and opacity tests, measure and record values for each of the operating limit parameters in your capture system operation and maintenance plan according to the monitoring requirements in §63.7740(a).

(2) For any dampers that are manually set and remain at the same position at all times the capture system is operating, the damper position must be visually checked and recorded at the beginning and end of each run.

(3) Review and record the monitoring data. Identify and explain any times the capture system operated outside the applicable operating limits.

(b) For each wet scrubber subject to the operating limits in §63.7690(b)(2) for pressure drop and scrubber water flow rate, you must establish site-specific operating limits according to the procedures specified in paragraphs (b)(1) and (2) of this section.

(1) Using the CPMS required in §63.7740(c), measure and record the pressure drop and scrubber water flow rate in intervals of no more than 15 minutes during each PM test run.

(2) Compute and record the average pressure drop and average scrubber water flow rate for each valid sampling run in which the applicable emissions limit is met.

(c) For each combustion device applied to emissions from a scrap preheater or TEA cold box mold or core making line subject to the operating limit in §63.7690(b)(4) for combustion zone temperature, you must establish a site-specific operating limit according to the procedures specified in paragraphs (c)(1) and (2) of this section.

(1) Using the CPMS required in §63.7740(e), measure and record the combustion zone temperature during each sampling run in intervals of no more than 15 minutes.

(2) Compute and record the average combustion zone temperature for each valid sampling run in which the applicable emissions limit is met.

(d) For each acid wet scrubber subject to the operating limit in §63.7690(b)(5), you must establish a site-specific operating limit for scrubbing liquid flow rate according to the procedures specified in paragraphs (d)(1) and (2) of this section.

(1) Using the CPMS required in §63.7740(f), measure and record the scrubbing liquid flow rate during each TEA sampling run in intervals of no more than 15 minutes.

(2) Compute and record the average scrubbing liquid flow rate for each valid sampling run in which the applicable emissions limit is met.

(e) You may change the operating limits for a capture system, wet scrubber, acid wet scrubber, or combustion device if you meet the requirements in paragraphs (e)(1) through (3) of this section.

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

(2) Conduct a performance test to demonstrate compliance with the applicable emissions limitation in §63.7690.

(3) Establish revised operating limits according to the applicable procedures in paragraphs (a) through (d) of this section.

(f) You may use a previous performance test (conducted since December 22, 2002) to establish an operating limit provided the test meets the requirements of this subpart.

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7221, February 7, 2008]

§ 63.7734 How do I demonstrate initial compliance with the emissions limitations that apply to me?

(a) You have demonstrated initial compliance with the emissions limits in §63.7690(a) by meeting the applicable conditions in paragraphs (a)(1) through (11) of this section. When alternative emissions limitations are provided for a given emissions source, you are not restricted in the selection of which applicable alternative emissions limitation is used to demonstrate compliance.

(1) For each electric arc metal melting furnace, electric induction metal melting furnace, or scrap preheater at an existing iron and steel foundry,

(i) The average PM concentration in the exhaust stream, determined according to the performance test procedures in §63.7732(b), did not exceed 0.005 gr/dscf; or

(ii) The average total metal HAP concentration in the exhaust stream, determined according to the performance test procedures in §63.7732(c), did not exceed 0.0004 gr/dscf.

(2) For each cupola metal melting furnace at an existing iron and steel foundry,

(i) The average PM concentration in the exhaust stream, determined according to the performance test procedures in §63.7732(b), did not exceed 0.006 gr/dscf; or

(ii) The average total metal HAP concentration in the exhaust stream, determined according to the performance test procedures in §63.7732(c), did not exceed 0.0005 gr/dscf; or

(iii) The average PM mass emissions rate, determined according to the performance test procedures in §63.7732(b), did not exceed 0.10 pound of PM per ton (lb/ton) of metal charged; or

(iv) The average total metal HAP mass emissions rate, determined according to the performance test procedures in §63.7732(c), did not exceed 0.008 pound of total metal HAP per ton (lb/ton) of metal charged.

(3) For each cupola metal melting furnace or electric arc metal melting furnace at a new iron and steel foundry,

(i) The average PM concentration in the exhaust stream, determined according to the performance test procedures in §63.7732(b), did not exceed 0.002 gr/dscf; or

(ii) The average total metal HAP concentration in the exhaust stream, determined according to the performance test procedures in §63.7732(c), did not exceed 0.0002 gr/dscf.

(4) For each electric induction metal melting furnace or scrap preheater at a new iron and steel foundry,

(i) The average PM concentration in the exhaust stream, determined according to the performance test procedures in §63.7732(b), did not exceed 0.001 gr/dscf; or

(ii) The average total metal HAP concentration in the exhaust stream, determined according to the performance test procedures in §63.7732(c), did not exceed 0.00008 gr/dscf.

(5) For each pouring station at an existing iron and steel foundry,

(i) The average PM concentration in the exhaust stream, measured according to the performance test procedures in §63.7732(b), did not exceed 0.010 gr/dscf; or

(ii) The average total metal HAP concentration in the exhaust stream, determined according to the performance test procedures in §63.7732(c), did not exceed 0.0008 gr/dscf.

(6) For each pouring area or pouring station at a new iron and steel foundry,

(i) The average PM concentration in the exhaust stream, measured according to the performance test procedures in §63.7732(b), did not exceed 0.002 gr/dscf; or

(ii) The average total metal HAP concentration in the exhaust stream, determined according to the performance test procedures in §63.7732(c), did not exceed 0.0002 gr/dscf.

(7) For each building or structure housing any iron and steel foundry emissions source at the iron and steel foundry, the opacity of fugitive emissions from foundry operations discharged to the atmosphere, determined according to the performance test procedures in §63.7732(d), did not exceed 20 percent (6-minute average), except for one 6-minute average per hour that did not exceed 27 percent opacity.

(8) For each cupola metal melting furnace at a new or existing iron and steel foundry, the average VOHAP concentration, determined according to the performance test procedures in §63.7732(e), did not exceed 20 ppmv corrected to 10 percent oxygen.

(9) For each scrap preheater at an existing iron and steel foundry that does not meet the work practice standards in §63.7700(e)(1) or (2) and for each scrap preheater at a new iron and steel foundry that does not meet the work practice standard in §63.7700(f), the average VOHAP concentration determined according to the performance test procedures in §63.7732(e), did not exceed 20 ppmv.

(10) For one or more automated conveyor and pallet cooling lines that use a sand mold system or automated shakeout lines that use a sand mold system at a new foundry,

(i) You have reduced the data from the CEMS to 3-hour averages according to the performance test procedures in §63.7732(f)(1) or (2); and

(ii) The 3-hour flow-weighted average VOHAP concentration, measured according to the performance test procedures in §63.7332(f)(1) or (2), did not exceed 20 ppmv.

(11) For each TEA cold box mold or core making line in a new or existing iron and steel foundry, the average TEA concentration, determined according to the performance test procedures in §63.7732(g), did not exceed 1 ppmv or was reduced by 99 percent.

(b) You have demonstrated initial compliance with the operating limits in §63.7690(b) if:

(1) For each capture system subject to the operating limit in §63.7690(b)(1)(ii),

(i) You have established appropriate site-specific operating limits in your operation and maintenance plan according to the requirements in §63.7710(b); and

(ii) You have a record of the operating parameter data measured during the performance test in accordance with §63.7733(a); and

(2) For each wet scrubber subject to the operating limits in §63.7690(b)(2) for pressure drop and scrubber water flow rate, you have established appropriate site-specific operating limits and have a record of the pressure drop and scrubber water flow rate measured during the performance test in accordance with §63.7733(b).

(3) For each combustion device subject to the operating limit in §63.7690(b)(3) for combustion zone temperature, you have a record of the combustion zone temperature measured during the performance test in accordance with §63.7732(e)(4).

(4) For each combustion device subject to the operating limit in §63.7690(b)(4) for combustion zone temperature, you have established appropriate site-specific operating limits and have a record of the combustion zone temperature measured during the performance test in accordance with §63.7733(c).

(5) For each acid wet scrubber subject to the operating limits in §63.7690(b)(5) for scrubbing liquid flow rate and scrubber blowdown pH,

(i) You have established appropriate site-specific operating limits for the scrubbing liquid flow rate and have a record of the scrubbing liquid flow rate measured during the performance test in accordance with §63.7733(d); and

(ii) You have a record of the pH of the scrubbing liquid blowdown measured during the performance test in accordance with §63.7732(g)(3).

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7221, February 7, 2008]

§ 63.7735 How do I demonstrate initial compliance with the work practice standards that apply to me?

(a) For each iron and steel foundry subject to the certification requirement in §63.7700(b), you have demonstrated initial compliance if you have certified in your notification of compliance status that: “At all times, your foundry will purchase and use only metal ingots, pig iron, slitter, or other materials that do not include post-consumer automotive body scrap, post-consumer engine blocks, post-consumer oil filters, oily turnings, lead components, mercury switches, plastics, or free organic liquids.”

(b) For each iron and steel foundry subject to the requirements in §63.7700(c) for a scrap inspection and selection plan, you have demonstrated initial compliance if you have certified in your notification of compliance status that:

(1) You have submitted a written plan to the Administrator for approval according to the requirements in §63.7700(c); and

(2) You will operate at all times according to the plan requirements.

(c) For each furan warm box mold or core making line in a new or existing foundry subject to the work practice standard in §63.7700(d), you have demonstrated initial compliance if you have certified in your notification of compliance status that:

(1) You will meet the no methanol requirement for the catalyst portion of each binder chemical formulation; and

(2) You have records documenting your certification of compliance, such as a material safety data sheet (provided that it contains appropriate information), a certified product data sheet, or a manufacturer's hazardous air pollutant data sheet, onsite and available for inspection.

(d) For each scrap preheater at an existing iron and steel foundry subject to the work practice standard in §63.7700(e)(1) or (2), you have demonstrated initial compliance if you have certified in your notification of compliance status that:

(1) You have installed a gas-fired preheater where the flame directly contacts the scrap charged, you will operate and maintain each gas-fired scrap preheater such that the flame directly contacts the scrap charged, and you have records documenting your certification of compliance that are onsite and available for inspection; or

(2) You will charge only material that is subject to and in compliance with the scrap certification requirements in §63.7700(b) and you have records documenting your certification of compliance that are onsite and available for inspection.

(e) For each scrap preheater at a new iron and steel foundry subject to the work practice standard in §63.7700(f), you have demonstrated initial compliance if you have certified in your notification of compliance status that you will charge only material that is subject to and in compliance with the scrap certification requirements in §63.7700(b) and you have records documenting your certification of compliance that are onsite and available for inspection.

[69 FR 21923, Apr. 22, 2004, as amended at 70 FR 29404, May 20, 2005]

§ 63.7736 How do I demonstrate initial compliance with the operation and maintenance requirements that apply to me?

(a) For each capture system subject to an operating limit in §63.7690(b), you have demonstrated initial compliance if you have met the conditions in paragraphs (a)(1) and (2) of this section.

(1) You have certified in your notification of compliance status that:

(i) You have submitted the capture system operation and maintenance plan to the Administrator for approval according to the requirements of §63.7710(b); and

(ii) You will inspect, operate, and maintain each capture system according to the procedures in the plan.

(2) You have certified in your performance test report that the system operated during the test at the operating limits established in your operation and maintenance plan.

(b) For each control device subject to an operating limit in §63.7690(b), you have demonstrated initial compliance if you have certified in your notification of compliance status that:

(1) You have submitted the control device operation and maintenance plan to the Administrator for approval according to the requirements of §63.7710(b); and

(2) You will inspect, operate, and maintain each control device according to the procedures in the plan.

(c) For each bag leak detection system, you have demonstrated initial compliance if you have certified in your notification of compliance status that:

(1) You have submitted the bag leak detection system monitoring information to the Administrator within the written O&M plan for approval according to the requirements of §63.7710(b);

(2) You will inspect, operate, and maintain each bag leak detection system according to the procedures in the plan; and

(3) You will follow the corrective action procedures for bag leak detection system alarms according to the requirements in the plan.

(d) For each pouring area and pouring station in a new or existing foundry, you have demonstrated initial compliance if you have certified in your notification of compliance status report that:

(1) You have submitted the mold vent ignition plan to the Administrator for approval according to the requirements in §63.7710(b); and

(2) You will follow the procedures for igniting mold vent gases according to the requirements in the plan.

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7221, February 7, 2008]

Continuous Compliance Requirements

§ 63.7740 What are my monitoring requirements?

(a) For each capture system subject to an operating limit in §63.7690(b)(1), you must install, operate, and maintain a CPMS according to the requirements in §63.7741(a) and the requirements in paragraphs (a)(1) and (2) of this section.

(1) If you use a flow measurement device to monitor the operating limit parameter, you must at all times monitor the hourly average rate (e.g., the hourly average actual volumetric flow rate through each separately ducted hood or the average hourly total volumetric flow rate at the inlet to the control device).

(2) Dampers that are manually set and remain in the same position are exempt from the requirement to install and operate a CPMS. If dampers are not manually set and remain in the same position, you must make a visual check at least once every 24 hours to verify that each damper for the capture system is in the same position as during the initial performance test.

(b) For each negative pressure baghouse or positive pressure baghouse equipped with a stack that is applied to meet any PM or total metal HAP emissions limitation in this subpart, you must at all times monitor the relative change in PM loadings using a bag leak detection system according to the requirements in § 63.7741(b).

(c) For each baghouse, regardless of type, that is applied to meet any PM or total metal HAP emissions limitation in this subpart, you must conduct inspections at their specified frequencies according to the requirements specified in paragraphs (c)(1) through (8) of this section.

(1) Monitor the pressure drop across each baghouse cell each day to ensure pressure drop is within the normal operating range identified in the manual.

(2) Confirm that dust is being removed from hoppers through weekly visual inspections or other means of ensuring the proper functioning of removal mechanisms.

(3) Check the compressed air supply for pulse-jet baghouses each day.

(4) Monitor cleaning cycles to ensure proper operation using an appropriate methodology.

(5) Check bag cleaning mechanisms for proper functioning through monthly visual inspections or equivalent means.

(6) Make monthly visual checks of bag tension on reverse air and shaker-type baghouses to ensure that bags are not kinked (kneed or bent) or lying on their sides. You do not have to make this check for shaker-type baghouses using self-tensioning (spring-loaded) devices.

(7) Confirm the physical integrity of the baghouse through quarterly visual inspections of the baghouse interior for air leaks.

(8) Inspect fans for wear, material buildup, and corrosion through quarterly visual inspections, vibration detectors, or equivalent means.

(d) For each wet scrubber subject to the operating limits in §63.7690(b)(2), you must at all times monitor the 3-hour average pressure drop and scrubber water flow rate using CPMS according to the requirements in §63.7741(c).

(e) For each combustion device subject to the operating limit in §63.7690(b)(3), you must at all times monitor the 15-minute average combustion zone temperature using a CPMS according to the requirements of §63.7741(d).

(f) For each combustion device subject to the operating limit in §63.7690(b)(4), you must at all times monitor the 3-hour average combustion zone temperature using CPMS according to the requirements in §63.7741(d).

(g) For each wet acid scrubber subject to the operating limits in §63.7690(b)(5),

(1) You must at all times monitor the 3-hour average scrubbing liquid flow rate using CPMS according to the requirements of §63.7741(e)(1); and

(2) You must at all times monitor the 3-hour average pH of the scrubber blowdown using CPMS according to the requirements in §63.7741(e)(2) or measure and record the pH of the scrubber blowdown once per production cycle using a pH probe and meter according to the requirements in §63.7741(e)(3).

(h) For one or more automated conveyor and pallet cooling lines and automated shakeout lines at a new iron and steel foundry subject to the VOHAP emissions limit in §63.7690(a)(10), you must at all times monitor the 3-hour average VOHAP concentration using a CEMS according to the requirements of §63.7741(g).

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7221, February 7, 2008]

§ 63.7741 What are the installation, operation, and maintenance requirements for my monitors?

(a) For each capture system subject to an operating limit in §63.7690(b)(1), you must install, operate, and maintain each CPMS according to the requirements in paragraphs (a)(1) through (3) of this section.

(1) If you use a flow measurement device to monitor an operating limit parameter for a capture system, you must meet the requirements in paragraphs (a)(1)(i) through (iv) of this section.

(i) Locate the flow sensor and other necessary equipment such as straightening vanes in a position that provides a representative flow and that reduces swirling flow or abnormal velocity distributions due to upstream and downstream disturbances.

(ii) Use a flow sensor with a minimum measurement sensitivity of 2 percent of the flow rate.

(iii) Conduct a flow sensor calibration check at least semiannually.

(iv) At least monthly, visually inspect all components, including all electrical and mechanical connections, for proper functioning.

(2) If you use a pressure measurement device to monitor the operating limit parameter for a capture system, you must meet the requirements in paragraphs (a)(2)(i) through (vi) of this section.

(i) Locate the pressure sensor(s) in or as close as possible to a position that provides a representative measurement of the pressure and that minimizes or eliminates pulsating pressure, vibration, and internal and external corrosion.

(ii) Use a gauge with a minimum measurement sensitivity of 0.5 inch of water or a transducer with a minimum measurement sensitivity of 1 percent of the pressure range.

(iii) Check the pressure tap for pluggage daily. If a ‘‘non-clogging’’ pressure tap is used, check for pluggage monthly.

(iv) Using a manometer or equivalent device such as a magnahelic or other pressure indicating transmitter, check gauge and transducer calibration quarterly.

(v) Conduct calibration checks any time the sensor exceeds the manufacturer's specified maximum operating pressure range, or install a new pressure sensor.

(vi) At least monthly, visually inspect all components, including all electrical and mechanical connections, for proper functioning.

(3) Record the results of each inspection, calibration, and validation check.

(b) For each negative pressure baghouse or positive pressure baghouse equipped with a stack that is applied to meet any PM or total metal HAP emissions limitation in this subpart, you must install, operate, and maintain a bag leak detection system according to the requirements in paragraphs (b)(1) through (7) of this section.

(1) The system must be certified by the manufacturer to be capable of detecting emissions of particulate matter at concentrations of 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less.

(2) The bag leak detection system sensor must provide output of relative particulate matter loadings and the owner or operator shall continuously record the output from the bag leak detection system using electronic or other means (e.g., using a strip chart recorder or a data logger).

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

(4) The initial adjustment of the system must, at minimum, consist of establishing the baseline output by adjusting the sensitivity (range) and the averaging period of the device, and establishing the alarm set points and the alarm delay time (if applicable).

(5) Following the initial adjustment, do not adjust the sensitivity or range, averaging period, alarm set point, or alarm delay time without approval from the Administrator. Except, once per quarter, you may adjust the sensitivity of the bag leak detection system to account for seasonable effects including temperature and humidity according to the procedures in the operation and maintenance plan required by §63.7710(b).

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

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

(c) For each wet scrubber subject to the operating limits in §63.7690(b)(2), you must install and maintain CPMS to measure and record the pressure drop and scrubber water flow rate according to the requirements in paragraphs (c)(1) and (2) of this section.

(1) For each CPMS for pressure drop you must:

(i) Locate the pressure sensor in or as close as possible to a position that provides a representative measurement of the pressure drop and that minimizes or eliminates pulsating pressure, vibration, and internal and external corrosion.

(ii) Use a gauge with a minimum measurement sensitivity of 0.5 inch of water or a transducer with a minimum measurement sensitivity of 1 percent of the pressure range.

(iii) Check the pressure tap for pluggage daily. If a ‘‘non-clogging’’ pressure tap is used, check for pluggage monthly

(iv) Using a manometer or equivalent device such as a magnahelic or other pressure indicating transmitter, check gauge and transducer calibration quarterly.

(v) Conduct calibration checks any time the sensor exceeds the manufacturer's specified maximum operating pressure range, or install a new pressure sensor.

(vi) At least monthly, visually inspect all components, including all electrical and mechanical connections, for proper functioning.

(2) For each CPMS for scrubber liquid flow rate, you must:

(i) Locate the flow sensor and other necessary equipment in a position that provides a representative flow and that reduces swirling flow or abnormal velocity distributions due to upstream and downstream disturbances.

(ii) Use a flow sensor with a minimum measurement sensitivity of 2 percent of the flow rate.

(iii) Conduct a flow sensor calibration check at least semiannually according to the manufacturer's instructions.

(iv) At least monthly, visually inspect all components, including all electrical and mechanical connections, for proper functioning.

(d) For each combustion device subject to the operating limit in §63.7690(b)(3) or (4), you must install and maintain a CPMS to measure and record the combustion zone temperature according to the requirements in paragraphs (d)(1) through (8) of this section.

(1) Locate the temperature sensor in a position that provides a representative temperature.

(2) For a noncryogenic temperature range, use a temperature sensor with a minimum tolerance of 2.2 °C or 0.75 percent of the temperature value, whichever is larger.

(3) For a cryogenic temperature range, use a temperature sensor with a minimum tolerance of 2.2 °C or 2 percent of the temperature value, whichever is larger.

(4) Shield the temperature sensor system from electromagnetic interference and chemical contaminants.

(5) If you use a chart recorder, it must have a sensitivity in the minor division of at least 20 °F.

(6) Perform an electronic calibration at least semiannually according to the procedures in the manufacturer's owners manual. Following the electronic calibration, conduct a temperature sensor validation check, in which a second or redundant temperature sensor placed nearby the process temperature sensor must yield a reading within 16.7 °C of the process temperature sensor's reading.

(7) Conduct calibration and validation checks any time the sensor exceeds the manufacturer's specified maximum operating temperature range, or install a new temperature sensor.

(8) At least monthly, visually inspect all components, including all electrical and mechanical connections, for proper functioning.

(e) For each wet acid scrubber subject to the operating limits in §63.7690(b)(5), you must:

(1) Install and maintain CPMS to measure and record the scrubbing liquid flow rate according to the requirements in paragraph (c)(2) of this section; and

(2) Install and maintain CPMS to measure and record the pH of the scrubber blowdown according to the requirements in paragraph (e)(2)(i) through (iv) of this section.

(i) Locate the pH sensor in a position that provides a representative measurement of the pH and that minimizes or eliminates internal and external corrosion.

(ii) Use a gauge with a minimum measurement sensitivity of 0.1 pH or a transducer with a minimum measurement sensitivity of 5 percent of the pH range.

(iii) Check gauge calibration quarterly and transducer calibration monthly using a manual pH gauge.

(iv) At least monthly, visually inspect all components, including all electrical and mechanical connections, for proper functioning.

(3) As an alternative to the CPMS required in paragraph (e)(2) of this section, you may use a pH probe to extract a sample for analysis by a pH meter that meets the requirements in paragraphs (e)(3)(i) through (iii) of this section.

(i) The pH meter must have a range of at least 1 to 5 or more;

(ii) The pH meter must have an accuracy of ±0.1; and

(iii) The pH meter must have a resolution of at least 0.1 pH.

(f) You must operate each CPMS used to meet the requirements of this subpart according to the requirements specified in paragraphs (f)(1) through (3) of this section.

(1) Each CPMS must complete a minimum of one cycle of operation for each successive 15-minute period. You must have a minimum of three of the required four data points to constitute a valid hour of data.

(2) Each CPMS must have valid hourly data for 100 percent of every averaging period.

(3) Each CPMS must determine and record the hourly average of all recorded readings and the 3-hour average of all recorded readings.

(g) For each automated conveyor and pallet cooling line and automated shakeout line at a new iron and steel foundry subject to the VOHAP emissions limit in §63.7690(a)(10), you must install, operate, and maintain a CEMS to measure and record the concentration of VOHAP emissions according to the requirements in paragraphs (g)(1) through (3) of this section.

(1) You must install, operate, and maintain each CEMS according to Performance Specification 8 in 40 CFR part 60, appendix B.

(2) You must conduct a performance evaluation of each CEMS according to the requirements of §63.8 and Performance Specification 8 in 40 CFR part 60, appendix B.

(3) You must operate each CEMS according to the requirements specified in paragraph (g)(3)(i) through (iv) of this section.

(i) As specified in §63.8(c)(4)(ii), each CEMS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.

(ii) You must reduce CEMS data as specified in §63.8(g)(2).

(iii) Each CEMS must determine and record the 3-hour average emissions using all the hourly averages collected for periods during which the CEMS is not out-of-control.

(iv) Record the results of each inspection, calibration, and validation check.

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7221, February 7, 2008]

§ 63.7742 How do I monitor and collect data to demonstrate continuous compliance?

(a) Except for monitoring malfunctions, associated repairs, and required quality assurance or control activities (including as applicable, calibration checks and required zero and span adjustments), you must monitor continuously (or collect data at all required intervals) any time a source of emissions is operating.

(b) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emissions or operating levels or to fulfill a minimum data availability requirement, if applicable. You must use all the data collected during all other periods in assessing compliance.

(c) A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

§ 63.7743 How do I demonstrate continuous compliance with the emissions limitations that apply to me?

(a) You must demonstrate continuous compliance by meeting the applicable conditions in paragraphs (a)(1) through (12) of this section. When alternative emissions limitations are provided for a given emissions source, you must comply with the alternative emissions limitation most recently selected as your compliance alternative.

(1) For each electric arc metal melting furnace, electric induction metal melting furnace, or scrap preheater at an existing iron and steel foundry,

(i) Maintaining the average PM concentration in the exhaust stream at or below 0.005 gr/dscf; or

(ii) Maintaining the average total metal HAP concentration in the exhaust stream at or below 0.0004 gr/dscf.

(2) For each cupola metal melting furnace at an existing iron and steel foundry,

(i) Maintaining the average PM concentration in the exhaust stream at or below 0.006 gr/dscf; or

(ii) Maintaining the average total metal HAP concentration in the exhaust stream at or below 0.0005 gr/dscf; or

(iii) Maintaining the average PM mass emissions rate at or below 0.10 pound of PM per ton (lb/ton) of metal charged; or

(iv) Maintaining the average total metal HAP mass emissions rate at or below 0.008 pound of total metal HAP per ton (lb/ton) of metal charged.

(3) For each cupola metal melting furnace or electric arc metal melting furnace at new iron and steel foundry, (i) Maintaining the average PM concentration in the exhaust stream at or below 0.002 gr/dscf; or

(ii) Maintaining the average total metal HAP concentration in the exhaust stream at or below 0.0002 gr/dscf.

(4) For each electric induction metal melting furnace or scrap preheater at a new iron and steel foundry,

(i) Maintaining the average PM concentration in the exhaust stream at or below 0.001 gr/dscf; or

(ii) Maintaining the average total metal HAP concentration in the exhaust stream at or below 0.00008 gr/dscf.

(5) For each pouring station at an existing iron and steel foundry,

(i) Maintaining the average PM concentration in the exhaust stream at or below 0.010 gr/dscf; or

(ii) Maintaining the average total metal HAP concentration in the exhaust stream at or below 0.0008 gr/dscf.

(6) For each pouring area or pouring station at a new iron and steel foundry,

(i) Maintaining the average PM concentration in the exhaust stream at or below 0.002 gr/dscf; or

(ii) Maintaining the average total metal HAP concentration in the exhaust stream at or below 0.0002 gr/dscf.

(7) For each building or structure housing any iron and steel foundry emissions source at the iron and steel foundry, maintaining the opacity of any fugitive emissions from foundry operations discharged to the atmosphere at or below 20 percent opacity (6-minute average), except for one 6-minute average per hour that does not exceed 27 percent opacity.

(8) For each cupola metal melting furnace at a new or existing iron and steel foundry, maintaining the average VOHAP concentration in the exhaust stream at or below 20 ppmv corrected to 10 percent oxygen.

(9) For each scrap preheater at an existing new iron and steel foundry that does not comply with the work practice standard in §63.7700(e)(1) or (2) and for each scrap preheater at a new iron and steel foundry that does not comply with the work practice standard in §63.7700(f), maintaining the average VOHAP concentration in the exhaust stream at or below 20 ppmv.

(10) For one or more automated conveyor and pallet cooling lines or automated shakeout lines that use a sand mold system at a new iron and steel foundry,

(i) Maintaining the 3-hour flow-weighted average VOHAP concentration in the exhaust stream at or below 20 ppmv;

(ii) Inspecting and maintaining each CEMS according to the requirements of §63.7741(g) and recording all information needed to document conformance with these requirements; and

(iii) Collecting and reducing monitoring data for according to the requirements of §63.7741(g) and recording all information needed to document conformance with these requirements.

(11) For each TEA cold box mold or core making line at a new or existing iron and steel foundry, maintaining a 99 percent reduction in the VOHAP concentration in the exhaust stream or maintaining the average VOHAP concentration in the exhaust stream at or below 1 ppmv.

(12) Conducting subsequent performance tests at least every 5 years for each emissions source subject to an emissions limit for PM, total metal HAP, VOHAP, or TEA in §63.7690(a) and subsequent

performance tests at least every 6 months for each building or structure subject to the opacity limit in §63.7690(a)(7).

(b) You must demonstrate continuous compliance for each capture system subject to an operating limit in §63.7690(b)(1) by meeting the requirements in paragraphs (b)(1) and (2) of this section.

(1) Operating the capture system at or above the lowest values or settings established for the operating limits in your operation and maintenance plan; and

(2) Monitoring the capture system according to the requirements in §63.7740(a) and collecting, reducing, and recording the monitoring data for each of the operating limit parameters according to the applicable requirements in this subpart.

(c) For each baghouse,

(1) Inspecting and maintaining each baghouse according to the requirements of §63.7740(c)(1) through (8) and recording all information needed to document conformance with these requirements; and

(2) If the baghouse is equipped with a bag leak detection system, maintaining records of the times the bag leak detection system sounded, and for each valid alarm, the time you initiated corrective action, the corrective action taken, and the date on which corrective action was completed.

(d) For each wet scrubber that is subject to the operating limits in §63.7690(b)(2), you must demonstrate continuous compliance by:

(1) Maintaining the 3-hour average pressure drop and 3-hour average scrubber water flow rate at levels no lower than those established during the initial or subsequent performance test;

(2) Inspecting and maintaining each CPMS according to the requirements of §63.7741(c) and recording all information needed to document conformance with these requirements; and

(3) Collecting and reducing monitoring data for pressure drop and scrubber water flow rate according to the requirements of §63.7741(f) and recording all information needed to document conformance with these requirements.

(e) For each combustion device that is subject to the operating limit in §63.7690(b)(3), you must demonstrate continuous compliance by:

(1) Maintaining the 15-minute average combustion zone temperature at a level no lower than 1,300 °F;

(2) Inspecting and maintaining each CPMS according to the requirements of §63.7741(d) and recording all information needed to document conformance with these requirements; and

(3) Collecting and reducing monitoring data for combustion zone temperature according to the requirements of §63.7741(f) and recording all information needed to document conformance with these requirements.

(f) For each combustion device that is subject to the operating limit in §63.7690(b)(4), you must demonstrate continuous compliance by:

(1) Maintaining the 3-hour average combustion zone temperature at a level no lower that established during the initial or subsequent performance test;

(2) Inspecting and maintaining each CPMS according to the requirements of §63.7741(d) and recording all information needed to document conformance with these requirements; and

(3) Collecting and reducing monitoring data for combustion zone temperature according to the requirements of §63.7741(f) and recording all information needed to document conformance with these requirements.

(g) For each acid wet scrubber subject to the operating limits in §63.7690(b)(5), you must demonstrate continuous compliance by:

(1) Maintaining the 3-hour average scrubbing liquid flow rate at a level no lower than the level established during the initial or subsequent performance test;

(2) Maintaining the 3-hour average pH of the scrubber blowdown at a level no higher than 4.5 (if measured by a CPMS) or maintaining the pH level of the scrubber blowdown during each production shift no higher than 4.5;

(3) Inspecting and maintaining each CPMS according to the requirements of §63.7741(e) and recording all information needed to document conformance with these requirements; and

(4) Collecting and reducing monitoring data for scrubbing liquid flow rate and scrubber blowdown pH according to the requirements of §63.7741(f) and recording all information needed to document conformance with these requirements. If the pH level of the scrubber blowdown is measured by a probe and meter, you must demonstrate continuous compliance by maintaining records that document the date, time, and results of each sample taken for each production shift.

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7222, February 7, 2008]

§ 63.7744 How do I demonstrate continuous compliance with the work practice standards that apply to me?

(a) You must maintain records that document continuous compliance with the certification requirements in §63.7700(b) or with the procedures in your scrap selection and inspection plan required in §63.7700(c). Your records documenting compliance with the scrap selection and inspection plan must include a copy (kept onsite) of the procedures used by the scrap supplier for either removing accessible mercury switches or for purchasing automobile bodies that have had mercury switches removed, as applicable.

(b) You must keep records of the chemical composition of all catalyst binder formulations applied in each furan warm box mold or core making line at a new or existing iron and steel foundry to demonstrate continuous compliance with the requirements in §63.7700(d).

(c) For a scrap preheater at an existing iron and steel foundry, you must operate and maintain each gas-fired preheater such that the flame directly contacts the scrap charged to demonstrate continuous compliance with the requirement §63.7700(e)(1). If you choose to meet the work practice standard in §63.7700(e)(2), you must keep records to document that the scrap preheater charges only material that is subject to and in compliance with the scrap certification requirements in §63.7700(b).

(d) For a scrap preheater at a new iron and steel foundry, you must keep records to document that each scrap preheater charges only material that is subject to and in compliance with the scrap certification requirements in §63.7700(b) to demonstrate continuous compliance with the requirement in §63.7700(f).

§ 63.7745 How do I demonstrate continuous compliance with the operation and maintenance requirements that apply to me?

(a) For each capture system and control device for an emissions source subject to an emissions limit in §63.7690(a), you must demonstrate continuous compliance with the operation and maintenance requirements of §63.7710 by:

(1) Making monthly inspections of capture systems and initiating corrective action according to §63.7710(b)(1) and recording all information needed to document conformance with these requirements;

(2) Performing preventative maintenance for each control device according to the preventive maintenance plan required by §63.7710(b)(3) and recording all information needed to document conformance with these requirements;

(3) Operating and maintaining each bag leak detection system according to the site-specific monitoring plan required by §63.7710(b)(4) and recording all information needed to demonstrate conformance with these requirements;

(4) Initiating and completing corrective action for a bag leak detection system alarm according to the corrective action plan required by §63.7710(b)(5) and recording all information needed to document conformance with these requirements; and

(5) Igniting gases from mold vents according to the procedures in the plan required by §63.7710(b)(6). (Any instance where you fail to follow the procedures is a deviation that must be included in your semiannual compliance report.)

(b) You must maintain a current copy of the operation and maintenance plans required by §63.7710(b) onsite and available for inspection upon request. You must keep the plans for the life of the iron and steel foundry or until the iron and steel foundry is no longer subject to the requirements of this subpart.

§ 63.7746 What other requirements must I meet to demonstrate continuous compliance?

(a) Deviations. You must report each instance in which you did not meet each emissions limitation in §63.7690 (including each operating limit) that applies to you. This requirement includes periods of startup, shutdown, and malfunction. You also must report each instance in which you did not meet each work practice standard in §63.7700 and each operation and maintenance requirement of §63.7710 that applies to you. These instances are deviations from the emissions limitations, work practice standards, and operation and maintenance requirements in this subpart. These deviations must be reported according to the requirements of §63.7751.

(b) Startups, shutdowns, and malfunctions. (1) Consistent with the requirements of §§63.6(e) and 63.7(e)(1), deviations that occur during a period of startup, shutdown, or malfunction are not violations if you demonstrate to the Administrator's satisfaction that you were operating in accordance with §63.6(e)(1).

(2) The Administrator will determine whether deviations that occur during a period of startup, shutdown, or malfunction are violations according to the provisions in §63.6(e).

[69 FR 21923, Apr. 22, 2004, as amended at 71 FR 20468, Apr. 20, 2006]

§ 63.7747 How do I apply for alternative monitoring requirements for a continuous emissions monitoring system?

(a) You may request an alternative monitoring method to demonstrate compliance with the VOHAP emissions limits in §63.7690(a)(10) for automated pallet cooling lines or automated shakeout lines at a new iron and steel foundry according to the procedures in this section.

(b) You can request approval to use an alternative monitoring method in the notification of construction or reconstruction for new sources, or at any time.

(c) You must submit a monitoring plan that includes a description of the control technique or pollution prevention technique, a description of the continuous monitoring system or method including appropriate operating parameters that will be monitored, test results demonstrating compliance with the emissions limit, operating limit(s) (if applicable) determined according to the test results, and the frequency of measuring and recording to establish continuous compliance. If applicable, you must also include operation and maintenance requirements for the monitors.

(d) The monitoring plan is subject to approval by the Administrator. Use of the alternative monitoring method must not begin until approval is granted by the Administrator.

Notifications, Reports, and Records

§ 63.7750 What notifications must I submit and when?

(a) You must submit all of the notifications required by §§63.6(h)(4) and (5), 63.7(b) and (c); 63.8(e); 63.8(f)(4) and (6); 63.9(b) through (h) that apply to you by the specified dates.

(b) As specified in §63.9(b)(2), if you start up your iron and steel foundry before April 22, 2004, you must submit your initial notification no later than August 20, 2004.

(c) If you start up your new iron and steel foundry on or after April 22, 2004, you must submit your initial notification no later than 120 calendar days after you become subject to this subpart.

(d) If you are required to conduct a performance test, you must submit a notification of intent to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin as required by §63.7(b)(1).

(e) If you are required to conduct a performance test or other initial compliance demonstration, you must submit a notification of compliance status according to the requirements of §63.9(h)(2)(ii). For opacity performance tests, the notification of compliance status may be submitted with the semiannual compliance report in §63.7751(a) and (b) or the semiannual part 70 monitoring report in § 63.7551(d).

(1) For each initial compliance demonstration that does not include a performance test, you must submit the notification of compliance status before the close of business on the 30th calendar day following completion of the initial compliance demonstration.

(2) For each initial compliance demonstration that does include a performance test, you must submit the notification of compliance status, including the performance test results, before the close of business on the 60th calendar day following the completion of the performance test according to the requirement specified in §63.10(d)(2).

§ 63.7751 What reports must I submit and when?

(a) Compliance report due dates. Unless the Administrator has approved a different schedule, you must submit a semiannual compliance report to your permitting authority according to the requirements specified in paragraphs (a)(1) through (5) of this section.

(1) The first compliance report must cover the period beginning on the compliance date that is specified for your iron and steel foundry by §63.7683 and ending on June 30 or December 31, whichever date comes first after the compliance date that is specified for your iron and steel foundry.

(2) The first compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date comes first after your first compliance report is due.

(3) Each subsequent compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(4) Each subsequent compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date comes first after the end of the semiannual reporting period.

(5) For each iron and steel foundry that is subject to permitting regulations pursuant to 40 CFR part 70 or 40 CFR part 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), you may submit the first and subsequent compliance reports according to the dates the permitting authority has established instead of the dates specified in paragraphs (a)(1) through (4) of this section.

(b) Compliance report contents. Each compliance report must include the information specified in paragraphs (b)(1) through (3) of this section and, as applicable, paragraphs (b)(4) through (8) of this section.

(1) Company name and address.

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

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

(4) If you had a startup, shutdown, or malfunction during the reporting period and you took action consistent with your startup, shutdown, and malfunction plan, the compliance report must include the information in §63.10(d)(5)(i).

(5) If there were no deviations from any emissions limitations (including operating limit), work practice standards, or operation and maintenance requirements, a statement that there were no deviations from the emissions limitations, work practice standards, or operation and maintenance requirements during the reporting period.

(6) If there were no periods during which a continuous monitoring system (including a CPMS or CEMS) was out-of-control as specified by §63.8(c)(7), a statement that there were no periods during which the CPMS was out-of-control during the reporting period.

(7) For each deviation from an emissions limitation (including an operating limit) that occurs at an iron and steel foundry for which you are not using a continuous monitoring system (including a CPMS or CEMS) to comply with an emissions limitation or work practice standard required in this subpart, the compliance

report must contain the information specified in paragraphs (b)(1) through (4) and (b)(7)(i) and (ii) of this section. This requirement includes periods of startup, shutdown, and malfunction.

(i) The total operating time of each emissions source during the reporting period.

(ii) Information on the number, duration, and cause of deviations (including unknown cause) as applicable and the corrective action taken.

(8) For each deviation from an emissions limitation (including an operating limit) or work practice standard occurring at an iron and steel foundry where you are using a continuous monitoring system (including a CPMS or CEMS) to comply with the emissions limitation or work practice standard in this subpart, you must include the information specified in paragraphs (b)(1) through (4) and (b)(8)(i) through (xi) of this section. This requirement includes periods of startup, shutdown, and malfunction.

(i) The date and time that each malfunction started and stopped.

(ii) The date and time that each continuous monitoring system was inoperative, except for zero (low-level) and high-level checks.

(iii) The date, time, and duration that each continuous monitoring system was out-of-control, including the information in §63.8(c)(8).

(iv) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of startup, shutdown, or malfunction or during another period.

(v) A summary of the total duration of the deviations during the reporting period and the total duration as a percent of the total source operating time during that reporting period.

(vi) A breakdown of the total duration of the deviations during the reporting period into those that are due to startup, shutdown, control equipment problems, process problems, other known causes, and unknown causes.

(vii) A summary of the total duration of continuous monitoring system downtime during the reporting period and the total duration of continuous monitoring system downtime as a percent of the total source operating time during the reporting period.

(viii) A brief description of the process units.

(ix) A brief description of the continuous monitoring system.

(x) The date of the latest continuous monitoring system certification or audit.

(xi) A description of any changes in continuous monitoring systems, processes, or controls since the last reporting period.

(c) Immediate startup, shutdown, and malfunction report. If you had a startup, shutdown, or malfunction during the semiannual reporting period that was not consistent with your startup, shutdown, and malfunction plan and the source exceeds any applicable emissions limitation in § 63.7690, you must submit an immediate startup, shutdown, and malfunction report according to the requirements of §63.10(d)(5)(ii).

(d) Part 70 monitoring report. If you have obtained a title V operating permit for an iron and steel foundry pursuant to 40 CFR part 70 or 40 CFR part 71, you must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If you submit a compliance report for an iron and steel foundry along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the compliance report includes all the required information concerning deviations from any emissions limitation or operation and maintenance requirement in this subpart, submission of the compliance report satisfies any obligation to report the same deviations in the semiannual monitoring report. However, submission of a compliance report does not otherwise affect any obligation you may have to report deviations from permit requirements for an iron and steel foundry to your permitting authority.

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7222, February 7, 2008]

§ 63.7752 What records must I keep?

(a) You must keep the records specified in paragraphs (a)(1) through (4) of this section:

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any initial notification or notification of compliance status that you submitted, according to the requirements of §63.10(b)(2)(xiv).

(2) The records specified in §63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction.

(3) Records of performance tests and performance evaluations as required by §63.10(b)(2)(viii).

(4) Records of the annual quantity of each chemical binder or coating material used to coat or make molds and cores, the Material Data Safety Sheet or other documentation that provides the chemical composition of each component, and the annual quantity of HAP used in these chemical binder or coating materials at the foundry as calculated from the recorded quantities and chemical compositions (from Material Data Safety Sheets or other documentation).

(b) You must keep the following records for each CEMS.

(1) Records described in §63.10(b)(2)(vi) through (xi).

(2) Previous (i.e., superseded) versions of the performance evaluation plan as required in §63.8(d)(3).

(3) Request for alternatives to relative accuracy tests for CEMS as required in §63.8(f)(6)(i).

(4) Records of the date and time that each deviation started and stopped, and whether the deviation occurred during a period of startup, shutdown, or malfunction or during another period.

(c) You must keep the records required by §§63.7743, 63.7744, and 63.7745 to show continuous compliance with each emissions limitation, work practice standard, and operation and maintenance requirement that applies to you.

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7222, February 7, 2008]

§ 63.7753 In what form and for how long must I keep my records?

(a) You must keep your records in a form suitable and readily available for expeditious review, according to the requirements of §63.10(b)(1).

(b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record onsite for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record according to the requirements in §63.10(b)(1). You can keep the records for the previous 3 years offsite.

Other Requirements and Information

§ 63.7760 What parts of the General Provisions apply to me?

Table 1 to this subpart shows which parts of the General Provisions in §§63.1 through 63.15 apply to you.

§ 63.7761 Who implements and enforces this subpart?

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

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

(c) The authorities that cannot be delegated to State, local, or tribal agencies are specified in paragraphs (c)(1) through (4) of this section.

(1) Approval of alternatives to non-opacity emissions limitations in §63.7690 and work practice standards in §63.7700 under §63.6(g).

(2) Approval of major alternatives to test methods under §63.7(e)(2)(ii) and (f) and as defined in §63.90.

(3) Approval of major alternatives to monitoring under §63.8(f) and as defined in §63.90.

(4) Approval of major alternatives to recordkeeping and reporting under §63.10(f) and as defined in §63.90.

Definitions

§ 63.7765 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act (CAA), in §63.2, and in this section.

Automated conveyor and pallet cooling line means any dedicated conveyor line or area used for cooling molds received from pouring stations.

Automated shakeout line means any mechanical process unit designed for and dedicated to separating a casting from a mold. These mechanical processes include, but are not limited to, shaker decks, rotary separators, and high-frequency vibration units. Automated shakeout lines do not include manual

processes for separating a casting from a mold, such as personnel using a hammer, chisel, pick ax, sledge hammer, or jackhammer.

Bag leak detection system means a system that is capable of continuously monitoring relative particulate matter (dust) loadings in the exhaust of a baghouse to detect bag leaks and other upset conditions. A bag leak detection system includes, but is not limited to, an instrument that operates on triboelectric, electrodynamic, light scattering, light transmittance, or other effect to continuously monitor relative particulate matter loadings.

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

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

Cold box mold or core making line means a mold or core making line in which the formed aggregate is hardened by catalysis with a gas.

Combustion device means an afterburner, thermal incinerator, or scrap preheater.

Conveyance means the system of equipment that is designed to capture pollutants at the source, convey them through ductwork, and exhaust them using forced ventilation. A conveyance may, but does not necessarily include, control equipment designed to reduce emissions of the pollutants. Emissions that are released through windows, vents, or other general building ventilation or exhaust systems are not considered to be discharged through a conveyance.

Cooling means the process of molten metal solidification within the mold and subsequent temperature reduction prior to shakeout.

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

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

(1) Fails to meet any requirement or obligation established by this subpart including, but not limited to, any emissions limitation (including operating limits), work practice standard, or operation and maintenance requirement;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any iron and steel foundry required to obtain such a permit; or

(3) Fails to meet any emissions limitation (including operating limits) or work practice standard in this subpart during startup, shutdown, or malfunction, regardless of whether or not such failure is permitted by this subpart. A deviation is not always a violation. The determination of whether a deviation constitutes a violation of the standard is up to the discretion of the entity responsible for enforcement of the standards.

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

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

Emissions limitation means any emissions limit or operating limit.

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

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

Fresh acid solution means a sulfuric acid solution used for the control of triethylamine emissions that has a pH of 2.0 or less.

Fugitive emissions means any pollutant released to the atmosphere that is not discharged through a conveyance as defined in this subpart.

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

Hazardous air pollutant means any substance on the list originally established in 112(b)(1) of the CAA and subsequently amended as published in the Code of Federal Regulations.

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

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

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

Mold vent means an intentional opening in a mold through which gases containing pyrolysis products of organic mold and core constituents produced by contact with or proximity to molten metal normally escape the mold during and after metal pouring.

Off blast means those periods of cupola operation when the cupola is not actively being used to produce molten metal. Off blast conditions include cupola startup when air is introduced to the cupola to preheat the sand bed and other cupola startup procedures as defined in the startup, shutdown, and malfunction plan. Off blast conditions also include idling conditions when the blast air is turned off or down to the point that the cupola does not produce additional molten metal.

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

Pouring area means an area, generally associated with floor and pit molding operations, in which molten metal is brought to each individual mold. Pouring areas include all pouring operations that do not meet the definition of a pouring station.

Pouring station means the fixed location to which molds are brought in a continuous or semicontinuous manner to receive molten metal, after which the molds are moved to a cooling area.

Responsible official means responsible official as defined in §63.2.

Scrap preheater means a vessel or other piece of equipment in which metal scrap that is to be used as melting furnace feed is heated to a temperature high enough to eliminate volatile impurities or other tramp materials by direct flame heating or similar means of heating. Scrap dryers, which solely remove moisture from metal scrap, are not considered to be scrap preheaters for purposes of this subpart.

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

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

Work practice standard means any design, equipment, work practice, or operational standard, or combination thereof, that is promulgated pursuant to section 112(h) of the CAA.

[69 FR 21923, Apr. 22, 2004, as amended at 70 FR 29404, May 20, 2005; 73 FR 7222, February 7, 2008]

Table 1 to Subpart EEEEE of Part 63—Applicability of General Provisions to Subpart EEEEE

[As stated in §63.7760, you must meet each requirement in the following table that applies to you.]

Citation	Subject	Applies to Subpart EEEEE?	Explanation
63.1	Applicability	Yes	
63.2	Definitions	Yes	
63.3	Units and abbreviations	Yes	
63.4	Prohibited activities	Yes	
63.5	Construction/reconstruction	Yes	

63.6(a)–(g)	Compliance with standards and maintenance requirements	Yes	
63.6(h)	Opacity and visible emissions standards	Yes	
63.6(i)–(j)	Compliance extension and Presidential compliance exemption	Yes	
63.7(a)(1)–(a)(2)	Applicability and performance test dates	No	Subpart EEEEE specifies applicability and performance test dates.
63.7(a)(3), (b)–(h)	Performance testing requirements	Yes	
63.8(a)(1)–(a)(3), (b), (c)(1)–(c)(3), (c)(6)–(c)(8), (d), (e), (f)(1)–(f)(6), (g)(1)–(g)(4)	Monitoring requirements	Yes	Subpart EEEEE specifies requirements for alternative monitoring systems.
63.8(a)(4)	Additional monitoring requirements for control devices in §63.11	No	Subpart EEEEE does not require flares.
63.8(c)(4)	Continuous monitoring system (CMS) requirements	No	Subpart EEEEE specifies requirements for operation of CMS and CEMS.
63.8(c)(5)	Continuous opacity monitoring system (COMS) Minimum Procedures	No	Subpart EEEEE does not require COMS.
63.8(g)(5)	Data reduction	No	Subpart EEEEE specifies data reduction requirements.
63.9	Notification requirements	Yes	Except: for opacity performance tests, Subpart EEEEE allows the notification of compliance status to be submitted with the semiannual compliance report or the semiannual part 70 monitoring report.
63.10(a)–(b), (c)(1)–(6), (c)(9)–(15), (d)(1)–(2), (e)(1)–(2), (f)	Recordkeeping and reporting requirements	Yes	Additional records for CMS in §63.10(c)(1)–(6), (9)–(15) apply only to CEMS.
63.10(c)(7)–(8)	Records of excess emissions and parameter monitoring exceedances for CMS	No	Subpart EEEEE specifies records requirements.
63.10(d)(3)	Reporting opacity or visible emissions observations	Yes	
63.10(e)(3)	Excess emissions reports	No	Subpart EEEEE specifies reporting requirements.
63.10(e)(4)	Reporting COMS data	No	Subpart EEEEE data does

			not require COMS.
63.11	Control device requirements	No	Subpart EEEEE does not require flares.
63.12	State authority and delegations	Yes	
63.13–63.15	Addresses of State air pollution control agencies and EPA regional offices. Incorporation by reference. Availability of information and confidentiality	Yes	

[69 FR 21923, Apr. 22, 2004, as amended at 73 FR 7223, February 7, 2008]

Indiana Department of Environmental Management
Office of Air Quality

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

Source Description and Location

Source Name:	**Waupaca Foundry, Inc. Plant 5**
Source Location:	**9856 State Highway 66, Tell City, Indiana 47586**
County:	**Perry**
SIC Code:	**3321 (Gray and Ductile Iron Foundries)**
Significant Source Modification No.:	**123-33284-00019**
Significant Permit Modification No.:	**123-33300-00019**
Permit Reviewer:	**Sarah Street**

Existing Approvals

The source was issued Part 70 Operating Permit Renewal No. T123-27047-00019 on July 23, 2009. The source has since received the following approvals:

(a) Significant Permit Modification No. 123-28470-00019, issued on November 20, 2009.

(b) Significant Source Modification No. 123-29490-00019, issued on May 10, 2011.

(c) Significant Permit Modification No. 123-29497-00019, issued on June 1, 2011.

(d) Minor Source Modification No. 123-31689-00019, issued on April 25, 2012.

(e) Minor Permit Modification No. 123-31720-00019, issued on June 29, 2012.

(f) Administrative Amendment No. 123-32226-00019, issued on August 27, 2012.

County Attainment Status

The source is located in Perry County.

Pollutant	Designation
SO_2	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O_3	Unclassifiable or attainment effective June 15, 2004, for the 8-hour ozone standard.[1]
PM_{10}	Unclassifiable effective November 15, 1990.
NO_2	Cannot be classified or better than national standards.
Pb	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. Unclassifiable or attainment effective April 5, 2005, for PM2.5.

(a) Ozone Standards

Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality

Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to ozone. Perry County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) $PM_{2.5}$
Perry County has been classified as attainment for $PM_{2.5}$. On May 8, 2008 U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for $PM_{2.5}$ emissions. These rules became effective on July 15, 2008. On May 4, 2011 the air pollution control board issued an emergency rule establishing the direct $PM_{2.5}$ significant level at ten (10) tons per year. This rule became effective, June 28, 2011. Therefore, direct $PM_{2.5}$ and SO_2 emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.

(c) Other Criteria Pollutants
Perry County has been classified as attainment or unclassifiable in Indiana for all criteria pollutatnts. 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

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 (tons/year)
PM	Greater than 100
PM10	Greater than 100
SO_2	Greater than 100
NO_x	Greater than 100
VOC	Greater than 100
CO	Greater than 100

(a) This existing source is a major stationary source, under PSD (326 IAC 2-2), because PM, PM10, SO2, NOx, VOC, and CO are each 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(gg)(1).

(b) These emissions are based upon Part 70 Renewal No. 123-27047-00019, issued on July 23, 2009.

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

HAPs	Potential To Emit (tons/year)
Single HAP	Greater than 10
Total HAPs	Greater than 25

This existing source is a major source of HAPs, as defined in 40 CFR 63.41, 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).

Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed a modification application, submitted by Waupaca Foundry, Inc. Plant 5 on June 7, 2013, relating to the modification of an existing stationary gray and ductile iron foundry.

Waupaca Foundry, Inc. is proposing to capture the fumes generated by the auto pour ladle cleaning operations at the Line 1 and Line 4 casting lines (P86A and P86B). These fumes will be exhausted through the existing casting line Baghouses C01 to C03 and Stack S01. These baghouses currently have a combined exhaust flow rate of 726,000 acfm. For this project, 15,000 acfm will be used to capture the fumes from each of the autopour ladle cleaning operations (P86A and P86B). The 15,000 acfm was determined using good engineering design estimates. The total exhaust flow rate or approved particulate emissions from Stack S01 will not increase. The cleaning operations occur when the casting lines are not in production.

The following is a list of the modified emission unit(s) and pollution control device(s):

(a) One (1) Line 1 ladle cleaning operation, identified as P86A, approved for modification in 2013, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using Baghouses C01, C02, and C03 as control, and exhausting to stack S01.

(b) One (1) Line 4 ladle cleaning operation, identified as P86B, approved for modification in 2013, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using Baghouses C01, C02, and C03 as control, and exhausting to stack S01.

Note: These Phase 1 Ladle Cleaning operations were originally approved in 1996 and considered as maintenance operations with uncontrolled emissions. With this modification, the source is venting these two ladle cleaning operations to existing Baghouses C01, C02, and C03. All three (3) baghouses will be in operation when the ladle cleaning operations are vented to stack S01.

Stack Summary

The table below provides a summary of the stacks:

Stack ID	Process	Process ID
S01	Line 1 Pouring/Mold Cooling	P01
	Line 1 Shakeout	P02
	Line 1 Cast Cooling	P03
	Line 1 Pick and Sort	P04
	***Line 1 ladle cleaning operation**	**P86A**
	Line 2 Pouring/Mold Cooling	P06
	Line 2 Shakeout	P07
	Line 2 Cast Cooling	P08
	Line 3 Pouring/Mold Cooling	P11
	Line 3 Shakeout	P12
	Line 3 Cast Cooling	P13
	Line 4 Pouring/Mold Cooling	P16
	Line 4 Shakeout	P17
	Line 4 Cast Cooling	P18
	Line 4 Pick and Sort	P19
	***Line 4 ladle cleaning operation**	**P86B**
	Return Sand Handling/ Screening	P21
	Sand Cooling/Water Addition	P22
	Sand Mulling/Handling	P23

Stack ID	Process	Process ID
	Spent Sand Handling/Processing	P24
S04	Line 1 Pouring/Mold Cooling	P01
	Line 1 Cast Cooling	P03
S07	Line 1 Cleaning/Grinding	P05
	Line 2 Pick and Sort	P09
	Line 2 Cleaning/Grinding	P10
	Line 3 Pick and Sort	P14
	Line 3 Cleaning/Grinding	P15
	Metallic Returns Handling	P25
	Line 4 Cleaning/Grinding	P20
S08	Core Sand Handling	P40
	Phenolic-Urethane Core Sand Handling System	P42
S09	Phase I gray iron cupola	P30
	Phase II cupola iron melting system	P33
S11	Core Machines & Ovens	P51
S15	Phase 2 Ductile Iron Treatment Ladle Cleaning	
	Line 5 Pouring/Mold Cooling	P60
	Line 5 Shakeout	P61
	Line 5 Cast Cooling	P62
	Line 6 Pouring/Mold Cooling	P65
	Line 6 Shakeout	P66
	Line 6 Cast Cooling	P67
	Line 7 Pouring/Mold Cooling	P70
	Line 7 Shakeout	P71
	Line 7 Cast Cooling	P72
	Line 8 Pouring/Mold Cooling	P75
	Shot Blast Machine	P55
	Return Sand Handling/ Screening	P80
	Sand Mulling and Handling	P81
	Sand Blending and Cooling	P82
	Spent Sand and Dust Handling	P83
	Metal Returns Handling System	P84
	Ductile Iron Treatment (2 stations)	P35
	Natural Gas Air Make-Up	P54
	Phase II Ladle Preheating (Formerly S13)	P53B
S17	Phenolic-urethane core making process	P47
S26A	Paint Booth	S26A
S26B	Paint Booth	S26B
S44	Phase 1 Melt Area Ladle Cleaning	P86
	Phase 2 Melt Area Ladle Cleaning	
	Charge Makeup and Handling	P32
	Ladle Filling & Iron Transport	P85
	Phase II Charge Makeup and Handling	
	Phase II Ladle Filling & Iron Transport	
	Desulfurization Ladle	P34

***These processes are being vented to Stack S01 as a part of this modification.**

Enforcement Issues

There are no pending enforcement actions related to this revision.

Emission Calculations

There are no increased emissions as a result of this Significant Source Modification and Significant Permit Modification.

Permit Level Determination – Part 70

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. Any control equipment is considered federally enforceable only after issuance of this Part 70 permit modification, and only to the extent that the effect of the control equipment is made practically enforceable in the permit. Appendix A shows the unlimited and controlled potential to emit from all the ladle cleaning operations at the source.

	Limited* PTE of the Proposed Modification (tons/year)									
Process/ Emission Unit	PM	PM10	PM2.5	SO_2	NOx	VOC	CO	GHGs as CO_2e	Total HAPs	Worst Single HAP
Line 1 ladle cleaning operation (P86A)	2.82	2.82	2.82	0	0	0	0	0	0	0
Line 4 ladle cleaning operation (P86B)	2.82	2.82	2.82	0	0	0	0	0	0	0
Total PTE of Proposed Modification	**5.63**	**5.63**	**5.63**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

*****The unlimited potential to emit of the Line 1 ladle cleaning operation (P86A) and the Line 4 ladle cleaning operation (P86B) is not increasing as a result of this modification. The table above shows the Limited PTE after use of the control device(s) and consideration of BACT limits. See Appendix A for unlimited PTE estimates.

(a) Significant Source Modification

This source modification is considered a significant source modification, pursuant to 326 IAC 2-7-10.5(g)(1), because this modification is subject to 326 IAC 2-2 (PSD). The requirements of the Prevention of Significant Deterioration regulations, including the use of Best Available Control Technology (BACT), apply to this project due to a change to the existing BACT requirements.

(b) Significant Permit Modification

This permit modification is considered a significant permit modification, pursuant to 326 IAC 2-7-12(d)(1), because this modification (1) does not qualify as a minor permit modification or administrative amendment, (2) includes significant changes in existing monitoring Part 70 permit terms and conditions, and (3) requires a case-by-case determination of an emission limitation or standard (e.g. PSD BACT).

Permit Level Determination – PSD

The requirements of the Prevention of Significant Deterioration regulations, including the use of Best Available Control Technology (BACT), apply to this project due to a change to the existing BACT requirements. The existing ladle cleaning operations (Phase 1 Line 1 Ladle Cleaning and Phase 1 Line 4 Ladle Cleaning) received a BACT determination to be uncontrolled emissions exhausting indoors when the original Phase 1 and 2 projects were approved. Any change to this original BACT determination, including the capture of the ladle cleaning emissions, will require a new BACT determination.

See Appendix B for the detailed PSD BACT review.

The control technology review required under 326 IAC 2-2-3 updates the BACT analysis for the ladle cleaning operations (see Appendix B).

Pursuant to 326 IAC 2-2 (Prevention of Significant Deterioration), IDEM, OAQ has determined that the following requirements represent BACT for the ladle cleaning operations at this source:

(1) The Line 1 ladle cleaning operation, identified as P86A, and the Line 4 ladle cleaning operation, identified as P86B, shall operate only when other production facilities exhausting to stack S01 are not in operation.

(2) The PM, PM10, and PM2.5 emissions exhausting to Stack S01 from the Line 1 ladle cleaning operation, identified as P86A, shall be controlled by a baghouse(s).

(3) The PM, PM10, and PM2.5 emissions exhausting to Stack S01 from the Line 4 ladle cleaning operation, identified as P86B, shall be controlled by a baghouse(s).

(4) The particulate emissions from the following processes shall not exceed the following limitations as shown in the table below:

Stack ID	Process	Process ID	Emission Limitation for Individual Processes (lb/hr)			Particulate Emission Limitation for Stack (gr/dscf)	Opacity Limitation for Stack
			PM	PM10	PM2.5		
S01	Line 1 ladle cleaning operation	P86A	0.64	0.64	0.64	0.005	10%
	Line 4 ladle cleaning operation	P86B	0.64	0.64	0.64		

Federal Rule Applicability Determination

New Source Performance Standards (NSPS):

(a) There are no new NSPS (326 IAC 12 and 40 CFR Part 60) included in the permit due to this proposed modification.

National Emission Standards for Hazardous Air Pollutants (NESHAP):

(b) There are no new NESHAPs included in the permit (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) due to this proposed modification.

Compliance Assurance Monitoring (CAM)

(c) Pursuant to 40 CFR 64.2, CAM is applicable to each new or modified pollutant-specific emission unit that meets 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 table below summarizes the CAM applicaility for the modified emission units:

Emission Unit / Pollutant	Control Device Used	Emission Limitation (Y/N)	Uncontrolled PTE (tons/year)	Controlled PTE (tons/year)	Major Source Threshold (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
Line 1 ladle cleaning operation (P86A) (PM)	Y	Y	<100	-	-	N	-
Line 1 ladle cleaning operation (P86A) (PM10)	Y	Y	<100	-	-	N	-
Line 1 ladle cleaning operation (P86A) (PM2.5)	Y	Y	<100	-	-	N	-
Line 4 ladle cleaning operation (P86B) (PM)	Y	Y	<100	-	-	N	-
Line 4 ladle cleaning operation (P86B) (PM10)	Y	Y	<100	-	-	N	-
Line 4 ladle cleaning operation (P86B) (PM2.5)	Y	Y	<100	-	-	N	-

State Rule Applicability Determination

The following state rules are applicable to the proposed revision:

(a) 326 IAC 2-2 (Prevention of Significant Deterioration(PSD))
PSD applicability is discussed under the Permit Level Determination – PSD section.

(b) 326 IAC 2-2-4 (Air Quality Analysis Requirements)
326 IAC 2-2-4(a) requires that the PSD application shall contain an analysis of ambient air quality in the area that the major stationary source would affect for pollutants that are emitted at major levels or significant amount. The source impact analysis or modeling analysis required under 326 IAC 2-2-4 is not required since there is no increase in facility emissions due to this project -- see Permit Level Determination section above. In addition, the change in method of exhaust (from general ventilation to stack) has lessen the impact to the ambient air quality.

(c) 326 IAC 2-2-5 (Air Quality Impact Requirements)
The air quality analysis required under 326 IAC 2-2-5 evaluates existing air quality conditions in the surrounding area. No modeling is necessary so there is no comparison with the Significant Monitoring Concentrations.

(d) 326 IAC 2-2-6 (Increment Consumption Requirements)
The increment consumption analysis required under 326 IAC 2-2-6 increased emissions due to the project will not exceed eighty percent (80%) of the available maximum allowable increases over the baseline. There is no emissions increase and no modeling is necessary for this project. No evaluation of increment consumption is required.

(e) 326 IAC 2-2-7 (Additional Analysis, Requirements)
The additional impact analysis required under 326 IAC 2-2-7 evaluates impairment to visibility, soils, and vegetation that would occur as a result this project, and general commercial, residential, industrial and other growth associated with this project. This project results in no growth in emissions, or growth outside of the foundry. No growth analysis is required.

(f) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
This source is not subject to the requirements of 326 IAC 2-4.1, since the unlimited potential to emit of HAPs from the modified Line 1 ladle cleaning operation (P86A) and the Line 4 ladle cleaning operation (P86B) is less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs.

(g) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-1(c)(1), the requirements of this rule do not apply if a particulate limitation is established in 326 IAC 2-2-3, concerning prevention of significant deterioration (PSD) best available control technology (BACT) determinations. Since the Line 1 ladle cleaning operation (P86A) and the Line 4 ladle cleaning operation (P86B) have undergone PSD BACT review for PM, the requirements of 326 IAC 6-3-2 do not apply to the Line 1 ladle cleaning operation (P86A) and the Line 4 ladle cleaning operation (P86B).

(h) 326 IAC 8 Rules (VOCs)
There are no other applicable VOC Rules applicable to this proposed modification.

(i) 326 IAC 12 (New Source Performance Standards)
See Federal Rule Applicability Section of this TSD.

(j) 326 IAC 20 (Hazardous Air Pollutants)
See Federal Rule Applicability Section of this TSD

Compliance Determination, Monitoring and Testing 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 for Baghouses C01-C03 are not changing as a result of this modification. The source will continue to comply with existing compliance determination and monitoring requirements.

(b) Testing will not be required for the Baghouses C01-C03 when controlling the ladle cleaning only due to the minimal emissions. In addition, the existing testing requirements for Baghouses C01-C03 are not changing as a result of this modification. The source will continue to comply with the existing testing requirements.

Proposed Changes

(a) The following changes listed below are due to the proposed modification:

(1) Section A.2 - Emission Units and Pollution Control Equipment Summary has been updated to reflect the proposed modification, and to accurately identify in the permit all the current ladle cleaning operations.

(2) Section D.2 has been updated to correctly match the emission unit identifications in Section A.2 of the permit, and to include the new PSD BACT requirements for the P86A and P86B ladle cleaning operations.

(3) Sections D.5 and E.1 have also been updated to correctly match the emission unit identifications in Section A.2 of the permit.

Deleted language appears as ~~strikethrough~~ text and new language appears as **bold** text:

...

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

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

Phase I

...

(c) Sand handling operations and ancillary operations, each constructed in 1996, consisting of the following:

...

(12) One (1) ladle filling & iron transport operation, identified as P85, with a maximum throughput of 100 tons per hour; ~~and~~

~~(13) One (1) ladle cleaning with burn bars, identified as P86.~~

(13) One (1) Phase 1 Melt Area Ladle Cleaning, identified as P86, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using one (1) baghouse (C44) as control, and exhausting to stack S44;

(14) One (1) Line 1 ladle cleaning operation, identified as P86A, approved for modification in 2013, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using Baghouses C01, C02, and C03 as control, and exhausting to stack S01;

(15) One (1) Line 2 ladle cleaning operation, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using no control, and exhausting inside the building;

(16) One (1) Line 3 ladle cleaning operation, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using no control, and exhausting inside the building;

(17) One (1) Line 4 ladle cleaning operation, identified as P86B, approved for modification in 2013, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using Baghouses C01, C02, and C03 as control, and exhausting to stack S01;

~~(14)~~**(18)** One (1) 16 ton iron bath desulfurization ladle operation, constructed in 2010, identified as P34, with a maximum throughput of 100 tons per hour, using one (1) baghouse (C44) for particulate matter control and exhausting through stack S44.

...

Phase II

...

(c) Sand handling operations and ancillary operations, each constructed in 1998, modified in 2010, consisting of the following:

...

(7) One (1) ladle filling and iron transport operation with a maximum capacity of 188 tons of iron per hour~~, and a ladle cleaning operation with an average usage of 13.2 pounds of burn bars per hour, using one (1) baghouse (C44) for particulate control, exhausting to stack S44~~;

(8) One (1) Phase 2 Melt Area Ladle Cleaning, identified as P86, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using one (1) baghouse (C44) as control, and exhausting to stack S44;

(9) One (1) Line 5 ladle cleaning operation, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using no control, and exhausting inside the building;

(10) One (1) Line 6 ladle cleaning operation, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using no control, and exhausting inside the building;

(11) One (1) Line 7 ladle cleaning operation, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using no control, and exhausting inside the building;

(12) One (1) Line 8 ladle cleaning operation, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using no control, and exhausting inside the building;

(13) One (1) Phase 2 Ductile Iron Treatment Ladle Cleaning, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, with approximately 25% of emissions controlled by Baghouse C15, and exhausting to stack S15, and with approximately 75% emissions uncontrolled, and exhausting inside the building;

Note: The ductile treatment operation includes locations where treatment occurs and iron is transferred. Fumes in the treatment area are captured by Baghouse C15 but those in the metal transfer area are not captured.

~~(8)~~**(14)** Two (2) ductile iron treatment stations, both identified as P35, each with a maximum production capacity of 50 tons per hour. Particulate matter emissions are controlled by two (2) baghouse systems identified as C15 and C35. The gases from both baghouses are then exhausted to Stack S15;

~~(9)~~**(15)** One (1) phenolic-urethane core sand handling system, identified as P42, constructed in 1998 and modified in 2008, with a maximum production capacity of 32 tons of cores per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C08, that exhausts to Stack S08;

~~(10)~~**(16)** One (1) phenolic-urethane core making process, identified as P43, with a maximum production capacity of 20 tons of cores per hour. Volatile organic compound emissions are controlled by one (1) packed bed scrubber (or equivalent), identified as C14. The gases are then exhausted to Stack S14;

~~(11)~~**(17)** One (1) phenolic-urethane core making process, identified as P44, consisting of 2 mixers and 2 core machines, each with a maximum capacity of 3 tons per hour. DMIPA emissions are controlled by one (1) packed bed scrubber, identified as C14. The gases are then exhausted to Stack S14;

~~(12)~~**(18)** Raw material handling including iron handling at a maximum rate of 150 tons per hour, alloys handling at a maximum rate of 1.5 tons per hour, coke handling at a

maximum rate of 15 tons per hour, and limestone handling at a maximum rate of 4.5 tons per hour;

~~(13)~~**(19)** Natural gas fired air make-up units equipped with low-NOx burners, identified as P54, with a maximum heat input rate of 80 MMBtu per hour exhausting to Stack S15.

~~(14)~~**(20)** One (1) pattern shop, identified as P50, controlled by a baghouse, exhausting to stack S08.

...

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Facilities exhausting to stacks S01, S04, or S07

Phase I

~~(A)~~ **(b)**Four (4) production lines, each constructed in 1996, consisting of the following:

...

~~(5)~~**(c)** Sand handling operations and ancillary operations

~~(a)~~**(1)** One (1) return sand handling & screen operation, identified as P21, with a maximum throughput of 522 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;

~~(b)~~**(2)** One (1) sand cooling & water addition operation, identified as P22, with a maximum throughput of 522 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;

~~(c)~~**(3)** One (1) sand mulling & handling operation, identified as P23, with a maximum throughput of 522 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;

~~(d)~~**(4)** One (1) spent sand handling & processing operation, identified as P24, with a maximum throughput of 54 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;

~~(e)~~**(5)** Air make-up units, identified as P52, with a maximum combined heat input capacity of 65.6 million British thermal units (MMBtu) per hour, combusting natural gas, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;

~~(f)~~**(6)** One (1) metallic returns handling operation, identified as P25, with a maximum throughput of 33 tons per hour, using one(1) baghouse (C07) for particulate control, exhausting to stack S07;

(14) One (1) Line 1 ladle cleaning operation, identified as P86A, approved for modification in 2013, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using Baghouses C01, C02, and C03 as control, and exhausting to stack S01;

(17) One (1) Line 4 ladle cleaning operation, identified as P86B, approved for modification in 2013, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using Baghouses C01, C02, and C03 as control, and exhausting to stack S01;

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

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

D.2.1 PSD BACT for Particulate Matter [326 IAC 2-2-3(a)(3)]

(a) Pursuant to CP-123-4593-00019, issued on January 19, 1996, CP-123-8451-00019, issued on February 4, 1998, Amendment 123-9740-00019, issued May 22, 1998, and 326 IAC 2-2-3(a)(3) (Prevention of Significant Deterioration (PSD) Rules), the particulate matter emissions from the following processes shall be limited as shown in the table below:

...

(b) Pursuant to CP123-4593-00019 issued on January 19, 1996, visible emissions from any baghouse stack shall not exceed ten percent (10%) opacity.

(c) Pursuant to PSD/SSM No. 123-33284-00019 and 326 IAC 2-2 (Prevention of Significant Deterioration):

(1) The Line 1 ladle cleaning operation, identified as P86A, and the Line 4 ladle cleaning operation, identified as P86B, shall operate only when other production facilities exhausting to stack S01 are not in operation.

(2) The PM, PM10, and PM2.5 emissions exhausting to Stack S01 from the Line 1 ladle cleaning operation, identified as P86A, shall be controlled by a baghouse(s).

(3) The PM, PM10, and PM2.5 emissions exhausting to Stack S01 from the Line 4 ladle cleaning operation, identified as P86B, shall be controlled by a baghouse(s).

(4) The particulate emissions from the following processes shall not exceed the following limitations as shown in the table below:

Stack ID	Process	Process ID	Emission Limitation for Individual Processes (lb/hr)			Particulate Emission Limitation for Stack (gr/dscf)	Opacity Limitation for Stack
			PM	PM10	PM2.5		
S01	Line 1 ladle cleaning operation	P86A	0.64	0.64	0.64	0.005	10%
	Line 4 ladle cleaning operation	P86B	0.64	0.64	0.64		

...

D.2.11 Particulate Matter (PM/PM-10) Control [326 IAC 2-7-6(6)]

...

(d) In order to comply with Condition D.2.1(c), the baghouse(s) for PM, PM10, and PM2. 5 control shall be in operation at all times when the Line 1 ladle cleaning operation, identified as P86A, is in operation.

(e) In order to comply with Condition D.2.1(c), the baghouse(s) for PM, PM10, and PM2. 5 control shall be in operation at all times when the Line 4 ladle cleaning operation, identified as P86B, is in operation.

...

SECTION D.5 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Phase I

(c) Sand handling operations and ancillary operations, each constructed in 1996, consisting of the following:

~~(1)~~**(10)** One (1) ladle preheating operation, identified as P53, with a maximum heat input capacity of 11.5 MMBtu per hour, combusting natural gas, exhausting to stack S12;

(2) One (1) charge and make-up operation, identified as P32, with a maximum throughput of 80 tons per hour, using one (1) baghouse (C44) for particulate control, exhausting to stack S44;

~~(3)~~**(11)** One (1) ladle filling & iron transport operation, identified as P85, with a maximum throughput of 100 tons per hour, using one (1) baghouse (C44) for particulate control, exhausting to stack S44; and

(12) One (1) ladle filling & iron transport operation, identified as P85, with a maximum throughput of 100 tons per hour;

~~(4) One (1) ladle cleaning with burn bars, identified as P86, using one (1) baghouse (C44) for particulate control, exhausting to stack S44.~~

(13) One (1) Phase 1 Melt Area Ladle Cleaning, identified as P86, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using one (1) baghouse (C44) as control, and exhausting to stack S44;

(15) One (1) Line 2 ladle cleaning operation, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using no control, and exhausting inside the building;

(16) One (1) Line 3 ladle cleaning operation, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using no control, and exhausting inside the building;

~~(5)~~**(18)** One (1) 16 ton iron bath desulfurization ladle operation, constructed in 2010, identified as P34, with a maximum throughput of 100 tons per hour, using one (1) baghouse (C44) for particulate matter control and exhausting through stack S44.

Phase II

(c) Sand handling operations and ancillary operations, each constructed in 1998, modified in 2010, consisting of the following:

~~(1) One (1) enclosed cupola charge make-up and handling unit with a maximum charge of 114 tons per hour using one (1) baghouse (C44) for particulate control, exhausting to stack S44;~~

(6) One (1) enclosed cupola charge make-up and handling unit with a maximum charge of 114.0 tons per hour;

~~(2)~~**(7)** One (1) ladle filling and iron transport operation with a maximum capacity of 188 tons of iron per hour~~, and a ladle cleaning operation with an average usage of 13.2 pounds of burn bars per hour, using one (1) baghouse (C44) for particulate control, exhausting to stack S44~~;

(8) One (1) Phase 2 Melt Area Ladle Cleaning, identified as P86, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using one (1) baghouse (C44) as control, and exhausting to stack S44;

(9) One (1) Line 5 ladle cleaning operation, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using no control, and exhausting inside the building;

(10) One (1) Line 6 ladle cleaning operation, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using no control, and exhausting inside the building;

(11) One (1) Line 7 ladle cleaning operation, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using no control, and exhausting inside the building;

(12) One (1) Line 8 ladle cleaning operation, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using no control, and exhausting inside the

building;

(13) One (1) Phase 2 Ductile Iron Treatment Ladle Cleaning, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, with approximately 25% of emissions controlled by Baghouse C15, and exhausting to stack S15, and with approximately 75% emissions uncontrolled, and exhausting inside the building;

Note: The ductile treatment operation includes locations where treatment occurs and iron is transferred. Fumes in the treatment area are captured by Baghouse C15 but those in the metal transfer area are not captured.

~~(3)~~**(18)** Raw material handling including iron handling at a maximum rate of 188 tons per hour, alloys handling at a maximum rate of 1.5 tons per hour, coke handling at a maximum rate of 15 tons per hour, and limestone handling at a maximum rate of 4.5 tons per hour; and

(4) One (1) ladle preheating operation, identified as P53B, with a maximum heat input **capacity of 11.5 MMBtu per hour, combusting natural gas, exhausting to stack S13.**

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

...

SECTION E.1 EMISSIONS UNIT OPERATION CONDITIONS

Emission Unit Description:

...

(c) Sand handling operations and ancillary operations, each constructed in 1996, consisting of the following:

(12) One (1) ladle filling & iron transport operation, identified as P85, with a maximum throughput of 100 tons per hour; ~~and~~

~~(13) One (1) ladle cleaning with burn bars, identified as P86.~~

(13) One (1) Phase 1 Melt Area Ladle Cleaning, identified as P86, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using one (1) baghouse (C44) as control, and exhausting to stack S44;

(14) One (1) Line 1 ladle cleaning operation, identified as P86A, approved for modification in 2013, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using Baghouses C01, C02, and C03 as control, and exhausting to stack S01;

(15) One (1) Line 2 ladle cleaning operation, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using no control, and exhausting inside the building;

(16) One (1) Line 3 ladle cleaning operation, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using no control, and exhausting inside the building;

(17) One (1) Line 4 ladle cleaning operation, identified as P86B, approved for modification in 2013, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using Baghouses C01, C02, and C03 as control, and exhausting to stack S01;

~~(14)~~**(18)** One (1) 16 ton iron bath desulfurization ladle operation, constructed in 2010, identified as P34, with a maximum throughput of 100 tons per hour, using one (1) baghouse (C44) for particulate matter control and exhausting through stack S44.

...

Phase II

...

(c) Sand handling operations and ancillary operations, each constructed in 1998, modified in 2010 consisting of the following:

...

(7) One (1) ladle filling and iron transport operation with a maximum capacity of 188 tons of iron per hour~~, and a ladle cleaning operation with an average usage of 13.2 pounds of burn bars per hour, using one (1) baghouse (C44) for particulate control, exhausting to stack S44~~;

(8) One (1) Phase 2 Melt Area Ladle Cleaning, identified as P86, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using one (1) baghouse (C44) as control, and exhausting to stack S44;

(9) One (1) Line 5 ladle cleaning operation, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using no control, and exhausting inside the building;

(10) One (1) Line 6 ladle cleaning operation, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using no control, and exhausting inside the building;

(11) One (1) Line 7 ladle cleaning operation, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using no control, and exhausting inside the building;

(12) One (1) Line 8 ladle cleaning operation, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using no control, and exhausting inside the building;

(13) One (1) Phase 2 Ductile Iron Treatment Ladle Cleaning, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, with approximately 25% of emissions controlled by Baghouse C15, and exhausting to stack S15, and with approximately 75% emissions uncontrolled, and exhausting inside the building;

Note: The ductile treatment operation includes locations where treatment occurs and iron is transferred. Fumes in the treatment area are captured by Baghouse C15 but those in the metal transfer area are not captured.

~~(8)~~**(14)** Two (2) ductile iron treatment stations, both identified as P35, each with a maximum production capacity of 50 tons per hour. Particulate matter emissions are controlled by two (2) baghouse systems identified as C15 and C35. The gases from both baghouses are then exhausted to Stack S15;

~~(9)~~**(15)** One (1) phenolic-urethane core sand handling system, identified as P42, constructed in 1998 and modified in 2008, with a maximum production capacity of 32 tons of cores per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C08, that exhausts to Stack S08;

~~(10)~~**(16)** One (1) phenolic-urethane core making process, identified as P43, with a maximum production capacity of 20 tons of cores per hour. Volatile organic compound emissions are controlled by one (1) packed bed scrubber (or equivalent), identified as C14. The gases are then exhausted to Stack S14;

~~(11)~~**(17)** One (1) phenolic-urethane core making process, identified as P44, consisting of 2 mixers and 2 core machines, each with a maximum capacity of 3 tons per hour. DMIPA emissions are controlled by one (1) packed bed scrubber, identified as C14. The gases are then exhausted to Stack S14;

~~(12)~~**(18)** Raw material handling including iron handling at a maximum rate of 150 tons per hour, alloys handling at a maximum rate of 1.5 tons per hour, coke handling at a maximum rate of 15 tons per hour, and limestone handling at a maximum rate of 4.5 tons per hour;

~~(13)~~**(19)** Natural gas fired air make-up units equipped with low-NOx burners, identified as

P54, with a maximum heat input rate of 80 MMBtu per hour exhausting to Stack S15.

~~(14)~~**(20)** One (1) pattern shop, identified as P50, controlled by a baghouse, exhausting to stack S08.

...

...

Conclusion and Recommendation

The construction and operation of this proposed modification shall be subject to the conditions of the attached proposed PSD/Part 70 Significant Source Modification No. 123-33284-00019 and Part 70 Significant Permit Modification No. 123-33300-00019. The staff recommends to the Commissioner that this PSD/Part 70 Significant Source and Part 70 Significant Permit Modification be approved.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to Sarah Street at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 232-8427 or toll free at 1-800-451-6027 extension 2-8427.

(b) A copy of the findings is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/

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

Appendix A: Emission Calculations
Ladle Cleaning Operations

Company Name: Waupaca Foundry, Inc. Plant 5
Address City IN Zip: 9856 State Highway 66, Tell City, Indiana 47586
Significant Source Modification No.: 123-33284-00019
Significant Permit Modification No.: 123-33300-00019
Permit Reviewer: Sarah Street

Emission Unit/Process	Control ID	Flow Rate of Baghouse Control (acfm)	Outlet Grain Loading (grain/dscf)	Uncontrolled PTE of PM		Controlled PTE of PM	
				(lbs/hr)	(tons/yr)	(lbs/hr)	(tons/yr)
Phase 1 Line 1 Ladle Cleaning	Baghouses C01-C03	15,000	0.005	642.86	2,815.71	0.64	2.82
Phase 1 Line 4 Ladle Cleaning	Baghouses C01-C03	15,000	0.005	642.86	2,815.71	0.64	2.82
				1,285.71	**5,631.43**	**1.29**	**5.63**

Methodology
Control Efficiency = 99.9%
Assume PM=PM10=PM2.5
Uncontrolled PTE of PM (lb/hr) = Controlled PTE of PM (lb/hr) / (100%-control efficiency(%))
Uncontrolled PTE of PM (ton/yr) = Controlled PTE of PM (ton/yr) / (100%-control efficiency(%))
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

Inventory of Ladle Cleaning Maintenance using Burn Bars

Description	Plant 5 Location	Process ID	Baghouse ID	Stack ID	Peak Usage (lbs/hr)	Average Usage (lbs/hr)	Average Usage (lbs/yr)	PM Factor [5] (lbs/lbs)	Uncontrolled PM PTE (lbs/hr)	Uncontrolled PM PTE (tons/yr)	Baghouse Capture [6] (%)	Controlled PM PTE (lbs/hr)	Controlled PM PTE (tons/yr)
Phase 1 Melt Area Ladle Cleaning [1]	P30	P86	C44	S44	100	7.1	61,800	0.1	10.00	43.80	99.9%	0.01	0.0438
Phase 2 Melt Area Ladle Cleaning [1]	P33	n/a	C44	S44	100	7.1	61,800	0.1	10.00	43.80	99.9%	0.01	0.0438
Phase 1 Line 1 Ladle Cleaning [2]	P01	P86A	C01 - C03	S01	100	0.6	5,150	see calculations above					
Phase 1 Line 2 Ladle Cleaning [3]	P06	n/a	n/a	n/a	100	0.6	5,150	0.1	10.00	43.80	0%	10.00	43.8000
Phase 1 Line 3 Ladle Cleaning [3]	P11	n/a	n/a	n/a	100	0.6	5,150	0.1	10.00	43.80	0%	10.00	43.8000
Phase 1 Line 4 Ladle Cleaning [2]	P16	P86B	C01 - C03	S01	100	0.6	5,150	see calculations above					
Phase 2 Line 5 Ladle Cleaning [3]	P60	n/a	n/a	n/a	100	1.2	10,300	0.1	10.00	43.80	0%	10.00	43.8000
Phase 2 Line 6 Ladle Cleaning [3]	P65	n/a	n/a	n/a	100	1.2	10,300	0.1	10.00	43.80	0%	10.00	43.8000
Phase 2 Line 7 Ladle Cleaning [3]	P70	n/a	n/a	n/a	100	1.2	10,300	0.1	10.00	43.80	0%	10.00	43.8000
Phase 2 Line 8 Ladle Cleaning [3]	P75	n/a	n/a	n/a	100	1.2	10,300	0.1	10.00	43.80	0%	10.00	43.8000
Phase 2 Ductile Iron Treatment Ladle Cleaning [4]	P35	n/a	n/a	n/a	100	1.8	15,450	0.1	10.00	43.80	0%	10.00	43.8000
Phase 2 Ductile Iron Treatment Ladle Cleaning [4]	P35	n/a	C15	S15	100	0.6	5,150	0.1	10.00	43.80	99.9%	0.01	0.0438
Total						**23.5**	**206,000**		**100.00**	**438.00**		**70.03**	**306.73**

Methodology
Assume PM=PM10=PM2.5
Average Usage (lbs/hr) = Average Usage (lbs/yr) / 8,760 hrs/yr
Uncontrolled PTE (lbs/hr) = Peak Usage (lbs/hr) * PM Factor (lbs/lbs)
Uncontrolled PTE (tons/yr) = Uncontrolled PTE (lbs/hr) * 8,760 hrs/yr / 2,000 lbs/ton
Controlled PTE (lbs/hr) = Uncontrolled PTE (lbs/hr) * (1-BH Capture (%))
Controlled PTE (tons/yr) = Uncontrolled PTE (tons/yr) * (1-BH Capture (%))

Notes
(1) These ladle cleaning operations currently vent to Baghouse C44.
(2) These ladle cleaning operations will vent to Baghouses C01-C03 as a result of this proposed modification.
(3) All casting line ladle cleaning is not ducted to baghouses for the following reasons: 1) ladle cleaning is a periodic, maintenance operation, 2) the small amount of fumes did not justify the expense, 3) the location of the cleaning makes fume capture difficult without interfering with production operations, and 4) the proposed capture of the Line 1 and 4 ladle cleaning fumes is a pilot project to determine if it will effectively capture fumes, and not interfere with production operations. If it is successful, similar capture systems will be considered for the other casting line ladle cleaning operations.
(4) The ductile treatment operation includes locations where treatment occurs and iron is transferred. Fumes in the treatment area are captured but those in the metal transfer area are not. Burn bar usage for this operation has been split 25/75 to allow separate emission estimates for the captured emissions (Baghouse C15) versus emissions exhausting indoors.
(5) There are no emission tests for ladle cleaning operations. For emissions reporting, Waupaca Foundry has assumed that PM emissions are 10% of the burn bar usage though the fumes are comprised of both the burn bar and material removed from the ladle.
(6) For the ladle cleaning operations which are captured and exhausted through a baghouse, Waupaca Foundry has assume that 99.9% of the fumes will be removed.

Indiana Department of Environmental Management
Office of Air Quality

Appendix B
Best Available Control Technology (BACT) Determination
Prevention of Significant Deterioration (PSD)

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

Source Description and Location

Source Name:	**Waupaca Foundry, Inc. Plant 5**
Source Location:	**9856 State Highway 66, Tell City, Indiana 47586**
County:	**Perry**
SIC Code:	**3321 (Gray and Ductile Iron Foundries)**
Significant Source Modification No.:	**123-33284-00019**
Significant Permit Modification No.:	**123-33300-00019**
Permit Reviewer:	**Sarah Street**

Background Information

The Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) has performed the following Best Available Control Technology (BACT) review for Waupaca Foundry, Inc Plant 5's major PSD modification to its existing stationary gray and ductile iron foundry. The existing ladle cleaning operations (Phase 1 Line 1 Ladle Cleaning and Phase 1 Line 4 Ladle Cleaning) received a BACT determination to be uncontrolled emissions exhausting indoors when the original Phase 1 and 2 projects were approved. Any change to this original BACT determination, including the capture of the ladle cleaning emissions, will require a new BACT determination. Since it is assumed that PM = PM10 = PM2.5, the BACT analysis applies to all three pollutants.

Pursuant to the provisions of 326 IAC 2-2 (Prevention of Significant Deterioration), Best Available Control Technology analyses for PM, PM10, and PM2.5 were performed for the following units:

(a) One (1) Line 1 ladle cleaning operation, identified as P86A, approved for modification in 2013, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using Baghouses C01, C02, and C03 as control, and exhausting to stack S01.

(b) One (1) Line 4 ladle cleaning operation, identified as P86B, approved for modification in 2013, with a maximum capacity of 100 pounds of burn bars per hour based on a 24-hour average, using Baghouses C01, C02, and C03 as control, and exhausting to stack S01.

For this project, the sources of particulate emissions (PM, PM10, and PM2.5) are the Line 1 Ladle Cleaning (P86A) and Line 4 Ladle Cleaning (P86B). During this process, oxygen gas flows through a consumable pipe (i.e. burn bars) creating a high temperature flame at the end of the pipe. This flame is used to melt and remove slag and other residue which has accumulated on ladles which hold and pour molten iron into sand molds.

The Line 1 Ladle Cleaning (P86A) and Line 4 Ladle Cleaning (P86B) are used for maintenance purposes only.

Requirement for Best Available Control Technology (BACT)

Waupaca Foundry, Inc. operates its Plant 5 iron foundry in Tell City, Perry County, Indiana. The foundry was built in two phases, with Phase 1 approved in 1996 and Phase 2 approved in 1998. Approval of both phases in 1996 and 1998 included ladle cleaning as a maintenance operation.

The existing 1996 Phase 1 Melt Area ladle cleaning operation is currently identified in the permit as follows:

(a) One (1) ladle cleaning with burn bars, identified as P86.

The existing 1998 Phase 2 Melt Area ladle cleaning operation is currently identified in the permit as follows:

(b) A ladle cleaning operation with an average usage of 13.2 pounds of burn bars per hour, using one (1) baghouse (C44) for particulate control, exhausting to stack S44.

When Plant 5 was originally approved, ladle cleaning fumes were released as emissions exhausting inside the Plant 5 buildings. These indoor emissions would eventually be captured by the building ventilation and baghouse systems used for production equipment.

In 2001, the company installed a new Baghouse (C44) for the close capture of indoor emissions in the iron melting area of the foundry. A portion of the ladle cleaning operation fumes generated in the melt area was designated P86 and exhausted through this new baghouse. This P86 ladle cleaning operation did not include the cleaning of the auto pour ladles which occurs at each of the casting lines, but rather included the melt area ladle cleaning operations only.

Waupaca Foundry, Inc. is proposing to capture the fumes generated by the auto pour ladle cleaning operations at the Line 1 and Line 4 casting lines (P86A and P86B). These fumes will be exhausted through the existing casting line baghouses and stack, identified as Baghouses C01 to C03 and Stack S01. These baghouses currently have a combined exhaust flow rate of 726,000 acfm. For this project, only 15,000 acfm will be used to capture the fumes from each of the autopour ladle cleaning operations (P86A and P86B). The 15,000 acfm was determined using good engineering design estimates. The total exhaust flow rate and approved particulate emissions (lb/hr BACT limit) from Stack S01 will not increase during production. The ladle cleaning operations occur when the casting lines are not in production and will have a separate PSD BACT limits. Line 1 Ladle Cleaning aand Line 4 Ladle Cleaning operations may occur at the same.

Below is an inventory of all ladle cleaning maintenance operations at Waupaca Foundry, Inc. - Plant 5:

Waupaca Foundry, Inc. - Plant 5 - Tell City, Indiana

Inventory of Ladle Cleaning Maintenance Using Burn Bars

Description	Plant 5 Location	Process ID	Baghouse ID	Stack ID	Peak Usage (lbs/hr)	Average Usage (lbs/hr)	Average Usage (lbs/yr)
Phase 1 Melt Area Ladle Cleaning [(1)]	P30	P86	C44	S44	100	7.1	61,800
Phase 2 Melt Area Ladle Cleaning [(1)]	P33	n/a	C44	S44	100	7.1	61,800
Phase 1 Line 1 Ladle Cleaning [(2)]	P01	P86A	C01 - C03	S01	100	0.6	5,150
Phase 1 Line 2 Ladle Cleaning [(3)]	P06	n/a	n/a	n/a	100	0.6	5,150
Phase 1 Line 3 Ladle Cleaning [(3)]	P11	n/a	n/a	n/a	100	0.6	5,150
Phase 1 Line 4 Ladle Cleaning [(2)]	P16	P86B	C01 - C03	S01	100	0.6	5,150
Phase 2 Line 5 Ladle Cleaning [(3)]	P60	n/a	n/a	n/a	100	1.2	10,300

Waupaca Foundry, Inc. - Plant 5 - Tell City, Indiana							
Inventory of Ladle Cleaning Maintenance Using Burn Bars							
Description	Plant 5 Location	Process ID	Baghouse ID	Stack ID	Peak Usage (lbs/hr)	Average Usage (lbs/hr)	Average Usage (lbs/yr)
Phase 2 Line 6 Ladle Cleaning (3)	P65	n/a	n/a	n/a	100	1.2	10,300
Phase 2 Line 7 Ladle Cleaning (3)	P70	n/a	n/a	n/a	100	1.2	10,300
Phase 2 Line 8 Ladle Cleaning (3)	P75	n/a	n/a	n/a	100	1.2	10,300
Phase 2 Ductile Iron Treatment Ladle Cleaning (4)	P35	n/a	n/a	n/a	100	1.8	15,450
Phase 2 Ductile Iron Treatment Ladle Cleaning (4)	P35	n/a	C15	S15	100	0.6	5,150
Total						**23.5**	**206,000**

Notes:
(1) These ladle cleaning operations currently vent to Baghouse C44.
(2) These ladle cleaning operations will vent to Baghouses C01-C03 as a result of this proposed modification.
(3) All casting line ladle cleaning is not ducted to baghouses for the following reasons:
  (a) ladle cleaning is a periodic, maintenance operation,
  (b) the small amount of fumes did not justify the expense,
  (c) the location of the cleaning makes fume capture difficult without interfering with production operations, and
  (d) the proposed capture of the Line 1 and 4 ladle cleaning fumes is a pilot project to determine if it will effectively capture fumes, and not interfere with production operations. If it is successful, similar capture systems will be considered for the other casting line ladle cleaning operations.
(4) The ductile treatment operation includes locations where treatment occurs and iron is transferred. Fumes in the treatment area are captured but those in the metal transfer area are not. Burn bar usage for this operation has been split 25/75 to allow separate emission estimates for the captured emissions (Baghouse C15) versus emissions exhausting indoors.

The requirements of the Prevention of Significant Deterioration regulations, including the use of Best Available Control Technology (BACT), apply to this project due to a change to the existing BACT requirements. The existing ladle cleaning operations received a BACT determination to be uncontrolled emissions exhausting indoors when the original Phase 1 and 2 projects were approved. Any change to this original BACT determination, including the capture of the ladle cleaning emissions, will require a new BACT determination.

BACT Description

IDEM, OAQ conducts BACT analyses in accordance with the *"Top-Down" Best Available Control Technology Guidance Document* outlined in the 1990 draft U.S. EPA *New Source Review Workshop Manual*, which outlines the steps for conducting a top-down BACT analysis. Those steps are listed below.

(1) Identify all potentially available control options;

(2) Eliminate technically infeasible control options;

(3) Rank remaining control technologies;

(4) Evaluate the most effective controls and document the results;

(5) Select BACT.

Also in accordance with the *"Top-Down" Best Available Control Technology Guidance Document* outlined in the 1990 draft U.S. EPA *New Source Review Workshop Manual*, BACT analyses take into account the energy, environmental, and economic impacts of the control options. Emission reductions may be determined through the application of available control techniques, process design, and/or operational limitations. Such reductions are necessary to demonstrate that the emissions remaining after application of BACT will not cause adverse environmental effects to public health and the environment.

A summary of the BACT for the modification is provided below. This BACT determination is based on the following information:

(1) The BACT analysis information submitted by Waupaca Foundry, Inc Plant 5 on June 7, 2013.

(2) The EPA RACT/BACT/LAER (RBLC) Clearinghouse; and

(3) State and local air quality permits.

The following BACT Analysis has been completed by each pollutant, and then by addressing each emission unit with the corresponding pollutant emissions.

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 PM, PM10, and PM2.5 emissions from the ladle cleaning operations.

(1) Cartridge Collectors

While traditional baghouses rely on the dust cake for particle filtration, Cartridge Collectors rely on the filter media. Cartridge Collectors are more compact than baghouses, and allow easier replacement of the filters. They are preferred over baghouses when there is limited space and frequent replacement of the filters is cost effective. Due to the close spaces between filters, Cartridge Collectors are best used for capturing dry, free flowing, non-sticky dust in a low-humidity environment. Cartridge Collectors are typically used for low flow rates of less than 10,000 cfm and low dust loading applications. Typical new equipment design efficiencies are greater than 99.9%. Due to their limitations, there are no known applications of Cartridge Collectors for ladle cleaning operations.

(2) Fabric Filter (Baghouse or Dust Collector)

A fabric filter unit consists of one or more isolated compartments containing rows of fabric bags in the form of round, flat, or shaped tubes, or pleated cartridges. Particle laden gas passes up (usually) along the surface of the bags then radially through the fabric. Particles are retained on the upstream face of the bags, and the cleaned gas stream is vented to the atmosphere. The filter is operated cyclically, alternating between relatively long periods of filtering and short periods of cleaning. During cleaning, dust that has accumulated on the bags is removed from the fabric surface and deposited in a hopper for subsequent disposal.

Fabric filters collect particles with sizes ranging from submicron to several hundred microns in diameter at efficiencies generally in excess of 99 or 99.9%. The layer of dust, or dust cake, collected on the fabric is primarily responsible for such high efficiency. The cake is a barrier with tortuous pores that trap particles as they travel through the cake.

Gas temperatures up to about 500°F, with surges to about 550°F, can be accommodated routinely in some configurations. Most of the energy used to operate the system appears as pressure drop across the bags and associated hardware and ducting.

Typical values of system pressure drop range from about 1 to 20 inches of water. Fabric filters are used where high efficiency particle collection is required. Limitations are imposed by gas characteristics (temperature and corrosivity) and particle characteristics (primarily stickiness) that affect the fabric or its operation and that cannot be economically accommodated. Important process variables include particle characteristics, gas characteristics, and fabric properties. The most important design parameter is the air- or gas-to-cloth ratio (the amount of gas in ft3/min that penetrates one ft2 of fabric) and the usual operating parameter of interest is pressure drop across the filter system.

The major operating feature of fabric filters that distinguishes them from other gas filters is the ability to renew the filtering surface periodically by cleaning. Common furnace filters, high efficiency particulate air (HEPA) filters, high efficiency air filters (HEAFs), and automotive induction air filters are examples of filters that must be discarded after a significant layer of dust accumulates on the surface. These filters are typically made of matted fibers, mounted in supporting frames, and used where dust concentrations are relatively low. Fabric filters are usually made of woven or (more commonly) needle-punched felts sewn to the desired shape, mounted in a plenum with special hardware, and used across a wide range of dust concentrations.

(3) High Efficiency Cyclone

Cyclones are simple mechanical devices commonly used to remove relatively large particles from gas streams. In industrial applications, cyclones are often used as precleaners for the more sophisticated air pollution control equipment such as ESPs or baghouses. Cyclones are less efficient than wet scrubbers, baghouses, or ESPs. Cyclones used as pre-cleaners are often designed to remove more than 80% of the particles that are greater than 20 microns in diameter. Smaller particles that escape the cyclone can then be collected by more efficient control equipment. This control technology may be more commonly used in industrial sites that generate a considerable amount of particulate matter, such as lumber companies, feed mills, cement plants, and smelters.

(4) Wet Scrubber

A wet scrubber is an air pollution control device that removes particulates from waste gas streams primarily through the impaction, diffusion, interception and/or absorption of the pollutant onto droplets of liquid. The liquid containing the pollutant is then collected for disposal. There are numerous types of wet scrubbers that remove particulates. Collection efficiencies for wet scrubbers vary with the particle size distribution of the waste gas stream. In general, collection efficiency decreases as the particulates size decreases. Collection efficiencies also vary with scrubber type. Collection efficiencies range from greater than 99% for venturi scrubbers to 40-60% (or lower) for simple spray towers. Wet scrubbers are smaller and more compact than baghouses or ESPs. They have lower capital costs and comparable operation and maintenance (O&M) costs.

(5) Electrostatic Precipitators (ESP)

An electrostatic precipitator (ESP) is a particle control device that uses electrical forces to move the particles out of the flowing gas stream and onto collector plates. The particles are given an electrical charge by forcing them to pass through a corona, a region in which

gaseous ions flow. The electrical field that forces the charged particles to the walls comes from electrodes maintained at high voltage in the center of the flow lane.

Once the particles are collected on the plates, they must be removed from the plates without re-entraining them into the gas stream. This is usually accomplished by knocking them loose from the plates, allowing the collected layer of particles to slide down into a hopper from which they are evacuated. Some precipitators remove the particles by intermittent or continuous washing with water. ESP control efficiencies can range from 99% to 99.9%.

The choice of which technology is most appropriate for a specific application depends upon several factors, including particle size to be collected, particle loading, stack gas flow rate, stack gas physical characteristics (e.g., temperature, moisture content, presence of reactive materials), and desired collection efficiency.

This information is based on *EPA's CATC Technical Bulletins (TB) & Air Pollution Technology Fact Sheets (FS)*.

Step 2 − Eliminate Technically Infeasible Control Options

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of all the potentially available control options listed in Step 1 are technically feasible options for the ladle cleaning operations at this source.

Step 3 – Rank Remaining Control Technologies by Control Effectiveness

IDEM, OAQ has ranked the technically feasible control technologies as follows:

Control Technology	Control Efficiency (%)
Cartridge Collector	>99%
Fabric Filter (Baghouse or Dust Collector)	>99%
Electrostatic Precipitators (ESP)	>99%
Wet Scrubber	<90%
High Efficiency Cyclone	<90%

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 through the use of 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

The U.S. EPA RACT/BACT/LAER Clearinghouse (RBLC) database was reviewed to identify control requirements and limitations for facilities that are similar to the ladle cleaning operations at this source. Below is a brief summary of search results obtained from the U.S. EPA RACT/BACT/LAER Clearinghouse (RBLC) database for processes similar to the ladle cleaning operations at this source.

(1) The U.S. EPA RACT/BACT/LAER Clearinghouse (RBLC) database search results are based on the following criteria:

(A) SIC Code 3321 (Gray and Ductile Iron Foundries);
(B) SIC Codes beginning with 332 (Iron and Steel Foundries).
(C) Process Descriptions with the term "ladle" or "ladle cleaning".

(2) Indiana Department of Environmental Management (IDEM) air quality permits under SIC Code 3321 (Gray and Ductile Iron Foundries).

The identified sources are presented below in descending order; the highest control efficiency is present first:

Plant	PBLD ID or Permit #	Date Issued and State	Facility	Control Device	BACT Determination
Waupaca Foundry, Inc. Plant 5	*(Proposed)*	*IN*	*Line 1 Ladle Cleaning*	*Baghouses C01 to C03*	*0.64 lb/hr (total for stack); 0.005 gr/dscf; visible emissions < 10% opacity from baghouse stack exhaust*
Waupaca Foundry, Inc. Plant 5	*(Proposed)*	*IN*	*Line 4 Ladle Cleaning*	*Baghouses C01 to C03*	*0.64 lb/hr (total for stack); 0.005 gr/dscf; visible emissions < 10% opacity from baghouse stack exhaust*
Waupaca Foundry, Inc. Plant 5	CP-123-4593-00019	1/19/2006 (IN)	Phase I Ladle Cleaning (P86)	Baghouse C44	0.005 gr/dscf; 6.86 lb/hr (combined for charge makeup operations, the molten iron handling operations, and the ladle cleaning operations); visible emissions < 10% opacity from baghouse stack exhaust

Ladle cleaning is considered a maintenance operation; therefore, a search of the U.S. EPA RACT/BACT/LAER Clearinghouse (RBLC) yields no results for BACT determinations for this specific type of operation. There are a number of BACT determinations in the RBLC for ladle metallurgy operations, whereby metallurgical reactions are carried out in the ladle; however, this operation is not comparable to a ladle cleaning operation, in which accumulated slag and other residue is melted and removed from the ladles.

Step 5 – Select BACT

(a) Background

For the P86A – Line 1 Ladle Cleaning and P86B – Line 4 Ladle Cleaning operations, BACT is selected as the existing baghouse control system C01 to C03, exhausting to a common stack. These baghouses currently have a combined exhaust flow rate of 726,000 acfm. The particulate emissions for each ladle cleaning operation from the baghouse control system C01 to C03 exhausting to stack S01 is 0.64 lbs/hr. This is based on the 15,000 acfm used to capture the ladle cleaning fumes, and the same BACT outlet loading limit of the stack at 0.005 gr/dscf as applied to the existing operations.

PM = PM10 = PM2.5 = 15,000 acfm * 0.005 gr/dscf * 60 min/hr * lb/7000 grains = 0.64 lbs/hr

The assumed control efficiency is 99.9%.

The ladle cleaning operations only occur when there is no production. Therefore, the current total particulate emission PSD BACT limitation for Baghouses C01 to C03 exhausting from Stack S01 during production will remain the same at 32.01 lbs/hr. This 32.01 lbs/hr of PM limitation for Stack S01 is pursuant to 326 IAC 2-2 (PSD), CP-123-4593-00019, issued on January 19, 1996, CP-123-8451-00019, issued on February 4, 1998, and Amendment 123-9740-00019, issued May 22, 1998.

(b) Comparison to NESHAP

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. There currently is no NSPS for iron foundries. There is a NESHAP for steel and iron foundries under 40 CFR Part 60 Subpart EEEEE. There are no specific limitations for maintenance operations such as ladle cleaning. However, there is a 20% opacity visible emission limitation for fugitive emissions from a building or structure at a new or existing iron and steel foundry that currently applies to indoor fugitive emissions such as ladle cleaning.

The proposed opacity BACT limit for the Line 1 Ladle Cleaning and Line 4 Ladle Cleaning operations will be 10%, which is more stringent than the 40 CFR Part 60 Subpart EEEEE.

Note: This is already the existing PSD BACT for the common exhaust stack of the three (3) Baghouses C01 to C03.

(c) BACT

Based on the above analysis, pursuant to 326 IAC 2-2 (Prevention of Significant Deterioration), IDEM, OAQ has determined that the following requirements represent BACT for the ladle cleaning operations at this source:

(1) The Line 1 ladle cleaning operation, identified as P86A, and the Line 4 ladle cleaning operation, identified as P86B, shall operate only when other production facilities exhausting to stack S01 are not in operation.

(2) The PM, PM10, and PM2.5 emissions exhausting to Stack S01 from the Line 1 ladle cleaning operation, identified as P86A, shall be controlled by a baghouse(s).

(3) The PM, PM10, and PM2.5 emissions exhausting to Stack S01 from the Line 4 ladle cleaning operation, identified as P86B, shall be controlled by a baghouse(s).

(4) The particulate emissions from the following processes shall not exceed the following limitations as shown in the table below:

Stack ID	Process	Process ID	Emission Limitation for Individual Processes (lb/hr)			Particulate Emission Limitation for Stack (gr/dscf)	Opacity Limitation for Stack
			PM	PM10	PM2.5		
S01	Line 1 ladle cleaning operation	P86A	0.64	0.64	0.64	0.005	10%
	Line 4 ladle cleaning operation	P86B	0.64	0.64	0.64		

IDEM Contact

(a) Questions regarding this BACT Analysis can be directed to Sarah Street at the Indiana Department Environmental Management, Office of Air Quality, 100 North Senate Avenue, MC 61-53, Room 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 232-8427 or toll free at 1-800-451-6027 extension 2-8427.

(b) A copy of the findings is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/

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

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

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

TO: Bryant Esch
Waupaca Foundry, Inc. Plant 5
PO Box 249
Waupaca, WI 54981

DATE: November 7, 2013

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

SUBJECT: Final Decision
Title V – Significant Permit Modification
123-33300-00019

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

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

A copy of the final decision and supporting materials has also been sent via standard mail to:
Bruce Tesch, Plant Manager / Waupaca Foundry
OAQ Permits Branch Interested Parties List

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

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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Commissioner

November 7, 2013

TO: Perry County Public Library

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

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

Applicant Name: Waupaca Foundry Inc.
Permit Number: 123-33300-00019

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

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

Enclosures
Final Library.dot 6/13/2013

Mail Code 61-53

IDEM Staff	AWELLS 11/7/2013 Waupaca Foundry Inc 123-33300-00019 Final		AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender	▶	Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: **CERTIFICATE OF MAILING ONLY**

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee Remarks
1		Bryant Esch Waupaca Foundry Inc PO Box 249 Waupaca WI 54981 (Source CAATS) confirmed delivery									
2		Bruce E Tesch Plant Mgr Waupaca Foundry Inc 9856 State Hwy 66 Tell City IN 47586 *(RO CAATS)*									
3		Perry County Health Department Courthouse Annex Cannelton IN 47520-1251 *(Health Department)*									
4		Mr. Ron Hendrich Schwab Corporation 4630 E St Rd 66 Cannelton IN 47520 *(Affected Party)*									
5		Mr. Bobby Carson P.O. Box 7 Mammoth Cave KY 42259 *(Affected Party)*									
6		Mrs. Tina M. Kunkler-Laake News Publishing Company 537 Main Street PO Box 309 Tell City IN 47586 *(Affected Party)*									
7		Tell City - City Council and Mayors Office PO Box 515 Tell City IN 47586 *(Local Official)*									
8		Perry County Commissioners Court House, 2219 Payne Street Tell City IN 47586 *(Local Official)*									
9		Tell City Perry County Public Library 2328 Tell Street Tell City IN 47586-1717 *(Library)*									
10		Mr. Mark Wilson Evansville Courier & Press P.O. Box 268 Evansville IN 47702-0268 *(Affected Party)*									
11		John Blair 800 Adams Ave Evansville IN 47713 *(Affected Party)*									
12											
13											
14											
15											

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10			The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is $50,000 per piece subject to a limit of $50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is $500. The maximum indemnity payable is $25,000 for registered mail, sent with optional postal insurance. See ***Domestic Mail Manual*** **R900, S913**, and **S921** for limitations of coverage on inured and COD mail. See ***International Mail Manual*** for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.

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