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June 29, 2004

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TO: Interested Parties / Applicant

RE: Thyssen Krupp Waupaca, Inc Plant #5 / 123-9234-00019

FROM: Paul Dubenetzky  
Chief, Permits Branch  
Office of Air Quality

### Notice of Decision: Approval – Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted, 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 13-15-6-1(b) or IC 13-15-6-1(a) require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204.

For an **initial Title V Operating Permit**, a petition for administrative review must be submitted to the Office of Environmental Adjudication within **thirty (30)** days from the receipt of this notice provided under IC 13-15-5-3, pursuant to IC 13-15-6-1(b).

For a **Title V Operating Permit renewal**, a petition for administrative review must be submitted to the Office of Environmental Adjudication within **fifteen (15)** days from the receipt of this notice provided under IC 13-15-5-3, pursuant to IC 13-15-6-1(a).

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 an initial Title V operating permit, permit renewal, 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 impracticable 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.

# PART 70 OPERATING PERMIT OFFICE OF AIR QUALITY

**ThyssenKrupp Waupaca, Inc. Plant 5  
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. This permit also addresses certain new source review requirements for existing equipment and is intended to fulfill the new source review procedures pursuant to 326 IAC 2-2 and 326 IAC 2-7-10.5, applicable to those conditions.

Operation Permit No.: T123-9234-00019	
Issued by: Original Signed by Janet G. McCabe Janet G. McCabe, Assistant Commissioner Office of Air Quality	Issuance Date: June 29, 2004

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- Compliance Determination Requirements**
- D.5.10 Particulate Matter (PM/PM-10) Control

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## SECTION A SOURCE SUMMARY

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

### A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

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The Permittee owns and operates a stationary ductile iron foundry.

Responsible Official:	Gary L. Thoe, President and CEO
Source Address:	9856 State Highway 66, Tell City, IN 47586
Mailing Address:	P.O. Box 189, Tell City, IN 47586
General Source Phone Number:	812-547-0700
SIC Code:	3321
County Location:	Perry
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Major Source, under PSD Rules; Major Source, Section 112 of the Clean Air Act 1 of 28 listed source categories (secondary metal production)

### A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

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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 80 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
    - (A) One (1) pouring/mold cooling operation, identified as P01, with a maximum throughput of 25 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 25 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 25 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 25 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 25 tons per hour, using a mechanical blaster, using one (1) baghouse (C07) for particulate control, exhausting to stack S07;

(1) Line 2

- (A) One (1) pouring/mold cooling operation, identified as P06, with a maximum throughput of 16 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 16 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 16 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 16 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 16 tons per hour, using a mechanical blaster, using one (1) baghouse (C07) for particulate control, exhausting to stack S07;

(2) Line 3

- (A) One (1) pouring/mold cooling operation, identified as P11, with a maximum throughput of 16 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 16 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 16 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 16 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 16 tons per hour, using a mechanical blaster, using one (1) baghouse (C07) for particulate control, exhausting to stack S07;

(3) Line 4

- (A) One (1) pouring/mold cooling operation, identified as P16, with a maximum throughput of 25 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 25 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 25 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 25 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 25 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 480 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 480 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 480 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 50 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 30 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 80 tons per hour; and
  - (13) One (1) ladle cleaning with burn bars, identified as P86.

#### Phase II

- (a) One (1) cupola iron melting system, identified as P33, constructed in 1998 with a maximum melt rate of 80 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 25 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 throughput capacity of 25 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 25 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 25 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 25 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 18 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 18 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 18 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 18 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 18 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 30 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 30 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 30 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 30 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 30 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 18 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 18 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 18 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 18 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 18 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, consisting of the following:
- (1) One (1) return sand handling and screening operation, identified as P80, with a maximum throughput capacity of 600 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 600 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 600 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 50 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 40 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 91.2 tons per hour;
  - (7) One (1) ladle filling and iron transport operation with a maximum capacity of 150 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) Two (2) ductile iron treatment stations, both identified as P35, each with a maximum production capacity of 40 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) One (1) phenolic-urethane core sand handling system, identified as P42, with a maximum production capacity of 20 tons of cores per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C08, that exhausts to Stack S08B;
  - (10) 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) 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) 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) 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) One (1) pattern shop, identified as P50, controlled by a baghouse, exhausting to stack S08.

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

- (1) 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]
- (2) This stationary source also includes the following insignificant activities which are not specifically regulated:
  - (a) Natural gas-fired combustion sources with heat input equal to or less than ten

million (10,000,000) Btu per hour;

- (b) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons;
- (c) A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month;
- (d) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to 1% by volume;
- (e) Any operations using aqueous solutions containing less than 1% by weight of VOCs excluding HAPs;
- (f) Forced and induced draft cooling tower system not regulated under a NESHAP;
- (g) Heat exchanger cleaning and repair;
- (h) Underground conveyors;
- (i) Blowdown for any of the following: sight glass; boilers; compressors; pumps; and cooling tower;
- (j) Mold release agents using low volatile products (vapor pressure less than or equal to 2 kilopascals measured at 38 degrees C);
- (k) A laboratory as defined in 326 IAC 2-7-1(21)(D).

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); and
- (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]

This permit is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date.

### B.3 Enforceability [326 IAC 2-7-7]

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.4 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.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. The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34). 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) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification.

- (c) A responsible official is defined at 326 IAC 2-7-1(34).

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

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- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in letter form no later than July 1 of each year to:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

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 the certification by the "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]**

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- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, including the following information on each facility:

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

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

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

The PMP extension notification does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The Permittee shall implement the PMPs, including any record keeping, as necessary to ensure that failure to implement a PMP does not cause or contribute to an exceedance of any limitation on emissions or potential to emit.
- (c) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMP does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (d) To the extent the Permittee is required by 40 CFR 63 to have an Operation, Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

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

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:
  - (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
  - (2) The permitted facility was at the time being properly operated;
  - (3) During the period of an emergency, the Permittee took all reasonable steps to

minimize levels of emissions that exceeded the emission standards or other requirements in this permit;

- (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section), or  
Telephone Number: 317-233-5674 (ask for Compliance Section)  
Facsimile Number: 317-233-5967

- (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 Branch, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

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

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

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

The notification which shall be submitted by the Permittee does not require the certification by the "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) 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.
- (h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

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 in 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]

- (a) All terms and conditions of previous permits issued pursuant to permitting programs approved into the state implementation plan have been either
  - (1) incorporated as originally stated,
  - (2) revised, or
  - (3) deletedby this permit.
- (b) All previous registrations and permits are superseded by this permit.

B.14 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]

- (a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provisions), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. 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.

The Quarterly Deviation and Compliance Monitoring Report does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

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 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 the certification by the "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 2-7-4]**

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- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ, and shall include the information specified in 326 IAC 2-7-4. 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 the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

- (b) Timely Submittal of Permit Renewal [326 IAC 2-7-4(a)(1)(D)]
  - (1) A timely renewal application is one that is:
    - (A) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
    - (B) 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.
  - (2) If IDEM, OAQ, upon receiving a timely and complete 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.

- (c) Right to Operate After Application for Renewal [326 IAC 2-7-3]  
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 in writing by IDEM, OAQ, any additional information identified as being needed to process the application.
- (d) United States Environmental Protection Agency Authority [326 IAC 2-7-8(e)]  
If IDEM, OAQ, fails to act in a timely way on a Part 70 permit renewal, the U.S. EPA may invoke its authority under Section 505(e) of the Clean Air Act to terminate or revoke and reissue a Part 70 permit.

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

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

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

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

Any such application shall be certified by the "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)]
- (d) No permit amendment or modification is required for the addition, operation, or removal of a nonroad engine, as defined in 40 CFR 89.2.

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

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- (a) No Part 70 permit revision 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]**

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- (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 emissions allowable under 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  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

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 which document, on a rolling five (5) year basis, all such changes and emissions trading that are subject to 326 IAC 2-7-20(b), (c), or (e) and makes 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

the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) Emission Trades [326 IAC 2-7-20(c)]  
The Permittee may trade increases and decreases in emissions in 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.

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

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A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2 and 326 IAC 2-7-10.5.

**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]**

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

- (a) Enter upon the Permittee's premises where a 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]**

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- (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

Permits Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

The application which shall be submitted by the Permittee does require the certification by the "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, I/M & Billing 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]

Notwithstanding the conditions of this permit that state specific methods that may be used to demonstrate compliance with, or a violation of, applicable requirements, any person (including the Permittee) may also use other credible evidence to demonstrate compliance with, or a violation of, any term or condition of this permit.

## 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 [40 CFR 52 Subpart P][326 IAC 6-3-2]
- (a) Pursuant to 40 CFR 52 Subpart P, particulate matter emissions from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour.
- (b) Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour. This condition is not federally enforceable.
- C.2 Opacity [326 IAC 5-1]
- Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:
- (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 or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2. 326 IAC 9-1-2 is not federally enforceable.
- 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).
- 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 submitted on February 12, 2003. The plan is included as Part 70 Permit Attachment A.

**C.7 Operation of Equipment [326 IAC 2-7-6(6)]**

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Except as otherwise provided by statute or rule, or in this permit, all air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation.

**C.8 Stack Height [326 IAC 1-7]**

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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 1-7-2, 326 IAC 1-7-3(c) and (d), 326 IAC 1-7-4(d), (e), and (f), and 326 IAC 1-7-5(d) are not federally enforceable.

**C.9 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]**

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- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.
- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
- (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
  - (2) If there is a change in the following:
    - (A) Asbestos removal or demolition start date;
    - (B) Removal or demolition contractor; or
    - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management  
Asbestos Section, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

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 Accredited 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 Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Accredited Asbestos inspector is not federally enforceable.

C.10 **National Emissions Standards for Hazardous Air Pollutants for Iron and Steel Foundries [40 CFR Part 63, Subpart EEEEE]**

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- (a) The provisions of 40 CFR 63 Subpart A - General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the iron and steel foundry except when otherwise specified in 40 CFR 63 Subpart EEEEE. The Permittee must comply with these requirements on and after the effective date of 40 CFR 63 Subpart EEEEE.
- (b) The affected source, the iron and steel foundry, is subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Iron and Steel Foundries, (40 CFR 63, Subpart EEEEE, and 326 IAC 20-1-1), effective the date the rule is published in the Federal Register. Pursuant to this rule, the Permittee must comply with 40 CFR 63, Subpart EEEEE on and after the date that is three years after the effective date of the rule, except as provided in paragraph (e), or accept and meet an enforceable HAP emissions limit below the major source threshold prior to three years after the effective date of the rule.
- (c) The following emissions units comprise the affected source that is subject to 40 CFR 63, Subpart EEEEE:
  - (1) Phase I and Phase II cupola melt furnaces;
  - (2) lines 1 through 8 pouring/casting operations; and
  - (3) fugitive emissions from each building or structure housing any emissions source at the foundry.
- (d) The definitions of 40 CFR 63, Subpart EEEEE at 40 CFR 63.7765 are incorporated by reference.
- (e) Pursuant to 40 CFR 63.7700(a) and 40 CFR 63.7683(b), the Permittee shall comply with the certification requirements in 40 CFR 63.7700(b) or prepare and implement a plan for the selection and inspection of scrap according to the requirements in 40 CFR 63.7700(c) no later than one year after the effective date of 40 CFR 63, Subpart EEEEE.

**C.11 Ambient Monitoring [326 IAC 2-2-4]**

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IDEM has determined that the SO<sub>2</sub> ambient monitoring site can be removed from operation because the data has established that the SO<sub>2</sub> levels comply with the NAAQS with an adequate margin of safety.

Pursuant to CP123-8451-00019 issued on February 4, 1998 and 326 IAC 2-2-4, the Permittee shall continue to operate the upwind and downwind ambient monitoring sites for PM<sub>10</sub> and collect meteorological data described in (a) through (d).

- (a) The ambient data for PM<sub>10</sub> and meteorological data shall be collected following the initial compliance demonstration. IDEM, OAQ reserves the authority to require the Permittee to monitor for compliance with the National Ambient Air Quality Standards (NAAQS) for PM<sub>2.5</sub> in the event that such information is necessary to demonstrate compliance with the standard.
- (b) The monitoring site(s) shall measure the following meteorological parameters:
  - (1) wind direction,
  - (2) wind speed, and
  - (3) temperature.
- (c) A quarterly summary of the monitoring data shall be submitted to:

Indiana Department of Environmental Management  
Ambient Monitoring Section, Office of Air Quality  
2525 North Shadeland Avenue  
Indianapolis, Indiana 46219

within ninety (90) calendar days after the end of the quarter being reported.
- (d) The Permittee may petition IDEM, OAQ for the removal of the monitoring sites if it has been established that the PM<sub>10</sub> levels will continue to comply with the NAAQS with an adequate margin of safety. The monitoring requirements may be continued if there exists a threat to the NAAQS or if determined to be warranted by IDEM, OAQ.

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

**C.12 Performance Testing [326 IAC 3-6]**

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- (a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

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

by the Permittee does not require certification by the "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 certification by the "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.

### **Compliance Requirements [326 IAC 2-1.1-11]**

#### C.13 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.14 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, 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 Branch, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

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 the certification by the "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.15 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 continuous opacity monitoring systems 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 continuous opacity monitoring system occurs, a record shall be made of the time and reason of the breakdown and efforts made to correct the problem.
- (d) Whenever a continuous opacity monitor (COM) is malfunctioning or will be down for calibration, maintenance, or repairs for a period of one (1) hour or more, compliance with the applicable opacity limits shall be demonstrated by the following:
  - (1) Visible emission (VE) notations shall be performed once per hour during daylight operations following the shutdown or malfunction of the primary COM. A trained employee shall record whether emissions are normal or abnormal for the state of operation of the emission unit at the time of the reading.
    - (A) 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.
    - (B) If abnormal emissions are noted during two consecutive emission notations, the Permittee shall begin Method 9 opacity observations within four hours of the second abnormal notation.
    - (C) VE notations may be discontinued once a COM is online or formal Method 9 readings have been implemented.
  - (2) If a COM is not online within twenty-four (24) hours of shutdown or malfunction of the primary COM, the Permittee shall provide certified opacity reader(s), who may be employees of the Permittee or independent contractors, to self-monitor the emissions from the emission unit stack.
    - (A) 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.
    - (B) Method 9 opacity readings shall be repeated for a minimum of five (5) consecutive six (6) minute averaging periods at least once every four (4) hours during daylight operations, until such time that a COM is in operation.
    - (C) Method 9 readings may be discontinued once a COM is online.
    - (D) Any opacity exceedances determined by Method 9 readings shall be reported with the Quarterly Opacity Exceedances Reports.
  - (3) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. Observation of abnormal emissions that do not violate an applicable opacity limit is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

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

C.16 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) If the CEMS is required for monitoring NO<sub>x</sub> or SO<sub>2</sub> emissions pursuant to 40 CFR 75 (Title IV Acid Rain program) or 326 IAC 10-4 (NO<sub>x</sub> Budget Trading Program), the Permittee shall comply with the relevant requirements of 40 CFR 75 Subpart D - Missing Data Substitution Procedures.
  - (2) If the CEMS is not used to monitor NO<sub>x</sub> or SO<sub>2</sub> emissions pursuant to 40 CFR 75 or 326 IAC 10-4, then supplemental or intermittent monitoring of the parameter shall be implemented as specified in Section D of this permit until such time as the emission monitor system is back in operation.
- (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.17 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60 Appendix B, 40 CFR 63, or other approved methods as specified in this permit.

C.18 Pressure Gauge and Other Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

- (d) Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent (±2%) of full scale reading.
- (b) Whenever a condition in this permit requires the measurement of a temperature or flow rate, the instrument employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent (±2%) of full scale reading.
- (c) The Preventive Maintenance Plan for the pH meter shall include calibration using known standards. The frequency of calibration shall be adjusted such that the typical error found at calibration is less than one pH point.

- (d) The Permittee may request the IDEM, OAQ approve the use of a pressure gauge or other instrument that does not meet the above specifications provided the Permittee can demonstrate an alternative pressure gauge or other instrument specification will adequately ensure compliance with permit conditions requiring the measurement of pressure drop or other parameters.

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

**C.19 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]**

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

- (a) The Permittee shall prepare written emergency reduction plans (ERPs) consistent with safe operating procedures.

- (b) These ERPs shall be submitted for approval to:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

within ninety (90) days after the date of issuance of this permit.

The ERP does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

- (c) If the ERP is disapproved by IDEM, OAQ, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.
- (d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.
- (e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.
- (f) 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.20 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68]**

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

**C.21 Compliance Response Plan - Preparation, Implementation, Records, and Reports [326 IAC 2-7-5] [326 IAC 2-7-6]**

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- (a) The Permittee is required to prepare a Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. If a Permittee is required to have an Operation, Maintenance and Monitoring (OMM) Plan under 40 CFR 63, such plan shall be deemed to satisfy the requirements for a CRP for those compliance monitoring conditions. A CRP shall be submitted to IDEM, OAQ upon request. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee,

supplemented from time to time by the Permittee, maintained on site, and comprised of:

- (1) Reasonable response steps that may be implemented in the event that a response step is needed pursuant to the requirements of Section D of this permit; and an expected timeframe for taking reasonable response steps.
- (2) If, at any time, the Permittee takes reasonable response steps that are not set forth in the Permittee's current Compliance Response Plan or Operation, Maintenance and Monitoring (OMM) Plan and the Permittee documents such response in accordance with subsection (e) below, the Permittee shall amend its Compliance Response Plan or Operation, Maintenance and Monitoring (OMM) Plan to include such response steps taken.

The OMM Plan shall be submitted within the time frames specified by the applicable 40 CFR 63 requirement.

- (b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:
  - (1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan or Operation, Maintenance and Monitoring (OMM) Plan; or
  - (2) If none of the reasonable response steps listed in the Compliance Response Plan or Operation, Maintenance and Monitoring (OMM) Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.
  - (3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, and it will be ten (10) days or more until the unit or device will be shut down, then the Permittee shall promptly notify the IDEM, OAQ of the expected date of the shut down. The notification shall also include the status of the applicable compliance monitoring parameter with respect to normal, and the results of the response actions taken up to the time of notification.
  - (4) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (c) The Permittee is not required to take any further response steps for any of the following reasons:
  - (1) A false reading occurs due to the malfunction of the monitoring equipment and prompt action was taken to correct the monitoring equipment.
  - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for a minor permit modification to the permit, and such request has not been denied.

- (3) An automatic measurement was taken when the process was not operating.
- (4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.
- (d) When implementing reasonable steps in response to a compliance monitoring condition, if the Permittee determines that an exceedance of an emission limitation has occurred, the Permittee shall report such deviations pursuant to Section B-Deviations from Permit Requirements and Conditions.
- (e) The Permittee shall record all instances when, in accordance with Section D, response steps are taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.
- (f) Except as otherwise provided by a rule or provided specifically in Section D, all monitoring as required in Section D shall be performed when the emission unit is operating, except for time necessary to perform quality assurance and maintenance activities.

**C.22 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5]  
[326 IAC 2-7-6]**

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- (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 take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) 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 the certification by the "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.23 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]**

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- (a) The Permittee shall submit an emission statement certified pursuant to the requirements of 326 IAC 2-6. This statement must be received in accordance with the compliance schedule specified in 326 IAC 2-6-3, and must comply with the minimum requirements specified in 326 IAC 2-6-4. The submittal should cover the period identified in 326 IAC 2-6. The emission statement shall meet the following requirements:
  - (1) Indicate estimated actual emissions of criteria pollutants from the source, in compliance with 326 IAC 2-6 (Emission Reporting);

- (2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1(32) ("Regulated pollutant which is used only for purposes of Section 19 of this rule") from the source, for purposes of Part 70 fee assessment.

The emission statement must be submitted to:

Indiana Department of Environmental Management  
Technical Support and Modeling Section, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

The emission statement does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The emission statement 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.24 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]

- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. 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, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.25 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11]

- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:  
  
Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015
- (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) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (e) 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.

C.26 National Emissions Standards for Hazardous Air Pollutants for Iron and Steel Foundries - Reporting Requirements [40 CFR 63, Subpart EEEEE]

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- (a) To comply with Condition C.10, the Permittee shall submit:
  - (1) An Initial Notification containing the information specified in 40 CFR 63.9(b)(2) no later than 120 days after the effective date of 40 CFR 63, Subpart EEEEE.
  - (2) A Notification of Compliance Status containing the information required by 40 CFR 63.9(h) in accordance with 40 CFR 63.7750(e). The Notification of Compliance Status must be submitted:
    - (A) Before the close of business on the 30th calendar day following completion of the initial compliance demonstration for each initial compliance demonstration that does not include a performance test; and
    - (B) Before the close of business on the 60th calendar day following the completion of the performance test according to the requirement specified in 40 CFR 63.10(d)(2) for each initial compliance demonstration that does include a performance test.
  - (3) If required to conduct a performance test, 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 40 CFR 63.7(b)(1) and 40 CFR 63.7750(d).
  - (4) If required to use a continuous monitoring system (CMS), notifications, if required, as specified in 40 CFR 63.9(g), by the date of submission of the notification of intent to conduct a performance test.
  - (5) If required to conduct opacity or visible emissions observations, the anticipated date for conducting the opacity or visible emission observations specified in 40 CFR 63.6(h)(5) in accordance with the appropriate schedule specified in 40 CFR 63.9(f) as required by 40 CFR 63.7750(a).

- (b) The notifications required by paragraph (a) shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

and

United States Environmental Protection Agency, Region V  
Director, Air and Radiation Division  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

The notifications require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) The Permittee shall submit an application for a significant permit modification to IDEM, OAQ to include information from the notification of compliance status in the Part 70 operating permit.
- (1) The significant permit modification application shall be consistent with 326 IAC 2-7-12, including information sufficient for IDEM, OAQ to incorporate into the Part 70 operating permit the applicable requirements of 40 CFR 63, Subpart EEEEE, a description of the affected source and activities subject to the standard, and a description of how the Permittee will meet the applicable requirements of the standard.
  - (2) The significant permit modification application shall be submitted no later than the date that the notification of compliance status, specified in 40 CFR 63.7750(e) and 40 CFR 63.9(h), is due.
  - (3) The significant permit modification application shall be submitted to:  
  
Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

### **Stratospheric Ozone Protection**

#### **C.27 Compliance with 40 CFR 82 and 326 IAC 22-1**

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

- (a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.
- (b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- (c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

## SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

### MELTING OPERATION

#### Phase I

One (1) gray iron cupola, identified as P30, constructed in 1996, with a maximum melt rate of 80 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 80 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 facility description box is descriptive information and does not constitute enforceable conditions.)

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

#### D.1.1 Particulate Matter Emissions Limitations [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 Lead Emission Limitations [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 Beryllium Emission Limitations [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 Sulfur Dioxide Emissions Limitations [326 IAC 2-2-3(a)(3)]

- (a) Pursuant to 326 IAC 2-2-3(a)(3), the sulfur dioxide (SO<sub>2</sub>) emissions from the cupolas shall be limited to 0.22 pounds per ton of metal melted based on a 30-day rolling average and 35.2 pounds per hour based on a 3-hour rolling average.
- (b) Pursuant to 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), coke usage shall not exceed 192 tons per day for each cupola.

**D.1.5 Volatile Organic Compound Emission Limitations [326 IAC 2-2-3(a)(3)] [326 IAC 8-1-6]**

Pursuant to CP-123-8451-00019, issued on February 4 1998, Amendment 123-9740-00019, issued May 22, 1998, 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 3.20 pounds per hour.

**D.1.6 Carbon Monoxide Emission Limitations [326 IAC 2-2-3(a)(3)] [326 IAC 9-1-2]**

(a) Pursuant to 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), the carbon monoxide (CO) emissions from the cupolas shall be limited to 0.4 pounds per ton of iron and 64.00 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 Nitrogen Oxide Emission Limitations [326 IAC 2-2-3(a)(3)]**

Pursuant to 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), the nitrogen oxide (NO<sub>x</sub>) emissions from the cupolas shall be limited to 0.44 pounds per ton of iron and 70.40 pounds per hour.

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

Pursuant to CP123-8451-00019 issued on February 4, 1998 and 326 IAC 2-2-3(a)(3), each cupola shall be limited to a maximum melt rate of 80 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, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and all control devices.

**Compliance Determination Requirements**

**D.1.10 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]**

Within 180 days after issuance of this Part 70 permit, the Permittee shall perform PM, opacity, VOC, NO<sub>x</sub>, CO, lead and beryllium testing on both cupolas (P30 and P33) using methods as approved by the Commissioner. The tests for CO shall be performed during periods of high and low load and at loads representative of normal operations. These tests shall be repeated at least once every two and one-half (2.5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.

**D.1.11 Particulate Matter (PM/PM-10) Controls**

(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).

**D.1.12 Sulfur Dioxide Control**

Pursuant to CP123-8451-00019 issued February 4, 1998, the SO<sub>2</sub> 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

- (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

- (a) Pursuant to CP123-8451 issued February 4, 1998, a continuous monitoring system shall be installed, calibrated, maintained, and operated for measuring opacity from stack S09 of the Phase I and Phase II cupolas, to demonstrate compliance with the limitations and operation standards required by Operation Condition D.1.1(b). The continuous monitoring systems shall meet the performance specifications of 326 IAC 3-5-2.
- (b) Pursuant to CP123-8451 issued February 4, 1998, compliance with the SO<sub>2</sub> limits for the Phase I and Phase II cupolas in Condition D.1.4 shall be demonstrated by installing and operating a SO<sub>2</sub> continuous emissions monitoring system (CEMS) for the Phase 1 and Phase 2 cupolas exhausting to stack S09. The SO<sub>2</sub> 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<sub>2</sub> per hour. The SO<sub>2</sub> 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 minute. The output of this system shall be recorded as an hourly average. From the date of issuance of this permit until the approved stack test results (as required by Condition D.1.10 of this Part 70 Permit) are available, the Permittee shall maintain the hourly average temperature of the cupola gas stream at or above 1400 °F. On and after the date the approved stack test results are available, the Permittee maintain the hourly average temperature of the cupola gas stream at or above the average temperature measured during the most recent compliant stack test. These minimum temperature requirements apply 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 2-7-6(1)] [326 IAC 2-7-5(1)]**

#### D.1.16 Baghouse Parametric Monitoring

The Permittee shall record the total static pressure drop across each of the baghouses used in conjunction with the cupolas, at least once per shift when the associated cupola is in operation. When for any one reading, the pressure drop across a baghouse is outside the normal range of 3.0 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- Compliance Response Plan - Preparation, Implementation, Records, and Reports. 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 - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other 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.1.17 Baghouse Inspections

An inspection shall be performed each calendar quarter of all bags controlling the cupolas. Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.

#### D.1.18 Broken or Failed Bag Detection

In the event that bag failure has been observed:

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit. If operations continue after bag failure is observed and it will be 10 days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.
- (b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

#### D.1.19 Dry Alkaline Injection Parametric Monitoring

Whenever the SO<sub>2</sub> continuous emissions monitoring system (CEMS) is malfunctioning or down for repairs for more than one (1) hour, the Permittee shall record the alkaline dust injection rate of each dry alkaline injection system at least once per hour until the SO<sub>2</sub> 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- Compliance Response Plan - Preparation, Implementation, Records, and Reports. 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 - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

#### D.1.20 Dry Alkaline Injection Inspection

An inspection shall be performed each calendar quarter for each dry alkaline injection system. Inspections required by this condition shall not be performed in consecutive months. A record shall be kept of the results of the inspections.

#### D.1.21 Recuperative Incinerator Inspections

An inspection shall be performed each calendar quarter for each recuperative incinerator system. Inspections required by this condition shall not be performed in consecutive months. All defective parts shall be replaced.

#### D.1.22 Recuperative Incinerator Failure Detection

In the event that the recuperative incinerator failure has been observed:

Charging of the cupola shall cease immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion.

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

#### D.1.23 Record keeping Requirement

- (a) To document compliance with Conditions D.1.1 and D.1.14, the Permittee shall maintain records of opacity from the continuous opacity monitor on stack S09, including raw data and supporting information, for a minimum of five (5) years.
- (b) 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).
- (c) To document compliance with Conditions D.1.15, D.1.16, and D.1.19, the Permittee shall maintain records of the following:
  - (1) the static pressure drop across each baghouse once per shift;
  - (2) records of the injection rate of each alkali injection system once per hour as required by Condition D.1.19;
  - (3) 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; and
- (d) To document compliance with Conditions D.1.17, D.1.20, and D.1.21, the Permittee shall maintain records of the results of the inspections required under Conditions D.1.17, D.1.20, and D.1.21.
- (e) 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.
- (f) All records shall be maintained in accordance with Section C - General Record Keeping

Requirements, of this permit.

**D.1.25 Reporting Requirements**

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- (a) A quarterly summary of excess opacity emissions, as defined in 326 IAC 3-5-7, from the continuous monitoring system, shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, within thirty (30) days after the end of the quarter being reported.
  
- (b) The Permittee shall submit a quarterly excess emissions report, if applicable, based on the continuous emissions monitor system (CEMS) data for SO<sub>2</sub>, 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 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

### Facilities exhausting to stacks S01, S04, or S07

Phase I

(A) 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 25 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 25 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 25 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 25 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 25 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 16 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 16 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 16 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 16 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 16 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 16 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 16 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 16 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 16 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 16 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 25 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 25 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 25 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 25 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 25 tons per hour, using a mechanical blaster, using one (1) baghouse (C07) for particulate control, exhausting to stack S07.
- (5) Sand handling operations and ancillary operations
- (a) One (1) return sand handling & screen operation, identified as P21, with a maximum throughput of 480 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;
  - (b) One (1) sand cooling & water addition operation, identified as P22, with a maximum throughput of 480 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;
  - (c) One (1) sand mulling & handling operation, identified as P23, with a maximum throughput of 480 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;
  - (d) One (1) spent sand handling & processing operation, identified as P24, with a maximum throughput of 50 tons per hour, using three (3) baghouses (C01, C02, C03) for particulate control, exhausting to stack S01;
  - (e) 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) One (1) metallic returns handling operation, identified as P25, with a maximum throughput of 30 tons per hour, using one(1) baghouse (C07) for particulate control, exhausting to stack S07;

(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.2.1 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, 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.

**D.2.2 Lead Emissions Limitations [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), 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	0.024
	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	

Stack ID	Process	Process ID	Lead Emission Limit (lb/hr)
	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	0.0006
	Line 1 Cast Cooling	P03	
S07	Line 1 Cleaning/Grinding	P05	0.0019
	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 Beryllium Emissions Limitations [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), 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	0.001
	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	0.000012
	Line 1 Cast Cooling	P03	
S07	Line 1 Cleaning/Grinding	P05	0.000017
	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.2.4 Volatile Organic Compound Emissions Limitations [326 IAC 2-2-3(a)(3)] [326 IAC 8-1-6]**

- (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, 326 IAC 8-1-6 (BACT), and 326 IAC 2-2-3(a)(3) (Prevention of Significant Deterioration (PSD) Rules), the volatile organic compound (VOC) emissions from the following processes shall be limited as shown in the table below:

Stack ID	Process	Process ID	VOC Emission Limits for Individual Processes (lb/hr)	VOC Emission Limit (lb/hr)
S01	Line 1 Pouring/Mold Cooling	P01		47.0
	Line 1 Shakeout	P02	0.90	
	Line 1 Cast Cooling	P03		
	Line 1 Pick and Sort	P04		
	Line 2 Pouring/Mold Cooling	P06		
	Line 2 Shakeout	P07	1.6	
	Line 2 Cast Cooling	P08		
	Line 3 Pouring/Mold Cooling	P11		
	Line 3 Shakeout	P12		
	Line 3 Cast Cooling	P13	1.6	
	Line 4 Pouring/Mold Cooling	P16		
	Line 4 Shakeout	P17	0.50	
	Line 4 Cast Cooling	P18	2.5	
	Line 4 Pick and Sort	P19		
	Return Sand Handling/ Screening	P21		
	Sand Cooling/Water Addition	P22	1.64	
	Sand Mulling/Handling	P23		
	Spent Sand Handling/Processing	P24		
Air makeup units	P52	0.38		
S04	Line 1 Pouring/Mold Cooling	P01	4.55	4.55
	Line 1 Cast Cooling	P03		

- (b) In order for the units exhausting to stack S01 to come into compliance with the VOC BACT limit, the Permittee shall comply with the following schedule.
- (1) By December 31, 2004, the Permittee shall complete a program of internal sand and core optimization to comply with the VOC limit for stack S01 in paragraph (a) of this condition.

- (2) By January 31, 2005, the Permittee will perform VOC stack testing on stack S01, as described in Condition D.2.10(b).
- (3) If the testing required by (b)(2) of this condition does not demonstrate that stack S01 is in compliance with the VOC BACT limit in paragraph (a) of this condition, the Permittee will install and operate an advanced oxidation system according to the following schedule.
  - (i) Within 21 days after the receipt of the test results from the stack test required by (b)(2) which do not demonstrate compliance with the VOC BACT limit in paragraph (a) of this condition, the Permittee will issue a purchase order for the advanced oxidation system. As used in this permit, the term advanced oxidation system means a system where captured baghouse dust from the sand system is mixed with water treated with a combination of ozone and hydrogen peroxide (advanced oxidants).
  - (ii) Within 5 months after issuance of the purchase order for the advanced oxidation system, the Permittee shall complete installation of the system and commence initial operation of the system.
  - (iii) Within 4 months after commencing operation of the advanced oxidation system, the Permittee shall complete troubleshooting and optimization of the system.
  - (iv) Within 2 months after completion of the troubleshooting and optimization of the advanced oxidation system, the Permittee shall perform VOC stack testing on stack S01, as described in Condition D.2.10(b), and demonstrate compliance with the VOC BACT limit established in paragraph (a) of this condition.

**D.2.5 Carbon Monoxide Emission Limitations [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), 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/hr) unless otherwise specified	CO Emission Limits for Stacks (lb/hr)
S01	Line 1 Pouring/Mold Cooling	P01	79.5	442.0
	Line 1 Shakeout	P02	1.0 lb/ton iron	
	Line 1 Cast Cooling	P03		
	Line 1 Pick and Sort	P04		
	Line 2 Pouring/Mold Cooling	P06	80.0	
	Line 2 Shakeout	P07	16.0	
	Line 2 Cast Cooling	P08		
	Line 3 Pouring/Mold Cooling	P11	80.0	
	Line 3 Shakeout	P12		
	Line 3 Cast Cooling	P13		
	Line 4 Pouring/Mold Cooling	P16	125.0	
	Line 4 Shakeout	P17	25.0	
	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		
S04	Line 1 Pouring/Mold Cooling	P01	45.5	45.5
	Line 1 Cast Cooling	P03		

**D.2.6 Sulfur Dioxide Emissions Limitations [326 IAC 2-2-3(a)(3)]**

Pursuant to CP-123-4593-00019, issued on January 19, 1996, Amendment 123-9740-00019, issued May 22, 1998, and 326 IAC 2-2-3(a)(3), the sulfur dioxide (SO<sub>2</sub>) emissions from the following processes shall be limited as shown in the table below:

Stack ID	Process	Process ID	SO <sub>2</sub> Emission Limits for Individual Processes (lb/hr)	SO <sub>2</sub> Emission Limits for Stacks (lb/hr)
S01	Line 1 Pouring/Mold Cooling	P01	0.64	3.0
	Line 1 Shakeout	P02		
	Line 1 Cast Cooling	P03		
	Line 1 Pick and Sort	P04		
	Line 2 Pouring/Mold Cooling	P06	0.64	
	Line 2 Shakeout	P07		
	Line 2 Cast Cooling	P08		
	Line 3 Pouring/Mold Cooling	P11	0.64	
	Line 3 Shakeout	P12		
	Line 3 Cast Cooling	P13		
	Line 4 Pouring/Mold Cooling	P16	1.0	
	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	0.039		
S04	Line 1 Pouring/Mold Cooling	P01	0.36	0.36
	Line 1 Cast Cooling	P03		

**D.2.7 Nitrogen Oxide Emission Limitations [326 IAC 2-2-3(a)(3)]**

Pursuant to CP-123-4593-00019, issued on January 19, 1996, CP123-8451 issued on February 4, 1998, Amendment 123-9740-00019, issued May 22, 1998, and 326 IAC 2-2-3(a)(3), the (NO<sub>x</sub>) emissions from the following processes shall be limited as shown in the table below:

Stack ID	Process	Process ID	NOx Emission Limits for Individual Processes (lb/hr)	NOx Emission Limits for Stacks (lb/hr)
S01	Line 1 Pouring/Mold Cooling	P01	0.16	4.03
	Line 1 Shakeout	P02		
	Line 1 Cast Cooling	P03		
	Line 1 Pick and Sort	P04		
	Line 2 Pouring/Mold Cooling	P06	0.32	
	Line 2 Shakeout	P07		
	Line 2 Cast Cooling	P08		
	Line 3 Pouring/Mold Cooling	P11	0.32	
	Line 3 Shakeout	P12		
	Line 3 Cast Cooling	P13		
	Line 4 Pouring/Mold Cooling	P16	0.50	
	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	2.98		
S04	Line 1 Pouring/Mold Cooling	P01	0.09	0.09
	Line 1 Cast Cooling	P03		

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

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Pursuant to CP-123-8451-00019, issued on February 4 1998 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 480 tons of sand per hour;
- (b) the sand cooling/water addition process, identified as P22, shall be limited to a maximum throughput capacity of 480 tons of sand per hour;
- (c) the sand mulling/handling process, identified as P23, shall be limited to a maximum throughput capacity of 480 tons of sand per hour; and
- (d) the Line 1 pouring/mold cooling process, identified as P01, shall not exceed a maximum throughput of 25 tons of iron per hour.

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

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A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and all control devices.

**Compliance Determination Requirements**

**D.2.10 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]**

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- (a) Within 180 days after issuance of this Part 70 permit, the Permittee shall perform PM, opacity, lead and beryllium testing on the facilities exhausting to stacks S01 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. During the stack test, the Permittee shall monitor and record those parameters required to be measured by Condition D.2.16. 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 Section C- Performance Testing. 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) The Permittee shall perform VOC testing on the emission units exhausting to stack S01 using Method 25, 25A, or other methods approved by the Commissioner, in order to demonstrate compliance with the total stack limit listed in Condition D.2.4(a). During the stack test, the Permittee shall monitor and record those parameters required to be measured by Condition D.2.16. 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 Section C- Performance Testing. 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.

**D.2.11 Particulate Matter (PM/PM-10) Control**

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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.

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

#### D.2.12 Visible Emission Notations

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- (a) Visible emission notations of each baghouse stack exhaust shall be performed once per shift 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) The Compliance Response Plan for these units shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

#### D.2.13 Baghouse Parametric Monitoring

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The Permittee shall record the total static pressure drop across each of the baghouses used in conjunction with the processes listed in this section, at least once per shift when the associated process is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 3.0 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- Compliance Response Plan - Preparation, Implementation, Records, and Reports. 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 - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

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

#### D.2.14 Baghouse Inspections

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An inspection shall be performed each calendar quarter of all bags controlling the processes listed in this section. Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.

#### D.2.15 Broken or Failed Bag Detection

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In the event that bag failure has been observed:

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation,

Records, and Reports, shall be considered a deviation from this permit. If operations continue after bag failure is observed and it will be 10 days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

- (b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

#### D.2.16 Parametric Monitoring of Advanced Oxidation System

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- (a) Upon commencing operation of the advanced oxidation system, the Permittee shall monitor and record the ultra-sonic power of the system used in conjunction with the mold lines, at least once per shift when the mold lines are in operation. When for any one reading, the ultra-sonic power is less than the minimum level recommended by the manufacturer or a minimum level established during the latest stack test, whichever is higher, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. An ultra-sonic power 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 - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.
- (b) Upon commencing operation of the advanced oxidation system, the Permittee shall monitor and record the ozone generator plasma voltage of the system used in conjunction with the mold lines, at least once per shift when the mold lines are in operation. When for any one reading, the ozone generator plasma voltage is less than the minimum recommended by the manufacturer or a minimum established during the latest stack test, whichever is higher, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. An ozone generator plasma voltage 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 - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.
- (c) Upon commencing operation of the advanced oxidation system, the Permittee shall monitor and record the hydrogen peroxide usage of the system used in conjunction with the mold lines, at least once per shift when the mold lines are in operation. When for any one reading, the hydrogen peroxide is less than the minimum recommended by the manufacturer, or a minimum established during the latest stack test, whichever is higher, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A peroxide usage 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 - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall

be considered a deviation from this permit.

The instruments used for determining the ultra-sonic power, the ozone generator plasma voltage and the hydrogen peroxide usage shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

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

#### **D.2.17 Record Keeping Requirements**

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- (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 shift.
- (b) To document compliance with Condition D.2.13, the Permittee shall maintain records of the total static pressure drop across each baghouse once per shift.
- (c) To document compliance with Condition D.2.14, the Permittee shall maintain records of the results of the inspections required under Condition D.2.14.
- (d) To document compliance with the schedule outlined in Condition D.2.4(b), the Permittee shall submit records complete and sufficient to determine compliance with each step of the compliance schedule. Records shall be submitted within 30 days after the completion of each step of the compliance schedule.
- (e) To document compliance with Condition D.2.16, the Permittee shall maintain records of the ultra-sonic power, the ozone generator plasma voltage, and the hydrogen peroxide usage of the advanced oxidation system.
- (f) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

**SECTION D.3**

**FACILITY OPERATION CONDITIONS**

Facility Description [326 IAC 2-7-5(15)]

**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 25 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 throughput capacity of 25 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 25 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 25 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 25 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 18 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 18 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 18 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 18 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 18 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C16. The gases are then exhausted to Stack S16;

Facility Description [326 IAC 2-7-5(15)]

(3) Line 7

- (A) One (1) pouring/mold cooling operation, identified as P70, with a maximum production capacity of 30 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 30 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 30 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 30 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 30 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 18 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 18 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 18 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 18 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 18 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C16. The gases are then exhausted to Stack S16.

Facility Description [326 IAC 2-7-5(15)]

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 600 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 600 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 600 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 50 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 40 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 18 tons of metal castings per hour, with emissions controlled by existing baghouse C15, and exhausting to stack S15.

Ductile Iron Treatment Operations

- (1) Two (2) ductile iron treatment stations, both identified as P35, each with a maximum production capacity of 40 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 facility description box is descriptive information and does not constitute enforceable conditions.)

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

D.3.1 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, SSM123-12331-00019 issued on January 31, 2001, 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)
S15	Return Sand Handling/ Screening	P80	0.005
	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	
S16	shotblast machine	P55	0.005
	ductile iron treatment stations #1 and #2	P35	
	Return Sand Handling/ Screening	P80	
	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	PM Emission Limitation (gr/dscf)
	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 Lead Emission Limitations [326 IAC 2-2-3(a)(3)] [326 IAC 2-4.1-1]**

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), 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 individual processes (lb/hr)	Lead Emission Limitation for stack (lb/hr)
S15	Line 5 Pouring/Mold Cooling	P60	0.0014	0.0070
	Line 5 Shakeout	P61	0.00035	
	Line 5 Cast Cooling	P62	0.0009	
	Line 6 Pouring/Mold Cooling	P65	0.0005	
	Line 6 Shakeout	P66	0.00031	
	Line 6 Cast Cooling	P67	0.00026	
	Line 7 Pouring/Mold Cooling	P70	0.0014	
	Line 7 Shakeout	P71	0.00035	
	Line 7 Cast Cooling	P72	0.00058	
	Line 8 Pouring/Mold Cooling	P75	0.0005	
	shotblast machine	P55	0.0003	
	Metal Returns Handling System	P84	0.00003	
	Return Sand Handling/Screening	P80	0.00009	
	Sand Mulling and Handling	P81	0.0001	
	Sand Blending and Cooling	P82	0.0001	
Spent Sand and Dust Handling	P83	0.00004		

Stack ID	Process	Process ID	Lead Emission Limitation for individual processes (lb/hr)	Lead Emission Limitation for stack (lb/hr)
S16	Line 5 Shakeout	P61	0.00035	0.005
	Line 5 Pick and Sort	P63	0.0001	
	Line 5 Cleaning/ Grinding	P64	0.0003	
	Line 6 Shakeout	P66	0.00019	
	Line 6 Cast Cooling	P67	0.00064	
	Line 6 Pick and Sort	P68	0.0001	
	Line 6 Cleaning/ Grinding	P69	0.0002	
	Line 7 Shakeout	P71	0.00035	
	Line 7 Cast Cooling	P72	0.00032	
	Line 7 Pick and Sort	P73	0.0001	
	Line 7 Cleaning/ Grinding	P74	0.0002	
	Line 8 Shakeout	P76	0.0005	
	Line 8 Cast Cooling	P77	0.0007	
	Line 8 Pick and Sort	P78	0.0003	
	Line 8 Cleaning/ Grinding	P79	0.0004	
	Return Sand Handling/Screening	P80	0.00001	
	Metal Returns Handling System	P84	0.00002	

**D.3.3 Beryllium Emission Limitations [326 IAC 2-2-3(a)(3)] [326 IAC 2-4.1-1]**

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), 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 Limitations for individual processes (lb/hr)	Beryllium Emission Limitation for stack (lb/hr)
S15	Line 5 Pouring/Mold Cooling	P60	0.000056	0.0003
	Line 5 Shakeout	P61	0.000014	
	Line 5 Cast Cooling	P62	0.000003	
	Line 6 Pouring/Mold Cooling	P65	0.000022	
	Line 6 Shakeout	P66	0.000014	
	Line 6 Cast Cooling	P67	0.0000008	
	Line 7 Pouring/Mold Cooling	P70	0.000056	
	Line 7 Shakeout	P71	0.000014	
	Line 7 Cast Cooling	P72	0.0000019	
	Line 8 Pouring/Mold Cooling	P75	0.000022	
	shotblast machine	P55	0.000001	
	Metal Returns Handling System	P84	0.000002	
	Return Sand Handling/Screening	P80	0.000035	
	Sand Mulling and Handling	P81	0.000029	
	Sand Blending and Cooling	P82	0.000017	
Spent Sand and Dust Handling	P83	0.000009		

Stack ID	Process	Process ID	Beryllium Emission Limitations for individual processes (lb/hr)	Beryllium Emission Limitation for stack (lb/hr)
S16	Line 5 Shakeout	P61	0.000014	0.00009
	Line 5 Pick and Sort	P63	0.0000005	
	Line 5 Cleaning/ Grinding	P64	0.000001	
	Line 6 Shakeout	P66	0.000008	
	Line 6 Cast Cooling	P67	0.0000022	
	Line 6 Pick and Sort	P68	0.0000005	
	Line 6 Cleaning/ Grinding	P69	0.000001	
	Line 7 Shakeout	P71	0.000014	
	Line 7 Cast Cooling	P72	0.0000011	
	Line 7 Pick and Sort	P73	0.0000005	
	Line 7 Cleaning/ Grinding	P74	0.000001	
	Line 8 Shakeout	P76	0.000001	
	Line 8 Cast Cooling	P77	0.000022	
	Line 8 Pick and Sort	P78	0.000003	
	Line 8 Cleaning/ Grinding	P79	0.000002	
	Return Sand Handling/Screening	P80	0.000014	
Metal Returns Handling System	P84	0.000001		

**D.3.5 Sulfur Dioxide Emissions Limitations [326 IAC 2-2-3(a)(3)]**

Pursuant to 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), the sulfur dioxide (SO<sub>2</sub>) emissions from the following processes shall be limited as shown in the table below:

Stack ID	Process	Process ID	SO <sub>2</sub> Emission Limitations for individual processes (lb/hr)	SO <sub>2</sub> Emission Limitation for stack (lb/hr)
S15	Line 5 Pouring/Mold Cooling	P60	1.00	3.69
	Line 6 Pouring/Mold Cooling	P65	0.72	
	Line 7 Pouring/Mold Cooling	P70	1.2	
	Line 8 Pouring/Mold Cooling	P75	0.72	

**D.3.6 Volatile Organic Compound Emission Limitations [326 IAC 2-2-3(a)(3)] [326 IAC 8-1-6]**

Pursuant to CP-123-8451-00019, issued on February 4, 1998, Amendment 123-9740-00019, issued May 22, 1998, 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:

Stack ID	Process	Process ID	VOC Emission Limitations for individual processes (lb/hr)	VOC Emission Limitation for stack (lb/hr)
S15	Line 5 Pouring/Mold Cooling	P60	12.5	52.3
	Line 5 Shakeout	P61	1.25	
	Line 6 Pouring/Mold Cooling	P65	9.00	
	Line 6 Shakeout	P66	1.13	
	Line 7 Pouring/Mold Cooling	P70	15.0	
	Line 7 Shakeout	P71	1.5	
	Line 8 Pouring/Mold Cooling	P75	9.00	
S16	Line 5 Shakeout	P61	1.25	5.23
	Line 6 Shakeout	P66	0.675	
	Line 7 Shakeout	P71	1.5	
	Line 8 Shakeout	P76	1.8	

**D.3.7 Carbon Monoxide Emission Limitations [326 IAC 2-2-3(a)(3)]**

Pursuant to 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), 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)
S15	Line 5 Pouring/Mold Cooling	P60	5.0
	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
S16	Line 5 Shakeout	P61	1.0
	Line 6 Shakeout	P66	1.0
	Line 7 Shakeout	P71	1.0
	Line 8 Shakeout	P76	1.0

**D.3.8 NOx Emission Limitations [326 IAC 2-2-3(a)(3)]**

(a) Pursuant to 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), the (NO<sub>x</sub>) 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)
S15	Line 5 Pouring/Mold Cooling	P60	0.01
	Line 6 Pouring/Mold Cooling	P65	0.01
	Line 7 Pouring/Mold Cooling	P70	0.01
	Line 8 Pouring/Mold Cooling	P75	0.01

(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.3.9 Operating Requirements [326 IAC 2-2-3(a)(3)]**

(a) Pursuant to SSM123-11479-00019 issued on June 7, 2001 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 80 tons of iron per hour, based on a 24 hour average.

- (b) Pursuant to CP-123-8451-00019, issued on February 4 1998 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 600 tons of sand per hour;
  - (2) the sand mulling/handling process, identified as P81, shall be limited to a maximum throughput capacity of 600 tons of sand per hour.
  - (3) the sand blending and cooling process, identified as P82, shall be limited to a maximum throughput capacity of 600 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 50 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 40 tons per hour.
- (d) Pursuant to CP-123-8451-00019, issued on February 4 1998 and 326 IAC 2-2-3(a)(3), the pouring/cooling processes shall comply with the following limitations:
  - (1) the Line 5 pouring/mold cooling process, identified as P60, shall be limited to a maximum production capacity of 25 tons per hour;
  - (2) the Line 6 pouring/mold cooling process, identified as P65, shall be limited to a maximum production capacity of 18 tons per hour;
  - (3) the Line 7 pouring/mold cooling process, identified as P70, shall be limited to a maximum production capacity of 30 tons per hour; and
  - (4) the Line 8 pouring/mold cooling process, identified as P75, shall be limited to a maximum production capacity of 18 tons per hour.
- (e) Pursuant to SSM123-12331-00019 issued on January 31, 2001, the shotblast machine, identified as P55, shall be limited to a maximum throughput capacity of 18 tons of metal castings per hour.

D.3.10 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and all control devices.

**Compliance Determination Requirements**

D.3.11 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

Within 180 days after issuance of this Part 70 permit, the Permittee shall perform PM, opacity, 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.3.1, D.3.2, and D.3.3. 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 Section C- Performance Testing.

D.3.12 Particulate Matter (PM/PM-10)

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.

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

#### **D.3.13 Visible Emission Notations**

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- (a) Visible emission notations of each baghouse stack exhaust shall be performed once per shift 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) The Compliance Response Plan for these units shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

#### **D.3.14 Baghouse Parametric Monitoring**

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The Permittee shall record the total static pressure drop across each of the baghouses used in conjunction with the processes listed in this section, at least once per shift when the associated process is in operation. When for any one reading, the pressure drop across a baghouse is outside the normal range of 3.0 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 - Compliance Response Plan - Preparation, Implementation, Records, and Reports. 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 - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

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

#### **D.3.15 Baghouse Inspections**

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An inspection shall be performed each calendar quarter of all bags controlling the processes listed in this section. Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.

#### **D.3.16 Broken or Failed Bag Detection**

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In the event that bag failure has been observed:

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) business hours of

the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit. If operations continue after bag failure is observed and it will be 10 days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

- (b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

### **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.3.13 the Permittee shall maintain records of visible emission notations of each baghouse stack exhaust once per shift.
- (b) To document compliance with Conditions D.3.14 the Permittee shall maintain records of the static pressure drop across each baghouse once per shift.
- (c) To document compliance with Conditions D.3.15 the Permittee shall maintain records of the results of the inspections required under Conditions D.3.15.
- (d) Pursuant to CP123-8451-00019 issued on February 4, 1998, and to document compliance with Conditions D.3.8(b) the Permittee shall maintain records of the equipment installed and the type of fuel used in the air makeup units.
- (e) In order to document compliance with D.3.9, 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.
- (f) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

## SECTION D.4 FACILITY OPERATION CONDITIONS

### 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, with a maximum production capacity of 26 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;

(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.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 Emissions Limitations [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, and SSM 123-16456, issued on May 13, 2003, 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. For the first 12 months of operation, the limit shall be 32.5 tons per 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. For the first 12 months of operation, the limit shall be 2,167 tons per month.
- (g) The total VOC emissions (including DMIPA) from the mixers and core machines identified as P43 shall not exceed 0.36 pound per ton of cores.
- (h) The scrubber controlling the DMIPA emissions from the core machines identified as P43

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

**D.4.3 SO<sub>2</sub> Emissions Limitations [326 IAC 2-2-3(a)(3)]**

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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<sub>2</sub> 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.4.4 NO<sub>x</sub> Emissions Limitations [326 IAC 2-2-3(a)(3)]**

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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 NO<sub>x</sub> 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.4.5 CO Emissions Limitations [326 IAC 2-2-3(a)(3)]**

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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.4.6 Operating Requirements [326 IAC 2-2-3(a)(3)]**

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

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A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and all control devices.

**Compliance Determination Requirements**

**D.4.8 Control of Hazardous Air Pollutants (HAPs) [326 IAC 2-2-3(a)(3)]**

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

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Pursuant to SSM 123-16456-00019 issued May 13, 2003, within 60 days after achieving maximum production rate but no later than 180 days after the startup of the core machines after the catalyst change, the Permittee shall perform DMIPA testing on the scrubber controlling the core machines identified as P43 and P44 in order to demonstrate compliance with Conditions D.4.2 (h) and (i) using methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.

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

**D.4.10 Packed Bed Scrubber Parametric Monitoring**

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- (a) The Permittee shall monitor and record the pH of the scrubber solution and the pressure drop across the scrubber unit at least once per shift. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the scrubber shall be maintained within the range of 2 to 5 inches of water or a range established during the latest stack test. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pH level of the scrubbing liquid shall not exceed 4.5 or a maximum established during the latest stack test. The Compliance Response Plan for the scrubber shall contain troubleshooting contingency and response steps for when the pressure drop reading is outside of the normal range for any one reading or the pH level is above the normal maximum for any one reading. Failure to take response steps in accordance with Section C -Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.
- (b) The Permittee shall continuously monitor the flow rate of the scrubbing liquid. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the flow rate shall be maintained at a minimum of 235 gallons per minute or a minimum established during the latest stack test. The Compliance Response Plan for the scrubber shall contain troubleshooting contingency and response steps for when the flow rate reading is below the normal minimum for any one reading. Failure to take response steps in accordance with Section C -Compliance Response Plan - Preparation, Implementation, Records, and Reports, 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 - Pressure Gauge and Other 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.4.11 Packed Bed Scrubber Inspections

An inspection shall be performed each calendar quarter of the scrubber used in conjunction with the core machines. Inspections required by this condition shall not be performed in consecutive months. Defective scrubber part(s) shall be replaced.

#### D.4.12 Packed Bed Scrubber Failure Detection

In the event that scrubber failure has been observed:

- (a) The affected process will be shut down immediately until the failed unit has been replaced. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.
- (b) Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion.

#### D.4.13 Visible Emission Notations

- (a) Visible emission notations of each baghouse stack exhaust shall be performed once per shift 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) The Compliance Response Plan for these units shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

#### D.4.14 Baghouse Parametric Monitoring

The Permittee shall record the total static pressure drop across each of the baghouses used in conjunction with the processes listed in this section, at least once per shift 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 4.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. 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 - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other 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 Baghouse Inspections

An inspection shall be performed each calendar quarter of all bags controlling the processes listed in this section. Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.

#### D.4.16 Broken or Failed Bag Detection

In the event that bag failure has been observed:

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit. If operations continue after bag failure is observed and it will be 10 days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.
- (b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

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

#### D.4.17 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.4.10(a), the Permittee shall maintain records of the pressure drop and pH readings of the scrubber once per shift.
- (d) To document compliance with Condition D.4.10(b), the Permittee shall maintain records

of the flow rate of the scrubber.

- (e) To document compliance with Conditions D.4.11, the Permittee shall maintain records of the results of the inspections required under Conditions D.4.11 and the number and type of any parts replaced.
- (f) To document compliance with Conditions D.4.13 the Permittee shall maintain records of visible emission notations of each baghouse stack exhaust once per shift.
- (g) To document compliance with Conditions D.4.14 the Permittee shall maintain records of the static pressure drop across each baghouse once per shift.
- (h) To document compliance with Conditions D.4.15 the Permittee shall maintain records of the results of the inspections required under Conditions D.4.15.
- (i) In order to document compliance with D.4.6(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.
- (j) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.4.18 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 FACILITY OPERATION CONDITIONS

### Phase I

- (1) 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) 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; and
- (4) One (1) ladle cleaning with burn bars, identified as P86, using one (1) baghouse (C44) for particulate control, exhausting to stack S44.

### Phase II

- (1) One (1) enclosed cupola charge make-up and handling unit with a maximum charge of 91.2 tons per hour using one (1) baghouse (C44) for particulate control, exhausting to stack S44;
- (2) One (1) ladle filling and iron transport operation with a maximum capacity of 150 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;
- (3) 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; 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 facility description box is descriptive information and does not constitute enforceable conditions.)

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

### D.5.1 Particulate Matter Emissions Limitations [326 IAC 2-2-3(a)(3)] [326 IAC 6-3-2]

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 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.

### D.5.2 Lead Emission Limitations [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 the charge makeup operations, the molten iron handling operations, and the ladle cleaning operations shall not exceed 0.00004 pound per hour.

### D.5.3 Beryllium Emissions [326 IAC 2-2-3(a)(3)] [326 IAC 2-4.1-1]

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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 0.000026 pounds per hour.

**D.5.4 VOC Emissions [326 IAC 2-2-3(a)(3)] [326 IAC 8-1-6]**

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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)]**

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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 NOx Emissions [326 IAC 2-2-3(a)(3)]**

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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 SO<sub>2</sub> Emissions [326 IAC 2-2-3(a)(3)]**

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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 SO<sub>2</sub> 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)]**

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

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A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and all control devices.

**Compliance Determination Requirements**

**D.5.10 Particulate Matter (PM/PM-10)**

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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.

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

#### **D.5.11 Visible Emission Notations**

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- (a) Visible emission notations of the baghouse C44 stack exhaust shall be performed once per shift 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) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

#### **D.5.12 Baghouse Parametric Monitoring**

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The Permittee shall record the total static pressure drop across the baghouse C44 used in conjunction with the charge makeup operation, at least once per shift when the process is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 3.0 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- Compliance Response Plan - Preparation, Implementation, Records, and Reports. 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 - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other 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.5.13 Baghouse Inspections**

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An inspection shall be performed each calendar quarter of all bags controlling the charge makeup process. Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.

#### **D.5.14 Broken or Failed Bag Detection**

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In the event that bag failure has been observed:

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding

response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit. If operations continue after bag failure is observed and it will be 10 days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

- (b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

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

##### **D.5.15 Record keeping Requirement**

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- (a) To document compliance with Conditions D.5.11 the Permittee shall maintain records of visible emission notations of the baghouse stack exhaust once per shift.
- (b) To document compliance with Conditions D.5.12 the Permittee shall maintain records of the static pressure drop across each baghouse once per shift.
- (c) To document compliance with Conditions D.5.13 the Permittee shall maintain records of the results of the inspections required under Conditions D.5.13.
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

## SECTION D.6

## FACILITY OPERATION CONDITIONS

### Insignificant Activities

Facility Description [326 IAC 2-7-5(15)]

Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6.

(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 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.6.2 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°C) (one hundred degrees Fahrenheit (100°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°C) (one hundred degrees Fahrenheit (100°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°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°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 or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), 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.

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

**PART 70 OPERATING PERMIT  
CERTIFICATION**

Source Name: ThyssenKrupp Waupaca, Inc. Plant 5  
Source Address: 9856 State Highway 66, Tell City, IN 47586  
Mailing Address: P.O. Box 189, Tell City, IN 47586  
Part 70 Permit No.: T123-9234-00019

**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) \_\_\_\_\_
- Other (specify) \_\_\_\_\_

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

Signature:

Printed Name:

Title/Position:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION  
P.O. Box 6015  
100 North Senate Avenue  
Indianapolis, Indiana 46206-6015  
Phone: 317-233-5674  
Fax: 317-233-5967**

**PART 70 OPERATING PERMIT  
EMERGENCY/DEVIATION OCCURRENCE REPORT**

Source Name: ThyssenKrupp Waupaca, Inc. Plant 5  
Source Address: 9856 State Highway 66, Tell City, IN 47586  
Mailing Address: P.O. Box 189, Tell City, IN 47586  
Part 70 Permit No.: T123-9234-00019

**This form consists of 2 pages**

**Page 1 of 2**

Check either No. 1 or No.2	
<input checked="" type="radio"/> 1.	This is an emergency as defined in 326 IAC 2-7-1(12) <input type="checkbox"/> The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and <input type="checkbox"/> The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-5967), and follow the other requirements of 326 IAC 2-7-16
<input checked="" type="radio"/> 2.	This is a deviation, reportable per 326 IAC 2-7-5(3)(c) <input type="checkbox"/> The Permittee must submit notice in writing within ten (10) calendar days

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/Deviation:
Describe the cause of the Emergency/Deviation:

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

**Page 2 of 2**

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

Form Completed by: \_\_\_\_\_  
Title / Position: \_\_\_\_\_  
Date: \_\_\_\_\_  
Phone: \_\_\_\_\_

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

**Part 70 Quarterly Report**

Source Name: ThyssenKrupp Waupaca, Inc. Plant 5  
Source Address: 9856 State Highway 66, Tell City, IN 47586  
Mailing Address: P.O. Box 189, 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
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

- 9 No deviation occurred in this quarter.
- 9 Deviation/s occurred in this quarter.  
Deviation has been reported on: \_\_\_\_\_

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

Attach a signed certification to complete this report.

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

**Part 70 Quarterly Report**

Source Name: ThyssenKrupp Waupaca, Inc. Plant 5  
Source Address: 9856 State Highway 66, Tell City, IN 47586  
Mailing Address: P.O. Box 189, 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
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

- 9 No deviation occurred in this quarter.
- 9 Deviation/s occurred in this quarter.  
Deviation has been reported on: \_\_\_\_\_

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

Attach a signed certification to complete this report.

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

**PART 70 OPERATING PERMIT  
 QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: ThyssenKrupp Waupaca, Inc. Plant 5  
 Source Address: 9856 State Highway 66, Tell City, IN 47586  
 Mailing Address: P.O. Box 189, Tell City, IN 47586  
 Part 70 Permit No.: T123-9234-00019

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

<p>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. Deviations that are required to be reported by an applicable requirement shall be reported according to the schedule stated in the applicable requirement and do not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".</p>	
<p><input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.</p>	
<p><input type="checkbox"/> THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD</p>	
<p><b>Permit Requirement</b> (specify permit condition #)</p>	
<p><b>Date of Deviation:</b></p>	<p><b>Duration of Deviation:</b></p>
<p><b>Number of Deviations:</b></p>	
<p><b>Probable Cause of Deviation:</b></p>	
<p><b>Response Steps Taken:</b></p>	
<p><b>Permit Requirement</b> (specify permit condition #)</p>	
<p><b>Date of Deviation:</b></p>	<p><b>Duration of Deviation:</b></p>
<p><b>Number of Deviations:</b></p>	
<p><b>Probable Cause of Deviation:</b></p>	
<p><b>Response Steps Taken:</b></p>	

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

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

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

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

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

Attach a signed certification to complete this report.

# Indiana Department of Environmental Management Office of Air Quality

## Addendum to the Technical Support Document for a Part 70 Operating Permit

**Source Name:** ThyssenKrupp Waupaca, Inc. Plant 5  
**Source Location:** 9856 State Highway 66, Tell City, IN 47586  
**County:** Perry  
**SIC Code:** 3321  
**Operation Permit No.:** T123-9234-00019  
**Permit Reviewer:** Nisha Sizemore

On November 3, 2003, the Office of Air Quality (OAQ) had a notice published in the Perry County News, Tell City, Indiana, stating that ThyssenKrupp Waupaca, Inc. had applied for a Part 70 Operating Permit to operate a ductile iron foundry. The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On December 1, 2003, Jeff Loeffler, provided written comments on the proposed permit during the public comment period. A summary of the comments and IDEM's responses is as follows, with deletions to the permit shown with a strikeout and new permit text shown as bold.

### Comment #1

The responsible official should be corrected to read: Gary L. Thoe, President and CEO.

### Response #1

The requested change has been made.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

The Permittee owns and operates a stationary ductile iron foundry.

Responsible Official: ~~Vice President~~ **Gary L. Thoe, President and CEO**

### Comment #2

In the November 20, 1997 T5 application, Form GSD-06 was provided which listed insignificant sources. If appropriate, these sources should be listed in the T5 permit. In the T5 permits for other states, they have included a list of specific insignificant activities avoiding future confusion over whether the operations were subject to permitting. These should be included in Section D of the permit as appropriate. At Plant 5, these insignificant activities include:

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour;
- (b) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300

gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons;

- (c) A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month;
- (d) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to 1% by volume;
- (e) Any operations using aqueous solutions containing less than 1% by weight of VOCs excluding HAPs;
- (f) Forced and induced draft cooling tower system not regulated under a NESHAP;
- (g) Heat exchanger cleaning and repair;
- (h) Underground conveyors;
- (i) Blowdown for any of the following: sight glass; boilers; compressors; pumps; and cooling tower;
- (j) Mold release agents using low volatile products (vapor pressure less than or equal to 2 kilopascals measured at 38 degrees C);
- (k) A laboratory as defined in 326 IAC 2-7-1(21)(D).

## Response #2

IDEM has included the list of insignificant activities in Section A of the permit, as requested. Insignificant activities that are specifically regulated have already been included in Section D of the permit.

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

---

- (1) 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]
- (2) **This stationary source also includes the following insignificant activities which are not specifically regulated:**
  - (a) **Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour;**
  - (b) **A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons;**
  - (c) **A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month;**

- (d) **Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to 1% by volume;**
- (e) **Any operations using aqueous solutions containing less than 1% by weight of VOCs excluding HAPs;**
- (f) **Forced and induced draft cooling tower system not regulated under a NESHAP;**
- (g) **Heat exchanger cleaning and repair;**
- (h) **Underground conveyors;**
- (i) **Blowdown for any of the following: sight glass; boilers; compressors; pumps; and cooling tower;**
- (j) **Mold release agents using low volatile products (vapor pressure less than or equal to 2 kilopascals measured at 38 degrees C);**
- (k) **A laboratory as defined in 326 IAC 2-7-1(21)(D).**

### **Comment #3**

B.14 (Prior Permits Superseded)

The T5 permit is a large and complex document incorporating several construction permits and amendments. It would be helpful if permit conditions that have been revised or deleted since previous permits were identified.

### **Response #3**

All permit conditions that have been revised or deleted have been identified and explained in the technical support document. It is not necessary to include such information in a permit condition. Making a complete list of all the revised conditions would result in a long, cumbersome permit.

### **Comment #4**

C.2 (Opacity)

The generic opacity limitations are listed. Most, if not all, existing operations should have opacity limitations established under the PSD regulations. It would be helpful to identify operations subject to the 40% and 60% limitations identified.

### **Response #4**

IDEM agrees that most, if not all, existing operations are subject to more stringent opacity limitations under 326 IAC 2-2-3 (BACT). However, these operations are also subject to the less stringent opacity limitations contained in 326 IAC 5-1 (Opacity). The Part 70 permit includes all applicable requirements and 326 IAC 5-1 is an applicable requirement, even though it contains less stringent limits than those applicable pursuant to 326 IAC 2-2-3 (BACT). There is no change to the permit as a result of this comment.

### Comment #5

#### C.10 (NESHAPs)

Under paragraph (c), the scrap preheaters can be eliminated from the T5 permit, as there are none at Plant 5. Core machines can also be eliminated, because the NESHAP only includes limitations on the use of TEA catalyst. We no longer use TEA at Plant 5.

### Response #5

IDEM agrees with the requested changes. The revised condition is shown below.

#### C.10 National Emissions Standards for Hazardous Air Pollutants for Iron and Steel Foundries [40 CFR Part 63, Subpart EEEEE]

- (a) The provisions of 40 CFR 63 Subpart A - General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the iron and steel foundry except when otherwise specified in 40 CFR 63 Subpart EEEEE. The Permittee must comply with these requirements on and after the effective date of 40 CFR 63 Subpart EEEEE.
- (b) The affected source, the iron and steel foundry, is subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Iron and Steel Foundries, (40 CFR 63, Subpart EEEEE, and 326 IAC 20-1-1), effective the date the rule is published in the Federal Register. Pursuant to this rule, the Permittee must comply with 40 CFR 63, Subpart EEEEE on and after the date that is three years after the effective date of the rule, except as provided in paragraph (e), or accept and meet an enforceable HAP emissions limit below the major source threshold prior to three years after the effective date of the rule.
- (c) The following emissions units comprise the affected source that is subject to 40 CFR 63, Subpart EEEEE:
- (1) Phase I and Phase II cupola melt furnaces;
  - (2) lines 1 through 8 pouring/casting operations; **and**
  - (3) ~~scrap preheaters;~~
  - (4) ~~all core machines; and~~
  - (5) fugitive emissions from each building or structure housing any emissions source at the foundry.
- (d) The definitions of 40 CFR 63, Subpart EEEEE at 40 CFR 63.7765 are incorporated by reference.
- (e) Pursuant to 40 CFR 63.7700(a) and 40 CFR 63.7683(b), the Permittee shall comply with the certification requirements in 40 CFR 63.7700(b) or prepare and implement a plan for the selection and inspection of scrap according to the requirements in 40 CFR 63.7700(c) no later than one year after the effective date of 40 CFR 63, Subpart EEEEE.

### Comment #6

#### C.11 (Ambient Monitoring)

Since the foundry has operated these monitoring sites for PM10, SO2, and meteorology for approximately 5 years, conditions related to initial operation can be removed. These include:

- In the last sentence of the first paragraph, the requirement to begin collecting valid data prior to commencement of the operation of the ductile iron cupola, identified as P33.
- Condition (a), describing submission of a Quality Assurance Plan.
- Condition (b), requirement approval of the monitoring sites.

Under Condition (c), IDEM reserves the authority to require monitoring of PM2.5. This statement should be removed. The PM10 monitoring site was established in response to the preconstruction monitoring requirement for this pollutant under the PSD regulations. Monitoring for PM2.5 is unrelated to issuance of the PSD construction permit and cannot be required by IDEM in this permit action.

Throughout the 5 years of monitor operation, measurements have been well within the NAAQS and provide an adequate margin of safety. Compliance with the NAAQS has also been supported by numerous dispersion modeling analyses conducted for the foundry. Compared to the preliminary version of the T5 permit, the draft permit had eliminated upwind PM10 monitoring and downwind SO2 monitoring. As allowed under the air quality permits issued to the foundry, ThyssenKrupp Waupaca, Inc. requests that ALL ambient monitoring requirements be removed from the T5 permit.

#### Response #6

IDEM agrees to remove the portions of the condition which are related to initial operation of the monitoring sites.

IDEM has already responded to a September 16, 2003 letter from the Permittee requesting to discontinue the operation of the ambient monitoring sites. IDEM's November 3, 2003 response stated that IDEM agrees to allow the Permittee to discontinue operation of the SO2 ambient monitoring site because the data has established that the SO2 levels comply with the NAAQS with an adequate margin of safety. However, IDEM is requiring the Permittee to continue the operation of the ambient monitoring sites for PM10 because the foundry does appear to have an impact on the air quality with consistently higher concentrations recorded at the downwind site as compared to the upwind (background) site. A recorded concentration in 2002 of 130 micrograms per cubic meter at the downwind site is roughly 87% of the 24 hour standard with annual averages at the downwind site at approximately 60% of the annual standard for four of the seven years of data.

The statement that IDEM reserves the authority to require PM2.5 monitoring has not been removed from the T5 permit. This statement was part of the original condition as written in construction permit #CP123-8451, issued to Waupaca Foundry on February 4, 1998. Such condition was not appealed by Waupaca Foundry at the time of issuance of the permit. Additionally, since the foundry has an impact on the local air quality in terms of particulate, it may also be a contributor to PM-2.5 problems in the area. Therefore, IDEM reserves the authority to require PM-2.5 monitoring at a later date.

Changes to the condition are shown below.

#### C.11 Ambient Monitoring [326 IAC 2-2-4]

~~IDEM has determined that the SO2 ambient monitoring site and the upwind PM10 ambient monitoring site can be removed from operation because the data has established that the SO2 and upwind PM10 levels comply with the NAAQS with an adequate margin of safety.~~

Pursuant to CP123-8451-00019 issued on February 4, 1998 and 326 IAC 2-2-4, the Permittee shall continue to operate the **upwind and** downwind ambient monitoring sites for PM<sub>10</sub> and collect meteorological data described in (a) through ~~(e)~~**(d)**. ~~These sites shall begin collecting~~

~~valid data prior to the commencement of operation of the ductile iron cupola, identified as P33.~~

- ~~(a) The monitoring must be performed using U.S. EPA approved methods, procedures, and quality assurance programs. A Quality Assurance Plan and Protocol shall be submitted to:~~

~~Indiana Department of Environmental Management  
Ambient Monitoring Section, Office of Air Quality  
2525 North Shadeland Avenue  
Indianapolis, Indiana 46219~~

~~within 90 calendar days prior to commencement of monitoring. The Quality Assurance Plan and Protocol must be approved by IDEM, OAQ prior to commencement of monitoring.~~

- ~~(b) The monitoring site shall be established at a downwind location and an upwind location to be approved by IDEM, OAQ. All monitors shall meet the operating and maintenance criteria outlined in IDEM, OAQ Quality Assurance Manual.~~

- ~~(c)(a) The ambient data for PM<sub>10</sub> and meteorological data shall be collected following the initial compliance demonstration. IDEM, OAQ reserves the authority to require the Permittee to monitor for compliance with the National Ambient Air Quality Standards (NAAQS) for PM<sub>2.5</sub> in the event that such information is necessary to demonstrate compliance with the standard.~~

- ~~(d)(b) The monitoring site(s) shall measure the following meteorological parameters:~~

- ~~(1) wind direction,~~
- ~~(2) wind speed, and~~
- ~~(3) temperature.~~

- ~~(e)(c) A quarterly summary of the monitoring data shall be submitted to:~~

~~Indiana Department of Environmental Management  
Ambient Monitoring Section, Office of Air Quality  
2525 North Shadeland Avenue  
Indianapolis, Indiana 46219~~

~~within ninety (90) calendar days after the end of the quarter being reported.~~

- ~~(f)(d) The Permittee may petition IDEM, OAQ for the removal of the monitoring sites if it has been established that the PM<sub>10</sub> levels will continue to comply with the NAAQS with an adequate margin of safety. The monitoring requirements may be continued if there exists a threat to the NAAQS or if determined to be warranted by IDEM, OAQ.~~

## Comment #7

### C.12 (Performance Testing)

To avoid any future confusion over test procedures, it would be helpful if all limitations specified the test

method used to establish the limit, and compliance testing requirements specified the required procedures for each pollutant.

#### **Response #7**

IDEM does not agree that it is necessary for the Part 70 permit to state the test methods used to establish all of the BACT limitations in previous permits. Test methods to be used for VOC are those which would measure ALL of the VOCs being emitted. Method 18 could be used if ALL VOCs were identified and the test measured ALL of those identified. If that is not practical, then Method 25A could be used. Since test protocols are reviewed and approved by IDEM's Compliance Data Section, the Part 70 permit will not include the test methods to be used for each stack test required by the permit.

#### **Comment #8**

C.15 (Maintenance of Continuous Opacity Monitoring Equipment)

Condition (d)(1) requires that visible emission (VE) notations be performed once per hour during daylight operations following shutdown or malfunction of the COM. EPA certification requirements for the COM allow for periods of shutdown or malfunction. A maximum of 5% downtime is already allowed on a quarterly basis.

There is no need to have alternative VE readings for the cupola stack, especially by a Method 9 trained observer. A properly operating baghouse system will have negligible opacity. It would be more appropriate to require the stack observations once per shift as required for other baghouse control systems.

#### **Response #8**

Pursuant to CP123-8451-00019 issued on February 4, 1998, the continuous opacity monitoring system (COMS) must meet the performance specifications of 326 IAC 3-5-2. 326 IAC 3-5 does not allow for periods of missing data due to shutdown or malfunction. There is no provision allowing 5% COM downtime. However, IDEM does use enforcement discretion to determine the appropriate course of action when a COMS is down for less than 5% of the operating time of the unit.

The Permittee is required to certify continuous compliance with all conditions of the permit. The Permittee must have sufficient information available in order to be able to certify continuous compliance. During review of the original PSD permit for the cupola, IDEM determined that the level of monitoring of opacity from the cupola should be more frequent than the once per shift monitoring required for other baghouses at the foundry. Therefore, if the COMS fails and the Permittee does not perform sufficiently frequent and accurate supplemental monitoring during the period of time when the COMS is not operating, there will not be sufficient information available for the Permittee to be able to certify continuous compliance during that time period. Therefore, the permit must include a requirement to perform supplemental monitoring whenever the COMS is not in operation and the emission unit is in operation. The supplemental monitoring must be sufficient for the Permittee to determine a reasonable assurance of compliance with the opacity limit; therefore Method 9 readings are required.

There have been no changes to the permit as a result of this comment.

#### **Comment #9**

D.1.13 (Natural Gas Usage for the Recuperative Incinerator)

If possible, please add propane as a potential backup fuel for natural gas.

### Response #9

IDEM agrees to add propane as a potential backup fuel. There is no increase in the potential to emit of any pollutant as a result of allowing propane to be used as a backup for natural gas. The revised condition is shown below.

#### D.1.13 VOC, CO, and NOx Control

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- (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.**

### Comment #10

#### D.1.18 (Dry Alkaline Injection Parametric Monitoring)

The stack exhausting the Plant 5 cupola is already equipped with a CEMS for demonstrating compliance with the SO<sub>2</sub> emission limitations. The additional monitoring of the alkaline injection rate specified in Condition (a) is redundant and unnecessary, and should be removed from the T5 permit.

If it must remain, we are requesting that the frequency of measurements be changed from hourly to once every shift, since this condition only demonstrates continued operation of the injection system. In addition the measurement of injection rate should either not mention the units of measurement, or it should include "liters" in addition to pounds and cubic feet to correspond to our present practice of measuring the addition rate with a pre calibrated beaker.

Condition D.1.24 (Record Keeping) should be revised similarly.

### Response #10

IDEM agrees that when the SO<sub>2</sub> CEMS is in operation, there is no need to record the alkaline injection rate. Therefore, paragraph (a) has been deleted.

Paragraph (b) has not been deleted because supplemental monitoring is required whenever the SO<sub>2</sub> CEMS is down. The frequency of monitoring in paragraph (b) remains at once per hour because when the SO<sub>2</sub> CEMS is down, monitoring of the alkaline injection rate is appropriate. The units of measure have been deleted from paragraph (b), as requested.

The revised condition is shown below.

#### D.1.4819 Dry Alkaline Injection Parametric Monitoring

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~~Pursuant to CP123-8451-00019, issued on February 4, 1998, the Permittee shall implement the following monitoring protocol for Stack S09 of the Phase I and Phase II cupolas, to demonstrate compliance with the SO<sub>2</sub> emission limitation required by Operation Condition D.1.4.~~

- ~~(a) — The Permittee shall record the alkaline dust injection rate (in pounds or cubic feet) of~~

~~each dry alkaline injection system at least once per hour. 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- Compliance Response Plan - Preparation, Implementation, Records, and Reports. 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 - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.~~

- (b) Whenever the SO<sub>2</sub> continuous emissions monitoring system (CEMS) is malfunctioning or down for repairs for more than one (1) hour, the Permittee shall record the alkaline dust injection rate ~~(in pounds or cubic feet)~~ of each dry alkaline injection system at least once ~~every 15 minutes~~ **per hour** until the SO<sub>2</sub> 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- Compliance Response Plan - Preparation, Implementation, Records, and Reports. 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 - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

The record keeping condition has been revised appropriately as shown below.

#### D.1.23 Record keeping Requirement

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- (c) To document compliance with Conditions D.1.15, D.1.18, ~~and D.1.20~~, the Permittee shall maintain records of the following:
- (2) records of the injection rate ~~(in pounds or cubic feet)~~ of each alkali injection system once per hour ~~or once every 15 minutes~~ as required by Condition D.1.18;

#### **Comment #11**

##### D.1.20 (Dry Alkaline Injection Failure Detection)

This provision requires the cupola to be shutdown immediately if the injection system fails. This provision should not be included in the T5 permit. Failure of the injection system is not an indication that the cupola will not continue to comply with its emission limitations. The Compliance Response Plan already contains provisions to address failure of the injection system. The Compliance Response Plan should be implemented in such circumstances. It should also be noted that baghouse failure under D.2.15 does not require shutdown of the process, but implementation of the Compliance Response Plan.

#### **Response #11**

Since there is a CEMS for measuring SO<sub>2</sub> emissions, cupola shutdown should not be required immediately if the injection system fails. Condition D.1.20 has been deleted from the permit, as requested. Subsequent conditions in Section D.1 have been renumbered appropriately.

##### ~~D.1.20 Dry Alkaline Injection Failure Detection~~

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~~In the event that dry alkaline injection system failure has been observed:~~

~~The affected process will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. 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).~~

## **Comment #12**

### **D.1.21 (Recuperative Incinerator Parametric Monitoring)**

Condition (a) specifies a minimum temperature of 1,677 degrees Fahrenheit. This temperature should be replaced with 1400 degrees Fahrenheit, approved by the construction permit.

Conditions (b) and (c) require that duct pressure and fan amperage shall be observed at least once per day. It is not clear which fan is referred to in this condition, as there is both a system fan and combustion air fan. This condition is also redundant and unnecessary to demonstrate proper operation of the incinerator and should not be included in the T5 permit. Compliance tests have determined the recuperative incinerator and its associated fans are designed to comply with emission limitations. Monitoring of temperature should be adequate to assure proper operation. This is demonstrated by the recently published MACT standards for the iron and steel foundries which only requires the monitoring of temperature with a minimum of 1,300 degrees Fahrenheit.

## **Response #12**

Construction permit #123-8451-00019 issued February 4, 1998 required a minimum temperature of 1,400° F as a default value, until such time that a stack test could be performed. Subsequent to the stack test being performed, the purpose of the condition was to require the minimum temperature as measured during the compliant stack test. The temperature during the most recent compliant stack test was 1,667° F; however the test was performed at a high melt rate. However, when operating at lower production levels CO generation will be lower, and it is possible that, at these lower production rates, a temperature lower than 1,667° F would be sufficient to destroy enough CO to comply with the BACT limit. Therefore, IDEM believes that the Permittee must perform stack testing at lower production rates to determine a minimum temperature necessary to comply with the BACT limit. During the time period from the date of issuance of this permit, until the stack test is required to be performed, the minimum temperature requirement will be 1,400° F. Once the Permittee performs another compliant stack test at a higher or lower average temperature, such average temperature will become the minimum. The condition has been revised to reflect this.

The recently published MACT standard for iron and steel foundries does not include a limit for CO emissions; therefore, it cannot be assumed that the minimum temperature requirements in the MACT (i.e. 1300°F) are sufficient to achieve a CO BACT limit of 0.4 pounds per ton of iron.

IDEM agrees that for a closed system, such as the cupola, it is not necessary to monitor duct pressure or fan amperage to assure proper capture efficiency.

The condition has been moved to the Compliance Determination Section of the permit, and other conditions renumbered as necessary. The revised condition is shown below.

**D.1.2015**      **Recuperative Incinerator Parametric Monitoring Temperature**

~~(a)~~ 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 minute. The output of this system shall be recorded as an hourly average. From the date of issuance of this permit until the approved stack test results (as required by Condition D.1.10 of this Part 70 Permit) are available, the Permittee shall ~~take appropriate response steps in accordance with Section C – Compliance Response Plan – Preparation, Implementation, Records, and Reports whenever~~ **maintain** the hourly average temperature of the cupola gas stream ~~at or above is below 1667~~ **1400 °F. On and after the date the approved stack test results are available, the Permittee maintain the hourly average temperature of the cupola gas stream at or above the average temperature measured during the most recent compliant stack test.** ~~This~~ **These** minimum temperature requirements ~~applies~~ **apply** at all times during operation of either of the cupolas, except for the following:

- ~~(1)~~**(a)** periods when the cupola blast air is turned off;
- ~~(2)~~**(b)** periods when the blast air has been turned on for less than 30 consecutive minutes; and
- ~~(3)~~**(c)** during the last 30 minutes of operation of the cupola.

~~An hourly average temperature that is below 1667 °F is not a deviation from this permit. Failure to take response steps in accordance with Section C – Compliance Response Plan – Preparation, Implementation, Records, and Reports shall be considered a deviation from this permit.~~

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

~~(b) The Permittee shall determine the appropriate duct pressure or fan amperage from the most recent valid stack test that demonstrates compliance with limits in conditions D.1.5 and D.1.6, as approved by IDEM.~~

~~(c) The duct pressure or fan amperage shall be observed at least once per day when the recuperative incinerator is in operation. On and after the date the approved stack test results are available, the duct pressure or fan amperage shall be maintained within the normal range as established in most recent compliant stack test.~~

The record keeping condition has also been revised accordingly.

**D.1.23 Record keeping Requirement**

(c) To document compliance with Conditions D.1.15, D.1.186, and D.1.2019, the Permittee shall maintain records of the following:

- ~~(4) daily records of the fan amperage or duct pressure.~~

The stack test condition has been revised to allow Waupaca to operate at different loads during the stack test, in order to determine a minimum temperature that is more representative of normal operations.

D.1.10 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

Within 180 days after issuance of this Part 70 permit, the Permittee shall perform PM, opacity, VOC, NOx, CO, lead and beryllium testing on both cupolas (P30 and P33) using methods as approved by the Commissioner. **The tests for CO shall be performed during periods of high and low load and at loads representative of normal operations.** These tests shall be repeated at least once every two and one-half (2.5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.

**Comment #13**

Condition D.1.23 (Recuperative Incinerator Failure Detection)

The first requirement states: "The affected process will be shut down immediately until the failed units have been repaired and replaced." This should be deleted. Immediately shutting down the cupola may result in damage to the equipment. Instead, curtailing cupola operations would more safely follow the required Compliance Response Plan. It should be noted that in the unlikely failure of the incinerator, the cupola would go on relief until a short and long term response to the incinerator failure. It should also be noted that baghouse failure under D.2.15 does not require shutdown of the process, but implementation of the Compliance Response Plan.

**Response #13**

IDEM agrees that it would take time to safely shut down the cupola, especially if it was fully charged when the control device failure occurred. However, charging of the cupola should cease immediately upon observation of failure of the control device. The condition (now renumbered D.1.22) has been revised as shown below.

D.1.22 Recuperative Incinerator Failure Detection

In the event that the recuperative incinerator failure has been observed:

~~The affected process will be shut down~~ **Charging of the cupola shall cease** immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. ~~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).~~

**Comment #14**

D.1.24 (Record Keeping)

Condition (b) requires records of coke usage. This requirement is unnecessary since a CEMS is used to continuously demonstrate compliance with the SO2 emission limitations.

Condition (e) requires records of total hours of operation of each cupola each day of operation. This requirement is unnecessary since limitations are established based on total daily production and hours of operation are unrelated to the limitations. Refer to Condition D.1.8 that specifies a maximum melt rate based on a 24-hour average.

#### Response #14

Permit #CP123-8451-00019 issued on February 4, 1998 established BACT for the cupola. One of the BACT provisions included a limit on coke usage. Another of the BACT provisions included a limit on the cupola melt rate. As part of the T5 requirements, the Permittee must certify compliance or noncompliance in the annual compliance report. In order to be able to certify compliance, the Permittee must have sufficient information available to determine that compliance was achieved. If the Permittee does not keep records of coke usage and melt rate, there will be insufficient information available for the Permittee to make a compliance determination regarding the conditions limiting coke usage and cupola melt rate.

#### Comment #15

Conditions D.2.1, D.2.4, D.2.5, D.2.6, D.3.2, D.3.3, D.3.5, D.3.6, D.3.7, and D.3.8

Several of the emission units listed in these conditions still have process specific emission limitations, in addition to the total stack limits. It would simplify the T5 permit if these process specific limitations were removed since the total stack limitations are sufficient to demonstrate compliance.

#### Response #15

Permit #CP-123-4593-00019, issued on January 19, 1996 and permit #CP123-8451-00019 issued on February 4, 1998, established BACT for these operations. No subsequent permit specifically superseded these BACT limits. IDEM does not re-evaluate BACT limits without a BACT analysis, and the Permittee has not submitted a new BACT analysis. Therefore, these limits have not been removed from the permit. However, IDEM does agree that from a practical perspective, compliance will be demonstrated by comparing the emissions measured from the stack to the emission limit for the stack, rather than trying to determine compliance with the individual limits for each process that exhausts to that stack. IDEM has clarified this in Conditions D.2.10 and D.3.11. The first sentence of D.2.10 states:

Within 180 days after issuance of this Part 70 permit, the Permittee shall perform PM, opacity, lead and beryllium testing on the facilities exhausting to stacks S01 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. (emphasis added)

Condition D.3.11 is written with similar wording.

#### Comment #16

D.3 Process Descriptions for Operations Exhausting to Stacks S15 and S16

The description refers to: "One (1) ductile iron treatment operation, identified as P35, with a maximum production capacity of 80 tons per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C15. The gases are then exhausted to Stack S15."

Under permit #123-11479-00019, a second treatment station controlled with baghouse C35 exhausting to S15 was added to the ductile iron treatment operations. This second station is noted in Condition D.3.9 and should be added to the process descriptions.

Process P55 - Cleaning and Grinding, approved under Permit #123-12331-00019 and exhausting to Stack S15 should be added to the T5 permit. It has a PM limitation of 0.005 gr/dscf.

### Response #16

The commenter misstates the description as listed in Section D.3 of the permit. The description refers to: "Two (2) ductile iron treatment stations, both identified as P35, each with a maximum production capacity of 40 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." Since both ductile iron treatment stations are listed, no change to the permit is necessary.

Process P55, which was approved under Permit #123-12331-00019, is already included in the description box of Section D.3 of the permit. The description refers to: "One (1) Tumbleblast shotblast machine, identified as P55, with a maximum capacity of 18 tons of metal castings per hour, with emissions controlled by existing baghouse C15, and exhausting to stack S15." The associated PM limitation for the process P55 is also already listed in Condition D.3.1(a) of the permit.

### Comment #17

D.2.4 and D.3.6 (VOC Emission Limitations for Stacks S01, S15 and S16)

The VOC limitations do not reflect the emission limitations proposed in the March 3, 2003 construction permit application. Comments on these limitations were addressed in the August 1<sup>st</sup> cover letter to our comments on the T5 operation permit. A copy of this letter is enclosed.

### Response #17

The Permittee demonstrated compliance with the VOC BACT limit for stacks S15; therefore, IDEM does not agree to increase the VOC BACT limit for stack S15. There has been no change to Condition D.3.6 as a result of this comment.

The Permittee was not able to demonstrate compliance with the VOC BACT limit for stack S01; therefore, IDEM and the Permittee have been trying to determine the appropriate responses which would bring those operations back into compliance with the allowable limit.

Subsequent to submitting the above comment, the Permittee and IDEM reached an agreement regarding a schedule of compliance for the Permittee to comply with the current VOC BACT limit for stack S01. As a result, the following changes were made to Section D.2 of the permit.

#### D.2.4 Volatile Organic Compound Emissions Limitations [326 IAC 2-2-3(a)(3)] [326 IAC 8-1-6]

- (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, 326 IAC 8-1-6 (BACT), and 326 IAC 2-2-3(a)(3) (Prevention of Significant Deterioration (PSD) Rules), the volatile organic compound (VOC) emissions from the following processes shall be limited as shown in the table below:

.....

~~IDEM has issued a notice of violation stating that the units exhausting to stack S01 are not in compliance with the VOC BACT limit. The OAQ will promptly reopen this permit using the provisions of 326 IAC 2-7-9 (Permit Reopening) to include detailed requirements necessary to comply with this rule and a schedule for achieving compliance with such requirements.~~

- (b) **In order for the units exhausting to stack S01 to come into compliance with the VOC BACT limit, the Permittee shall comply with the following schedule.**

- (1) By December 31, 2004, the Permittee shall complete a program of internal sand and core optimization to comply with the VOC limit for stack S01 in paragraph (a) of this condition.**
- (2) By January 31, 2005, the Permittee will perform VOC stack testing on stack S01, as described in Condition D.2.10(b).**
- (3) If the testing required by (b)(2) of this condition does not demonstrate that stack S01 is in compliance with the VOC BACT limit in paragraph (a) of this condition, the Permittee will install and operate an advanced oxidation system according to the following schedule.**
  - (i) Within 21 days after the receipt of the test results from the stack test required by (b)(2) which do not demonstrate compliance with the VOC BACT limit in paragraph (a) of this condition, the Permittee will issue a purchase order for the advanced oxidation system. As used in this permit, the term advanced oxidation system means a system where captured baghouse dust from the sand system is mixed with water treated with a combination of ozone and hydrogen peroxide (advanced oxidants).**
  - (ii) Within 5 months after issuance of the purchase order for the advanced oxidation system, the Permittee shall complete installation of the system and commence initial operation of the system.**
  - (iii) Within 4 months after commencing operation of the advanced oxidation system, the Permittee shall complete troubleshooting and optimization of the system.**
  - (iv) Within 2 months after completion of the troubleshooting and optimization of the advanced oxidation system, the Permittee shall perform VOC stack testing on stack S01, as described in Condition D.2.10(b) and demonstrate compliance with the VOC BACT limit established in paragraph (a) of this condition.**

**D.2.10 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]**

- (a) Within 180 days after issuance of this Part 70 permit, the Permittee shall perform PM, opacity, lead and beryllium testing on the facilities exhausting to stacks S01 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 Section C- Performance Testing. 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) The Permittee shall perform VOC testing on the emission units exhausting to stack S01 using Method 25, 25A, or other methods approved by the Commissioner, in order to demonstrate compliance with the total stack limit listed**

**in Condition D.2.4(a). During the stack test, the Permittee shall monitor and record those parameters required to be measured by Condition D.2.16. 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 Section C- Performance Testing. 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.**

#### **D.2.16 Parametric Monitoring of Advanced Oxidation System**

- (a) Upon commencing operation of the advanced oxidation system, the Permittee shall monitor and record the ultra-sonic power of the system used in conjunction with the mold lines, at least once per shift when the mold lines are in operation. When for any one reading, the ultra-sonic power is less than the minimum level recommended by the manufacturer or a minimum level established during the latest stack test, whichever is higher, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. An ultra-sonic power 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 - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.**
  
- (b) Upon commencing operation of the advanced oxidation system, the Permittee shall monitor and record the ozone generator plasma voltage of the system used in conjunction with the mold lines, at least once per shift when the mold lines are in operation. When for any one reading, the ozone generator plasma voltage is less than the minimum recommended by the manufacturer or a minimum established during the latest stack test, whichever is higher, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. An ozone generator plasma voltage 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 - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.**
  
- (c) Upon commencing operation of the advanced oxidation system, the Permittee shall monitor and record the hydrogen peroxide usage of the system used in conjunction with the mold lines, at least once per shift when the mold lines are in operation. When for any one reading, the hydrogen peroxide is less than the minimum recommended by the manufacturer, or a minimum established during the latest stack test, whichever is higher, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A peroxide usage 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 - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.**

**The instruments used for determining the ultra-sonic power, the ozone generator plasma voltage and the hydrogen peroxide usage shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.**

**D.2.167 Record Keeping Requirements**

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- (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 shift.
- (b) To document compliance with Condition D.2.13, the Permittee shall maintain records of the total static pressure drop across each baghouse once per shift.
- (c) To document compliance with Condition D.2.14, the Permittee shall maintain records of the results of the inspections required under Condition D.2.14.
- (d) To document compliance with the schedule outlined in Condition D.2.4(b), the Permittee shall submit records complete and sufficient to determine compliance with each step of the compliance schedule. Records shall be submitted within 30 days after the completion of each step of the compliance schedule.
- (e) To document compliance with Condition D.2.16, the Permittee shall maintain records of the ultra-sonic power, the ozone generator plasma voltage, and the hydrogen peroxide usage of the advanced oxidation system.**
- ~~(e)~~(f) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

**Comment #18**

D.4.2 (VOC Emission Limitations)

Under Condition (j), it states that DMIPA may be the only catalyst. To allow flexibility in the choice of catalysts, another condition should be added to allow substitution of DMIPA with an alternative catalyst that does not generate higher VOC or HAP emissions.

**Response #18**

IDEM issued permit #123-16456 on May 13, 2003 for approval to change catalysts materials from TEA to DMIPA. Changing catalyst materials is considered to be a change in the method of operation of the core machines; however, the project was determined to be exempt from PSD because the reduction in hazardous air pollutant (TEA) emissions allowed it to be considered a pollution control project pursuant to 326 IAC 2-2.5. IDEM does not agree that any change in catalyst would be exempt from NSR requirements. Such a change must be evaluated on a case by case basis to determine the impact on emissions, due to the possible effects on material usage, production levels, etc. There have been no changes to the permit as a result of this comment.

**Comment #19**

P53 - Phase I Ladle Preheating Operations should be moved to Section D.6 - Combustion Facilities with the Phase II ladle preheating operation, P53B.

Stack S10, baghouse C10, and process P32 was never constructed as suggested in the construction permit but were incorporated into the melt center improvement project complete in 2001. This project collected several sources of fugitive emissions associated with charge handling, ladle filling, molten iron handling, and ladle cleaning. IDEM exempted this project from construction permit requirements on June 21, 2001 due to the overall emission reductions caused by the project and suggested it would be incorporated into the T5 permit.

Proposed operations exhausting through C44 and S44 are as follows:

P32A - Phase I charge handling, ladle filling, molten iron handling and ladle cleaning  
P32B - Phase II charge handling, ladle filling, molten iron handling and ladle cleaning

The remaining operations are fugitive emissions that cannot be practically captured by C44:

Phase I charge handling, ladle filling, molten iron handling and ladle cleaning  
Phase II charge handling, ladle filling, molten iron handling and ladle cleaning

These fugitive sources are subject to the 3% opacity requirement for building openings under D.1.1, or the general fugitive dust control requirements for outdoor sources.

#### D.6 Combustion Facilities

Process P53B represents miscellaneous natural gas usage for ladle heating. This operation appeared in the preliminary version of the T5 permit but has now been removed. It should be resubmitted in the permit, and should be referred to as natural gas combustion rather than as a boiler as in the preliminary permit.

#### **Response #19**

Process P53B has been added to Section D.5 of the permit. The description for the cupola charge make-up and handling unit has been revised to state that it is controlled by baghouse C44. The PM BACT limit in Condition D.5.1(a) was corrected to 6.86 lb/hr. Condition D.5.1 was also revised to include the PM BACT limit for the ladle preheating P53 and to include the opacity limit for fugitive emissions. Revisions to Section D.5 are shown below.

### **SECTION D.5 FACILITY OPERATION CONDITIONS**

Phase I

- (1) 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) 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; and
- (4) One (1) ladle cleaning with burn bars, identified as P86, using one (1) baghouse (C44) for particulate control, exhausting to stack S44.

Phase II

- (1) One (1) enclosed cupola charge make-up and handling unit with a maximum charge of 91.2 tons per hour **using one (1) baghouse (C44) for particulate control, exhausting to stack S44;**
- (2) One (1) ladle filling and iron transport operation with a maximum capacity of 150 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;
- (3) 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; **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 facility description box is descriptive information and does not constitute enforceable conditions.)

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

**D.5.1 Particulate Matter Emissions Limitations [326 IAC 2-2-3(a)(3)] [326 IAC 6-3-2]**

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 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 ~~5.14~~ **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;**
- ~~(b)~~(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.**

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

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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.

#### Compliance Determination Requirements

##### D.5.10 Particulate Matter (PM/PM-10)

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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 ~~C10~~ **C44** at all times when the process is in operation.

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

##### D.5.11 Visible Emission Notations

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- (a) Visible emission notations of the baghouse ~~C10~~ **C44** stack exhaust shall be performed once per shift 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) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

#### D.5.12 Baghouse Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouse ~~C40~~ **C44** used in conjunction with the charge makeup operation, at least once per shift when the process is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 3.0 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- Compliance Response Plan - Preparation, Implementation, Records, and Reports. 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 - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

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

Upon further review, IDEM has made the following revisions to the permit.

#### Revision #1

Condition C.23 (Emission Statement) has been revised in order to follow the most current version of the rule. The revisions are shown below:

#### C.23 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]~~

(a) The Permittee shall submit an ~~annual~~ emission statement certified pursuant to the requirements of 326 IAC 2-6-, **that This statement must be received by July 1 of each year in accordance with the compliance schedule specified in 326 IAC 2-6-3, and must comply with the minimum requirements specified in 326 IAC 2-6-4. The submittal should cover the period identified in 326 IAC 2-6.** The ~~annual~~ emission statement shall meet the following requirements:

- (1) Indicate estimated actual emissions of criteria pollutants from the source, in compliance with 326 IAC 2-6 (Emission Reporting);
- (2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1(32) ("Regulated pollutant which is used only for purposes of Section 19 of this rule") from the source, for purposes of Part 70 fee assessment.

(b) ~~The annual emission statement covers the twelve (12) consecutive month time period starting January 1 and ending December 31.~~ The ~~annual~~ emission statement must be submitted to:

Indiana Department of Environmental Management  
Technical Support and Modeling Section, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

The emission statement does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (e)(b) The ~~annual~~ emission statement 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.

#### Revision #2

The rule cite in the title of Condition C.20 has been corrected. Additionally, IDEM has changed the reference to "source" to "Permittee" for clarification purposes.

C.20 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68.245]

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

#### Revision #3

Condition C.21 has been changed to only require the notification when the Permittee determines that the necessary response to an abnormal or out of range condition is to shutdown an emission unit or control device, but the shutdown will not occur for at least ten days. The notification requirement is intended to apply only to situations where the emissions unit will continue to operate for an extended period of time while the compliance monitoring parameter is out of range. It is intended to provide IDEM an opportunity to assess the situation and determine whether any additional actions are necessary to demonstrate compliance with any applicable requirements.

C.21 Compliance Response Plan - Preparation, Implementation, Records, and Reports [326 IAC 2-7-5] [326 IAC 2-7-6]

(b)

- (3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, **and it will be ten (10) days or more until the unit or device will be shut down, then the Permittee shall promptly notify** the IDEM, OAQ ~~shall be promptly notified~~ of the expected date of the shut down. **The notification shall also include** the status of the applicable compliance monitoring parameter with respect to normal, and the results of the **response** actions taken up to the time of notification.

#### Revision #4

In accordance with the credible evidence rule (62 Fed. Reg. 8314, Feb 24, 1997); Section 113(a) of the Clean Air Act, 42 U.S. C. § 7413 (a); and a letter from the United States Environmental Protection Agency (USEPA) to IDEM, OAQ dated May 18, 2004, all permits must address the use of credible evidence; otherwise, USEPA will object to the permits. The following language will be incorporated into the permit to address credible evidence:

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

**Notwithstanding the conditions of this permit that state specific methods that may be used to demonstrate compliance with, or a violation of, applicable requirements, any person (including the Permittee) may also use other credible evidence to demonstrate compliance with, or a violation of, any term or condition of this permit.**

## Indiana Department of Environmental Management Office of Air Quality

### Technical Support Document (TSD) for a Part 70 Operating Permit

#### Source Background and Description

**Source Name:** ThyssenKrupp Waupaca, Inc. Plant 5  
**Source Location:** 9856 State Highway 66, Tell City, IN 47586  
**County:** Perry  
**SIC Code:** 3321  
**Operation Permit No.:** T123-9234-00019  
**Permit Reviewer:** Nisha Sizemore

The Office of Air Quality (OAQ) has reviewed a Part 70 permit application from ThyssenKrupp Waupaca, Inc. Plant 5 relating to the operation of a ductile iron foundry. This Part 70 permit also contains provisions intended to satisfy the requirements of the construction permit rules.

#### Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted 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 80 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
    - (A) One (1) pouring/mold cooling operation, identified as P01, with a maximum throughput of 25 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 25 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 25 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 25 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 25 tons per hour, using a mechanical blaster, using one (1) baghouse (C07) for particulate control, exhausting to stack S07;
  - (1) Line 2
    - (A) One (1) pouring/mold cooling operation, identified as P06, with a maximum throughput of 16 tons per hour, using three (3) baghouses

- (B) (C01, C02, C03) for particulate control, exhausting to stack S01;  
One (1) shakeout operation, identified as P07, with a maximum throughput of 16 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 16 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 16 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 16 tons per hour, using a mechanical blaster, using one (1) baghouse (C07) for particulate control, exhausting to stack S07;
- (2) Line 3
- (A) One (1) pouring/mold cooling operation, identified as P11, with a maximum throughput of 16 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 16 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 16 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 16 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 16 tons per hour, using a mechanical blaster, using one (1) baghouse (C07) for particulate control, exhausting to stack S07;
- (3) Line 4
- (A) One (1) pouring/mold cooling operation, identified as P16, with a maximum throughput of 25 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 25 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 25 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 25 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 25 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

- (2) maximum throughput of 480 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 480 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 480 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 50 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 30 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) 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;
- (12) 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; and
- (13) One (1) ladle cleaning with burn bars, identified as P86.

#### Phase II

- (a) One (1) cupola iron melting system, identified as P33, constructed in 1998 with a maximum melt rate of 80 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 25 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 throughput capacity of 25 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 25 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 25 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 25 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 18 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 18 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 18 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 18 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 18 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 30 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 30 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 30 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 30 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 30 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 18 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 18 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 18 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 18 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 18 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, consisting of the following:
- (1) One (1) return sand handling and screening operation, identified as P80, with a maximum throughput capacity of 600 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 600 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 600 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 50 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 40 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 91.2 tons per hour;

- (7) One (1) ladle filling and iron transport operation with a maximum capacity of 150 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) Two (2) ductile iron treatment stations, both identified as P35, each with a maximum production capacity of 40 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) One (1) phenolic-urethane core sand handling system, identified as P42, with a maximum production capacity of 20 tons of cores per hour. Particulate matter emissions are controlled by one (1) baghouse system, identified as C08, that exhausts to Stack S08B;
- (10) 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) 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) 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) One (1) natural gas fired boiler, identified as P53B, with a maximum heat input rate of 11.5 MMBtu per hour exhausting to Stack S13; and
- (14) 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.
- (15) One (1) pattern shop, identified as P50, controlled by a baghouse, exhausting to stack S08.

### **Unpermitted Emission Units**

There are no unpermitted facilities operating at this source during this review process.

### **New Emission Units**

There are no new facilities to be reviewed.

### **Insignificant Activities**

The source also consists of the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour;
- (b) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons;
- (c) A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month;

- (d) Refractory storage not requiring air pollution control equipment;
- (e) Filling drums, pails, or other packaging containers with lubricating oils, waxes, and greases;
- (f) One (1) degreasing operation, constructed in 1996, not exceeding 145 gallons per 12 months, except if subject to 326 IAC 20-6;
- (g) Cleaners and solvents characterized as follows:
  - (1) having a vapor pressure equal to or less than 2 kilopascals; 15 mmHg; or 0.3 psi measured at 38 degrees C; or
  - (2) having a vapor pressure equal to or less than 0.7 kilopascals; 5 mmHg; or 0.1 psi measured at 20 degrees C.the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months;
- (h) Closed loop heating and cooling systems;
- (i) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to 1% by volume;
- (j) Any operations using aqueous solutions containing less than 1% by weight of VOCs excluding HAPs;
- (k) Forced and induced draft cooling tower system not regulated under a NESHAP;
- (l) Heat exchanger cleaning and repair;
- (m) Underground conveyors;
- (n) Blowdown for any of the following: sight glass; boilers; compressors; pumps; and cooling tower;
- (o) Mold release agents using low volatile products (vapor pressure less than or equal to 2 kilopascals measured at 38 degrees C),
- (p) A laboratory as defined in 326 IAC 2-7-1(21)(D), and
- (q) Other activities or categories not previously identified:
  - (1) Main Sand Receiving Silos, identified as P87,
  - (2) Iron Delivery and Handling, identified as P88,
  - (3) Alloys Delivery and Handling, identified as P89,
  - (4) Coke Delivery and Handling, identified as P90,
  - (5) Limestone Delivery and Handling, identified as P91, and
  - (6) Vehicular Traffic, identified as P92.

### Existing Approvals

The source was constructed and has been operating under the following previous approvals:

- (a) CP 123-4593-00019 (PSD Permit), issued on January 19, 1996, for Phase I operations;
- (b) Amendment 123-6620-00019, issued on October 2, 1996;
- (c) CP-123-8620-00019, issued September 12, 1997;

- (d) CP-123-8451-00019 (PSD Permit), issued on February 4, 1998 for Phase II operations;
- (e) Amendment 123-9740-00019, issued on May 22, 1998;
- (f) Amendment 123-10191-00019, issued on January 21, 1999;
- (g) SSM 123-12331-00019, issued on January 31, 2001, for shotblast machine P55;
- (h) SSM 123-12948-00019, issued on June 5, 2001, for core making process P44;
- (i) SSM 123-11479-00019, issued on June 7, 2001, for approval to increase the capacity of the ductile iron treatment process;
- (j) SSM 123-15425-00019, issued on April 3, 2002, for approval to modify shotblast machine P55;
- (k) SSM 123-16456, issued on May 13, 2003, for a pollution control project involving changing the catalyst material used in core making processes P43 and P44.

All terms and conditions from previous approvals issued pursuant to permitting programs approved into the state implementation plan have been either incorporated as originally stated, revised, or deleted by this permit. All previous registrations and permits are superseded by this permit.

The following terms and conditions from previous approval have been determined no longer applicable; therefore, were not incorporated into this Part 70 permit:

- (a) All construction conditions from all previously issued permits.

Reason not incorporated: All facilities previously permitted have already been constructed; therefore, the construction conditions are no longer necessary as part of the operating permit. Any facilities that were previously permitted but have not yet been constructed would need new pre-construction approval before beginning construction.

The following terms and conditions from previous approvals have been revised in this Part 70 permit:

- (a) The SO<sub>2</sub> BACT limit for the cupolas has been revised. The previous limit stated that SO<sub>2</sub> emissions shall not exceed 35.20 pounds per hour and 0.22 pound per ton based on a 3 hour average,.

Reason for the revision: The cupolas have consistently demonstrated compliance with the SO<sub>2</sub> BACT limit of 35.20 lb/hr. However, during periods of low production, the cupolas have not been able to demonstrate consistent compliance with the original BACT limit of 0.22 lb/ton based on a 3 hour average. As a result, Waupaca Foundry submitted an application to revise the SO<sub>2</sub> BACT limit. The application has been combined with this Part 70 application. The BACT analysis included in Appendix A of this document explains the reasoning for the proposed approval to change the SO<sub>2</sub> BACT limit for the cupolas. The proposed change is to maintain the limit of 35.20 pounds per hour, and change the 0.22 lb/ton limit to a 30 day rolling average instead of a 3 hour average. The proposed change will not affect the air quality analysis originally performed by the Permittee, because the pound per hour limit is not changing. Refer to the BACT analysis in Appendix A for more detailed information.

- (b) Pursuant to 326 IAC 2-2-4, the Permittee shall establish ambient monitoring sites for PM<sub>10</sub>, SO<sub>2</sub>, and meteorological data described below. These sites shall begin collecting

valid data prior to the commencement of operation of the ductile iron cupola, identified as P33. The monitoring must be performed using U.S. EPA approved methods, procedures, and quality assurance programs. A Quality Assurance Plan and Protocol shall be submitted to:

Indiana Department of Environmental Management  
Ambient Monitoring Section, Office of Air Quality  
2525 North Shadeland Avenue  
Indianapolis, Indiana 46219

within 90 calendar days prior to commencement of monitoring. The Quality Assurance Plan and Protocol must be approved by IDEM, OAQ prior to commencement of monitoring.

The two (2) monitoring sites shall be established at a downwind location and an upwind location to be approved by IDEM, OAQ. All monitors shall meet the operating and maintenance criteria outlined in IDEM, OAQ Quality Assurance Manual.

The ambient data for PM<sub>10</sub>, SO<sub>2</sub> and meteorological data shall be collected following the initial compliance demonstration. IDEM, OAQ reserves the authority to require the Permittee to monitor for compliance with the National Ambient Air Quality Standards (NAAQS) for PM<sub>2.5</sub> in the event that such information is necessary to demonstrate compliance with the standard.

The monitoring site(s) shall measure the following meteorological parameters:

- (1) wind direction,
- (2) wind speed, and
- (3) temperature.

A quarterly summary of the monitoring data shall be submitted to:

Indiana Department of Environmental Management  
Ambient Monitoring Section, Office of Air Quality  
2525 North Shadeland Avenue  
Indianapolis, Indiana 46219

within ninety (90) calendar days after the end of the quarter being reported.

The Permittee may petition IDEM, OAQ for the removal of the monitoring site if it has been established that the PM and SO<sub>2</sub> levels will continue to comply with the NAAQS with an adequate margin of safety. The monitoring requirements may be continued if there exists a threat to the NAAQS or if determined to be warranted by IDEM, OAQ.

Reason revised: The Permittee has petitioned IDEM, OAQ for the removal of the monitoring sites. IDEM has agreed that the Permittee can remove the SO<sub>2</sub> monitoring site and the upwind PM<sub>10</sub> monitoring site. These monitors have demonstrated no violations of the NAAQS and that no threat to the NAAQS exists as a result of this source, as permitted. Therefore, IDEM, OAQ proposes to allow the Permittee to remove these two (2) monitoring sites. IDEM has determined that, since some high values were recorded (at approximately 80% of the NAAQS) from the downwind PM<sub>10</sub> monitor, the Permittee shall be required to continue to operate the downwind PM<sub>10</sub> monitor.

- (c) Pursuant to CP-123-8451-00019, issued on February 4, 1998, the maximum melt rate of each cupola shall not exceed 80 tons of iron per hour. This requirement has been changed to state that the maximum melt rate of each cupola shall not exceed 80 tons of iron per hour, based on a 24 hour average.

Reason revised: As required by the Part 70 rules, the Permittee must now begin certifying compliance with each applicable requirement. Therefore, the Permittee must be able to keep records as necessary upon which to base the certification of compliance. It would be extremely onerous, if not impossible, to determine compliance every minute, with a melt rate of 80 tons per hour. Therefore, in order to make the condition enforceable as a practical matter, IDEM has changed the requirement such that it is based on a 24 hour average. The Permittee will be required to keep records of cupola production and hours of operation each day, in order to demonstrate compliance with this condition.

### Enforcement Issue

IDEM has the following enforcement actions pending against Waupaca Foundry:

- (a) Case #2000-9237-A which includes the following alleged violations:
- (1) During a compliance stack test conducted September 23, 1999 lead emissions from stack S07 measured 0.00252 pounds per hour, as compared to the permit limit of 0.0019 pounds per hour. Subsequently Waupaca Foundry replaced bags in the baghouse, then repeated the stack test and demonstrated compliance with the emission limit.
  - (2) During a compliance stack test conducted September 23, 1999 PM emissions from stack S07 measured 0.00845 gr/dscf, as compared to the permit limit of 0.005 gr/dscf. Subsequently Waupaca Foundry replaced bags in the baghouse, then repeated the stack test and demonstrated compliance with the emission limit.
  - (3) During a compliance stack test conducted September 21, 1999 VOC emissions from stack S01 measured 57.7 pounds per hour as compared to the permit limit of 47.0 pounds per hour. During a repeat compliance stack test conducted September 5, 2001 VOC emissions from Stack S01 measured 51.5 pounds per hour as compared to the permit limit of 47.0 pounds per hour. As part of this Part 70 permit review, Waupaca has applied to revise the VOC BACT limit for this stack. See Appendix A (BACT Analysis) for more detailed information. However, IDEM has determined that ThyssenKrupp Waupaca has not made a thorough attempt to comply with the current emission limits. Additionally, at least two other foundries in Indiana have VOC emissions from similar processes that are lower than the limits that the Permittee suggests should apply.
  - (4) Between June 2000 and October 2001, the recuperative incinerators associated with the Phase I and Phase II cupolas each failed to consistently maintain the minimum operating temperature of 1667 degrees Fahrenheit, as required by Permit #123-8451-00019, issued on February 4, 1998.
  - (5) During an inspection conducted on March 21, 2001, the IDEM inspector determined that Waupaca Foundry was not monitoring the flow rate of the scrubbing liquid in the acid scrubber controlling the TEA emissions from the coremaking operation. The monitoring is required by Permit #123-8451-00019, issued on February 4, 1998.
  - (6) Quarterly CEMS reports submitted by Waupaca for the first, second, third, and

fourth quarters of calendar year 2001 indicate that SO<sub>2</sub> emissions from the cupolas exceeded the SO<sub>2</sub> limit of 0.22 pounds per ton of metal. As part of this Part 70 permit review, Waupaca has applied to revise the SO<sub>2</sub> BACT limit for the cupolas. See Appendix A (BACT Analysis) for more detailed information.

- (b) Case #2001-3527-A which includes the following alleged violations:
- (1) During an inspection conducted on March 31, 1999, the IDEM inspector discovered that Waupaca Foundry failed to install BACT, a baghouse, for the charge makeup and handling area, which is required by Permit #123-4593-00019. Since this time Waupaca has installed and begun operating a baghouse to control emissions from the charge makeup and handling area. The baghouse was installed in December 2001 and became operational in January 2003.
  - (2) On March 31, 1999, visible emissions from the building opening above the cupola measured 18% opacity, as compared to the BACT limit of 3% opacity. Since this time Waupaca has installed and begun operating a baghouse to control fugitive emissions from the melt area in order to address the opacity issues. The baghouse was installed in December 2001 and became operational in January 2003.
  - (3) The Permittee failed to perform any of the required visible emission notations of particulate emissions exhausted to the atmosphere from stacks S01, S04, S07, S08, S14, S15, and S16. These readings are required by Permit #123-8451-00019.

Presently, IDEM is evaluating these matters and will take appropriate actions. If further actions are determined to be necessary for the Permittee to comply with applicable requirements, IDEM will promptly reopen and revise the Part 70 permit to include such provisions in the permit and a schedule for achieving compliance.

### **Recommendation**

The staff recommends to the Commissioner that the Part 70 permit be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An administratively complete Part 70 permit application for the purposes of this review was received on November 20, 1997. No notice of completeness was sent to the source.

### **Emission Calculations**

There are no calculations provided with this Part 70 permit. All emission units at the source have been reviewed under the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration). There are no unpermitted emission units. Therefore, no calculations are necessary.

### **Potential Emissions**

Pursuant to 326 IAC 1-2-55, Potential Emissions are defined as "emissions of any one (1) pollutant which would be emitted from a facility, if that facility were operated without the use of pollution control equipment unless such control equipment is necessary for the facility to produce its normal product or is integral to the normal operation of the facility."

Pollutant	Potential Emissions (tons/year)
PM	greater than 100
PM-10	greater than 100
SO <sub>2</sub>	greater than 100
VOC	greater than 100
CO	greater than 100
NO <sub>x</sub>	greater than 100

Note: For the purpose of determining Title V applicability for particulates, PM-10, not PM, is the regulated pollutant in consideration.

HAP's	Potential Emissions (tons/year)
lead	greater than 10
arsenic	less than 10
beryllium	less than 10
cadmium	less than 10
nickel	less than 10
antimony	less than 10
cobalt	less than 10
manganese	greater than 10
benzene	greater than 10
formaldehyde	less than 10
acrolein	greater than 10
aromatic amines	less than 10
phenol	less than 10
TOTAL	greater than 25

- (a) The potential emissions (as defined in 326 IAC 1-2-55) of PM-10, SO<sub>2</sub>, VOC, NO<sub>x</sub>, and CO are equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.
- (b) The potential emissions (as defined in 326 IAC 1-2-55) of any single HAP is equal to or greater than ten (10) tons per year and the potential emissions (as defined in 326 IAC 1-2-55) of a combination HAPs is greater than or equal to twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.
- (c) This source is a major stationary source because it is one of the 28 listed source categories (secondary metal production) and at least one criteria pollutant is emitted at levels greater than 100 tons per year. Therefore, pursuant to 326 IAC 2-2 the PSD requirements apply. Since this type of operation is one of the twenty-eight (28) listed source categories (secondary metal production) under 326 IAC 2-2, the fugitive emissions are counted toward determination of PSD and Emission Offset applicability.

**Actual Emissions**

The following table shows the actual emissions from the source. These emissions were based on the information submitted by the company as part of the emission statement for 2001.

Pollutant	Actual Emissions (tons/year)
PM	161
PM-10	161
SO <sub>2</sub>	34
VOC	154
CO	1,415
NO <sub>x</sub>	73
lead	0.74

**Limited Potential to Emit**

The table below summarizes the total potential to emit, reflecting all limits, of the significant emission units.

Process/facility	Limited Potential to Emit (tons/year)						
	PM	PM-10	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs
Stack S01 (Phase 1 mold lines and sand handling)	140.2	-	13.14	205.9	1936	17.65	0.11
Stack S04 (Phase 1 mold lines)	7.53	-	1.58	19.9	199.3	0.39	0.003
Stack S07 (Phase 1 cleaning/finishing operations)	34.2	-					0.008
Stack S08 (core sand handling)	6.57	7.0					
Stack S09 (cupolas)	27.3	-	154.2	14.0	280.0	308.3	2.37
Stack S10 (Phase 1 charge makeup operation)	4.38	-					0.0002
Stack S11 (core machines and ovens P51)	1.0	1.0	0.044	20.6	2.58	10.3	
Stack S12 (Phase 1 ladle preheating)	0.70	-	0.03	0.29	1.75	7.05	
Stack S13 (boiler P53B)	29.2	-					
Stack S14 (Isocure core mixers and core machines)		-		40.6			4.55
Stack S15 (Phase 2 mold lines, sand handling, and ductile iron treatment)	146.4	-	16.16	229.1	2312	3.99	0.031
Stack S16 (Phase 2 mold lines, sand handling, and cleaning/finishing)	78.8	-		22.91	398.5		0.022
Phase 1 ladle filling and iron transport	23.7	-					
Phase 1 ladle cleaning with burn bars	0.32	-					
<b>Total Emissions</b>	<b>500.30</b>		<b>187.15</b>	<b>553.30</b>	<b>5130.13</b>	<b>347.68</b>	<b>7.09</b>

### County Attainment Status

The source is located in Perry County.

Pollutant	Status
PM-10	attainment
SO <sub>2</sub>	attainment
NO <sub>2</sub>	attainment
Ozone	attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Perry County has been designated as attainment or unclassifiable for ozone.
- (b) Perry County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (c) Fugitive Emissions  
Since this type of operation is one of the twenty-eight (28) listed source categories (secondary metal production) under 326 IAC 2-2, the fugitive emissions are counted toward determination of PSD and Emission Offset applicability.

### Part 70 Permit Conditions

This source is subject to the requirements of 326 IAC 2-7, pursuant to which the source has to meet the following:

- (a) Emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of issuance of Part 70 permits.
- (b) Monitoring and related record keeping requirements which assume that all reasonable information is provided to evaluate continuous compliance with the applicable requirements.

### Federal Rule Applicability

- (a) The one (1) boiler (P53B), rated at 11.5 MMBtu per hr for Phase II, is subject to the New Source Performance Standard, 326 IAC 12, (40 CFR Part 60.40c, Subpart Dc). This rule applies to steam generating units constructed after June 9, 1989, which have a maximum design heat input capacity between 10 and 100 MMBtu/hr. Pursuant to this rule, the owner or operator shall submit notification of the date of construction, anticipated startup and actual startup, as well as maintain records of the natural gas combusted during each day.
- (b) The degreasers are not subject to National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR Part 63.460, Subpart T (National Emission Standards for Halogenated Solvent Cleaning). The source does not use any halogenated solvent cleaners.
- (c) The affected source, the iron and steel foundry, is subject to the National Emission

Standards for Hazardous Air Pollutants (NESHAP) for Iron and Steel Foundries, (40 CFR 63, Subpart EEEEE, and 326 IAC 20-1-1), effective the date the rule is published in the Federal Register. Pursuant to this rule, the Permittee must comply with 40 CFR 63, Subpart EEEEE on and after the date that is three years after the effective date of the rule, except as provided in paragraph (d), or accept and meet an enforceable HAP emissions limit below the major source threshold prior to three years after the effective date of the rule.

- (d) The definitions of 40 CFR 63, Subpart EEEEE at 40 CFR 63.7765 are incorporated by reference.
- (e) Pursuant to 40 CFR 63.7700(a) and 40 CFR 63.7683(b), the Permittee shall comply with the certification requirements in 40 CFR 63.7700(b) or prepare and implement a plan for the selection and inspection of scrap according to the requirements in 40 CFR 63.7700(c) no later than one year after the effective date of 40 CFR 63, Subpart EEEEE.
- (f) The following emissions units comprise the affected source that is subject to 40 CFR 63, Subpart EEEEE:
  - (A) Phase I and Phase II cupola melt furnaces;
  - (B) lines 1 through 8 pouring/casting operations;
  - (C) scrap preheaters;
  - (D) all core machines; and
  - (E) fugitive emissions from each building or structure housing any emissions source at the foundry.
- (g) Since the Permittee has not yet chosen compliance options for this rule, detailed requirements of the rule will be incorporated into the Part 70 permit at a later date. The permit will require the Permittee to apply for a permit modification closer to the compliance date of the rule. The permit modification will serve to incorporate all of the detailed requirements of the rule into the Part 70 permit.

### **State Rule Applicability - Entire Source**

#### **326 IAC 2-2 (Prevention of Significant Deterioration)**

This source is subject to 326 IAC 2-2 (Prevention of Significant Deterioration) because it is one of the 28 listed source categories and at least one of the regulated attainment pollutants is emitted at a rate of 100 tons per year or greater. Therefore, pursuant to 326 IAC 2-2 the source is a major source under 326 IAC 2-2 (PSD). The source has been reviewed under the requirements of PSD. Some of the PSD requirements are applicable to the entire source, such as the requirement that visible emissions from any building opening shall not exceed 3% opacity.

#### **326 IAC 1-6-3 (Preventive Maintenance Plan)**

The source has submitted a Preventive Maintenance Plan (PMP) on November 20, 1997. This PMP has been verified to fulfill the requirements of 326 IAC 1-6-3 (Preventive Maintenance Plan).

#### **326 IAC 2-4.1-1 (New Source Toxics Control)**

- (a) Phase I is not subject to the requirements of 326 IAC 2-4.1-1 (New Source Toxics Control) because it was constructed prior to the applicability of the rule.
- (b) Phase II is subject to the requirements of 326 IAC 2-4.1-1 (New Source Toxics Control). The BACT limits were determined to satisfy the requirements of this rule.
- (c) Pursuant to CP-123-16910-00019, issued on April 23, 2003, the dimethylisopropylamine

(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. This will limit single and total HAPs to less than 10 and 25 tons per year, respectively, therefore the core machines are not subject to the requirements of 326 IAC 2-4.1-1 (New Source Toxics Control).

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting), because it has the potential to emit more than 100 tons per year of PM-10, SO<sub>2</sub>, VOC, NO<sub>x</sub> and CO. Pursuant to this rule, the owner/operator of the source must annually submit an emission statement for the source. The annual statement must be received by July 1 of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8)(Emission Statement Operating Year).

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limits), 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.

326 IAC 1-5-2 (Emergency Reduction Plans)

Pursuant to 326 IAC 1-5-2, the Permittee shall prepare and submit written emergency reduction plans (ERPs) consistent with safe operating procedures.

- (a) If the ERP is disapproved by IDEM and OAQ, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.
- (b) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.
- (c) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.
- (d) Upon direct notification by IDEM and 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 level. [326 IAC 1-5-3]

326 IAC 6-4 (Fugitive Dust Emissions)

This source is subject to 326 IAC 6-4 for fugitive dust emissions. Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions), fugitive dust shall not be visible crossing the boundary or property line of a source. Observances of visible emissions crossing property lines may be refuted by factual data expressed in 326 IAC 6-4-2(1), (2) or (3).

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

This source is subject to the requirements of 326 IAC 6-5. Pursuant to this rule, the fugitive particulate matter emissions shall be controlled according to the plan submitted on February 12, 2003. The plan is included as Part 70 Permit Attachment A.

**326 IAC 8-1-6 (General Reduction Requirements for New Facilities)**

This source is subject to 326 IAC 8-1-6 (General Reduction Requirements for New Facilities). New facilities (as of January 1, 1980), which have potential VOC emissions of 25 tons or more per year, located anywhere in the state, which are not otherwise regulated by other provisions of 326 IAC 8, shall reduce VOC emissions using Best Available Control Technology (BACT). Pursuant to CP 123-4593-00019 and CP-123-8451-00019, a VOC BACT Analysis was performed in the PSD BACT Analysis. Therefore, the source will comply with the requirements of 326 IAC 8-1-6 by complying with the VOC BACT limits.

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

None of the emission units at this source are subject to the requirements of this rule, because all of the facilities at this source have more stringent particulate emission limitations pursuant to the requirements of 326 IAC 2-2-3 (PSD BACT).

**State Rule Applicability - Individual Facilities**

**Natural gas-fired boiler P53B**

**326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating)**

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), the natural gas-fired boiler in Phase II (P53B) shall be limited to 0.58 pounds PM per million BTU heat input.

Particulate emissions from indirect heating constructed after September 21, 1983 shall be limited by the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

$$Pt = \frac{1.09}{11.5^{0.26}} = 0.58 \text{ lb/MMBtu}$$

**40 CFR 60, Subpart Dc**

This boiler is subject to the NSPS Subpart Dc because it was constructed after June 9, 1989 and has a capacity greater than 10 MMBtu per hour but less than 100 MMBtu per hour. There are no emission limitations applicable to this boiler under this rule, because the boiler combusts only natural gas. Pursuant to this rule, the Permittee shall keep records of the fuel combusted in this boiler each day of operation.

**326 IAC 2-2 (PSD)**

Pursuant to CP123-8451-00019 issued on February 4, 1998, the boiler shall combust only natural gas.

Note: Since the boiler is only capable of combusting natural gas and the Permittee must certify compliance with the requirement to combust only natural gas each year when the annual compliance certification is submitted, there is no need to require the Permittee to also submit the natural gas boiler certification form.

**Phase I and Phase II cupolas**

**326 IAC 7-1-1 (Sulfur Dioxide Emission Limitations)**

The cupolas have the potential to emit greater than 25 tons per year and are therefore subject to this rule. However, there are no applicable limits listed in this rule for emission units that combust coke.

**326 IAC 9-1 (Carbon Monoxide Emission Limits)**

This source is subject to 326 IAC 9-1 (Carbon Monoxide Emission Limits). No person shall cause or allow the discharge of carbon monoxide from any cupola, blast furnace, basic oxygen steel furnace, or other ferrous metal smelting equipment, having a capacity of ten (10) tons per hour or more process weight unless the waste gas stream is burned in a direct-flame afterburner or boiler or is controlled by other means approved by the commissioner. The cupolas at the source comply with this rule by controlling CO emissions with a recuperative combustor/heat recovery systems, which maintain a minimum temperature of one thousand three hundred (1,300) degrees Fahrenheit for a minimum retention time of three-tenths (0.3) second. No other facilities at this source are subject to the requirements of this rule.

### 326 IAC 2-2 (PSD)

The Phase I cupola P30 was constructed in 1996 and permitted under CP 123-4593-00019 issued on January 19, 1996. The Phase I cupola was modified in 1998 and the modification was permitted under CP123-8451-00019 issued on February 4, 1998. The Phase II cupola P33 was constructed in 1998 and permitted under CP 123-8451-00019 issued on February 4, 1998. Both cupolas were reviewed under the requirements of 326 IAC 2-2 (PSD). The BACT requirements for the cupolas include the following requirements.

- (a) The PM emissions from both cupolas combined shall not exceed 12.48 pounds per hour and 0.078 pounds per ton of iron. PM emissions shall be controlled by a baghouse.
- (b) Visible emissions from the cupola stack S09 shall not exceed 10% opacity. A COM shall be used to monitor opacity.
- (c) Lead emissions from both cupolas combined shall not exceed 0.54 pounds per hour. Emissions shall be controlled by a baghouse.
- (d) Beryllium emission from both cupolas combined shall not exceed 0.0016 pounds per hour. Emissions shall be controlled by a baghouse.
- (e) The sulfur dioxide (SO<sub>2</sub>) emissions from the cupolas shall be limited to 0.22 pounds per ton of metal melted based on a 30-day rolling average and 35.2 pounds per hour based on a 3-hour rolling average. SO<sub>2</sub> emissions shall be controlled by a dry lime or other equivalent alkaline reagent located prior to the baghouse. A CEMS shall be used to monitor the SO<sub>2</sub> emissions.
- (f) VOC emissions from both cupolas combined shall not exceed 3.20 pounds per hour. The VOC emissions shall be controlled by a recuperative incinerator.
- (g) CO emissions from both cupolas combined shall not exceed 64.00 pounds per hour. The CO emissions shall be controlled by a recuperative incinerator.
- (h) NO<sub>x</sub> emissions from both cupolas combined shall not exceed 70.40 pounds per hour. The recuperative incinerator shall be equipped with low-NO<sub>x</sub> burners.
- (i) The maximum melt rate of each cupola shall not exceed 80 tons of iron per hour, based on a 24 hour average.

### **Units Exhausting to Stacks S01, S04, and S07 (Includes Phase 1 mold lines, sand handling, and cleaning/finishing operations)**

### 326 IAC 2-2 (PSD)

These emission units were constructed in 1996, permitted under CP123-4593-00019 issued on

January 19, 1996, and were reviewed under the requirements of 326 IAC 2-2 (PSD). The BACT requirements for these units include the following requirements.

- (a) The PM emissions from stack S01 shall not exceed 0.005 gr/dscf and 32.01 pounds per hour. Additionally, the following emission units exhausting to stack S01 have the following individual PM emission limits.

Process	Process ID	Emission Limit (lb/hr)
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
Spent Sand Handling/Processing	P24	2.74

- (b) The PM emissions from the line 1 pouring and castings cooling operations exhausting to stack S04 shall not exceed 0.005 gr/dscf and 1.72 pounds per hour. PM emissions shall be controlled by baghouses.
- (c) The PM emissions from stack S07 shall not exceed 0.005 gr/dscf and 7.8 pounds per hour. Additionally, the following emission units exhausting to stack S07 have the following individual PM emission limits.

Process	Process ID	Emission Limit (lb/hr)
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

- (d) Visible emissions from any baghouse stack shall not exceed 10% opacity.
- (e) Lead emissions from stack S01 shall not exceed 0.024 pounds per hour. Emissions shall be controlled by baghouses.
- (f) Lead emissions from stack S04 shall not exceed 0.0006 pounds per hour. Emissions shall be controlled by baghouses.
- (g) Lead emissions from stack S07 shall not exceed 0.00019 pounds per hour. Emissions shall be controlled by baghouses.
- (h) Beryllium emissions from stack S01 shall not exceed 0.001 pounds per hour. Emissions shall be controlled by baghouses.
- (i) Beryllium emissions from stack S04 shall not exceed 0.000012 pounds per hour. Emissions shall be controlled by baghouses.
- (j) Beryllium emissions from stack S07 shall not exceed 0.000017 pounds per hour. Emissions shall be controlled by baghouses.
- (k) VOC emissions from stack S01 shall not exceed 47.0 pounds per hour. Additionally, the following emission units exhausting to stack S01 have the following individual VOC emission limits.

Process	Process ID	Emission Limit (lb/hr)
Line 1 Pouring/Mold Cooling	P01	7.95
Line 1 Shakeout	P02	0.90
Line 2 Pouring/Mold Cooling	P06	0.32
Line 2 Shakeout	P07	1.6
Line 3 Pouring/Mold Cooling	P11	0.32
Line 3 Cast Cooling	P13	1.6
Line 4 Shakeout	P17	0.50
Line 4 Cast Cooling	P18	2.5
Sand Cooling/Water Addition	P22	1.64
Air makeup units	P52	0.38

- (l) VOC emissions from stack S04 shall not exceed 4.55 pounds per hour. Additionally, the VOC emissions from Line 1 pouring/mold cooling operation exhausting to stack S04 shall not exceed 4.55 pounds per hour.
- (m) The CO emissions from stack S01 shall not exceed 442.0 pounds per hour. Additionally, the following emission units exhausting to stack S01 have the following individual CO emission limits.

Process	Process ID	Emission Limit (lb/hr)
Line 1 Pouring/Mold Cooling	P01	79.5
Line 1 Shakeout	P02	1.0 lb/ton iron
Line 2 Pouring/Mold Cooling	P06	80.0
Line 2 Shakeout	P07	16.0
Line 3 Pouring/Mold Cooling	P11	80.0
Line 4 Pouring/Mold Cooling	P16	125.0
Line 4 Shakeout	P17	25.0
Air makeup units	P52	18.2

- (n) The CO Emissions from stack S04 shall not exceed 45.5 pounds per hour. Additionally, the CO emissions from the Line 1 pouring/mold cooling operation exhausting to stack S04 shall not exceed 45.5 pounds per hour.
- (o) The SO2 emissions from stack S01 shall not exceed 3.0 pounds per hour. Additionally, the following emission units exhausting to stack S01 have the following individual SO2 emission limits.

Process	Process ID	Emission Limit (lb/hr)
Line 1 Pouring/Mold Cooling	P01	0.64
Line 2 Pouring/Mold Cooling	P06	0.64
Line 3 Pouring/Mold Cooling	P11	0.64
Line 4 Pouring/Mold Cooling	P16	1.0
Air Makeup Units	P52	0.039

- (p) The SO<sub>2</sub> emissions from stack S04 shall not exceed 0.36 pounds per hour. Additionally, the SO<sub>2</sub> emissions from the Line 1 pouring/mold cooling process exhausting to stack S04 shall not exceed 0.36 pounds per hour.
- (q) The NO<sub>x</sub> emissions from stack S01 shall not exceed 4.03 pounds per hour. Additionally, the following emission units exhausting to stack S01 have the following individual NO<sub>x</sub> emission limits.

Process	Process ID	Emission Limit (lb/hr)
Line 1 Pouring/Mold Cooling	P01	0.16
Line 2 Pouring/Mold Cooling	P06	0.32
Line 3 Pouring/Mold Cooling	P11	0.32
Line 4 Pouring/Mold Cooling	P16	0.50
Air Makeup Units	P52	2.98

- (r) The NO<sub>x</sub> emissions from stack S04 shall not exceed 0.09 pounds per hour. Additionally the NO<sub>x</sub> emissions from the Line 1 pouring/mold cooling process exhausting to stack S04 shall not exceed 0.09 pounds per hour.

**Emission Units exhausting to stacks S15 and S16 (includes Phase II mold lines, cleaning/finishing operations, ductile iron treatment, and sand handling)**

326 IAC 2-2 (PSD)

These emission units were constructed in 1998, permitted under CP123-8451-00019 issued on February 4, 1998, and reviewed under the requirements of 326 IAC 2-2 (PSD). The BACT requirements for these units include the following requirements.

- (a) The PM emissions from stack S15 shall not exceed 0.005 gr/dscf.
- (b) The PM emissions from stack S16 shall not exceed 0.005 gr/dscf.
- (c) Lead emissions from stack S15 shall not exceed 0.0067 pounds per hour. Additionally, the following emission units exhausting to stack S15 have the following individual lead emission limits.

Process	Process ID	Emission Limit (lb/hr)
Line 5 Pouring/Mold Cooling	P60	0.0014
Line 5 Shakeout	P61	0.00035
Line 5 Cast Cooling	P62	0.0009
Line 6 Pouring/Mold Cooling	P65	0.0005
Line 6 Shakeout	P66	0.00031
Line 6 Cast Cooling	P67	0.00026
Line 7 Pouring/Mold Cooling	P70	0.0014
Line 7 Shakeout	P71	0.00035
Line 7 Cast Cooling	P72	0.00058
Line 8 Pouring/Mold Cooling	P75	0.0005
Metal Returns Handling System	P84	0.00003
Return Sand Handling/Screening	P80	0.00009
Sand Mulling and Handling	P81	0.0001
Sand Blending and Cooling	P82	0.0001
Spent Sand and Dust Handling	P83	0.00004

- (d) Lead emissions from stack S16 shall not exceed 0.005 pounds per hour. Additionally, the following emission units exhausting to stack S16 have the following individual lead emission limits.

Process	Process ID	Emission Limit (lb/hr)
Line 5 Shakeout	P61	0.00035
Line 5 Pick and Sort	P63	0.0001
Line 5 Cleaning/ Grinding	P64	0.0003
Line 6 Shakeout	P66	0.00019
Line 6 Cast Cooling	P67	0.00064
Line 6 Pick and Sort	P68	0.0001
Line 6 Cleaning/ Grinding	P69	0.0002
Line 7 Shakeout	P71	0.00035
Line 7 Cast Cooling	P72	0.00032
Line 7 Pick and Sort	P73	0.0001

Line 7 Cleaning/ Grinding	P74	0.0002
Line 8 Shakeout	P76	0.0005
Line 8 Cast Cooling	P77	0.0007
Line 8 Pick and Sort	P78	0.0003
Line 8 Cleaning/ Grinding	P79	0.0004
Return Sand Handling/Screening	P80	0.00001
Metal Returns Handling System	P84	0.00002

- (e) Beryllium emissions from stack S15 shall not exceed 0.0003 pounds per hour. Additionally, the following emission units exhausting to stack S15 have the following individual beryllium emission limits.

Process	Process ID	Emission Limit (lb/hr)
Line 5 Pouring/Mold Cooling	P60	0.000056
Line 5 Shakeout	P61	0.000014
Line 5 Cast Cooling	P62	0.000003
Line 6 Pouring/Mold Cooling	P65	0.000022
Line 6 Shakeout	P66	0.000014
Line 6 Cast Cooling	P67	0.0000008
Line 7 Pouring/Mold Cooling	P70	0.000056
Line 7 Shakeout	P71	0.000014
Line 7 Cast Cooling	P72	0.0000019
Line 8 Pouring/Mold Cooling	P75	0.000022
Metal Returns Handling System	P84	0.000002
Return Sand Handling/Screening	P80	0.000035
Sand Mulling and Handling	P81	0.000029
Sand Blending and Cooling	P82	0.000017
Spent Sand and Dust Handling	P83	0.000009

- (f) Beryllium emissions from stack S16 shall not exceed 0.00009 pounds per hour. Additionally, the following emission units exhausting to stack S16 have the following individual beryllium emission limits.

Process	Process ID	Emission Limit (lb/hr)
Line 5 Shakeout	P61	0.000014
Line 5 Pick and Sort	P63	0.0000005
Line 5 Cleaning/ Grinding	P64	0.000001
Line 6 Shakeout	P66	0.000008
Line 6 Cast Cooling	P67	0.0000022
Line 6 Pick and Sort	P68	0.0000005
Line 6 Cleaning/ Grinding	P69	0.000001
Line 7 Shakeout	P71	0.000014
Line 7 Cast Cooling	P72	0.0000011
Line 7 Pick and Sort	P73	0.0000005
Line 7 Cleaning/ Grinding	P74	0.000001
Line 8 Shakeout	P76	0.000001
Line 8 Cast Cooling	P77	0.000022
Line 8 Pick and Sort	P78	0.000003
Line 8 Cleaning/ Grinding	P79	0.000002
Return Sand Handling/Screening	P80	0.000014
Metal Returns Handling System	P84	0.000001

- (g) SO<sub>2</sub> emissions from stack S15 shall not exceed 3.69 pounds per hour. Additionally, the following emission units exhausting to stack S15 have the following individual SO<sub>2</sub> emission limits.

Process	Process ID	SO <sub>2</sub> Emission Limitations for individual processes (lb/hr)
Line 5 Pouring/Mold Cooling	P60	1.00
Line 6 Pouring/Mold Cooling	P65	0.72
Line 7 Pouring/Mold Cooling	P70	1.2
Line 8 Pouring/Mold Cooling	P75	0.72

- (h) VOC emissions from stack S15 shall not exceed 52.3 pounds per hour. Additionally, the following emission units exhausting to stack S15 have the following individual VOC emission limits.

Process	Process ID	VOC Emission Limitations for individual processes (lb/hr)
Line 5 Pouring/Mold Cooling	P60	12.5
Line 5 Shakeout	P61	1.25
Line 6 Pouring/Mold Cooling	P65	9.00
Line 6 Shakeout	P66	1.13
Line 7 Pouring/Mold Cooling	P70	15.0
Line 7 Shakeout	P71	1.5
Line 8 Pouring/Mold Cooling	P75	9.00

- (i) VOC emissions from stack S16 shall not exceed 5.23 pounds per hour. Additionally, the following emission units exhausting to stack S16 have the following individual VOC emission limits.

Process	Process ID	VOC Emission Limitations for individual processes (lb/hr)
Line 5 Shakeout	P61	1.25
Line 6 Shakeout	P66	0.675
Line 7 Shakeout	P71	1.5
Line 8 Shakeout	P76	1.8

- (j) CO emissions from the Line 5 pour/mold cooling P60, Line 6 pouring/mold cooling P65, Line 7 pouring/mold cooling P70, and Line 8 pouring/mold cooling P75 shall each not exceed 5.0 pounds per ton of iron.
- (k) CO emissions from the Line 5 shakeout P61, the Line 6 shakeout P66, the Line 7 shakeout P71, and the Line 8 shakeout shall each not exceed 1.0 pounds per ton.
- (l) NOx emissions from stack S15 shall not exceed 0.01 pounds per ton of iron poured.
- (m) The natural gas-fired air makeup units shall be equipped with low-NOx burners and shall be limited to a heat input rate of 80 MMBtu per hour.
- (m) The maximum production rate of both ductile iron treatment stations combined shall not exceed a combined total of 80 tons of iron per hour.

**Core Manufacturing Operations (includes pattern shop, core machines, core mixers, core ovens, and core sand handling operations)**

326 IAC 2-2 (PSD)

These emission units were constructed in 1996, 1998, and 2001 and were reviewed under the requirements of 326 IAC 2-2 (PSD). The BACT requirements for these units include the

following requirements.

- (a) The PM/PM10 emissions from the core sand handling process exhausting to stack S08 shall not exceed 0.005 gr/dscf and 1.5 pounds per hour. Emissions shall be controlled by a baghouse.
- (b) The PM/PM10 emissions from stack S11 shall not exceed 0.23 pounds per hour. Additionally, the PM/PM10 emissions from the core machines and ovens exhausting to stack S11 shall not exceed 0.23 pounds per hour.
- (c) Visible emissions from any baghouse stack shall not exceed 10% opacity.
- (d) 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.
- (e) 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.
- (f) The non-DMIPA volatile organic compound (VOC) emissions 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.
- (g) 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.
- (h) The amount of binder used in both mixers, identified as P44, combined shall not exceed 390 tons per 12 consecutive month period. For the first 12 months of operation, the limit shall be 32.5 tons per month.
- (i) The amount of cores produced by both core machines, identified as P44, combined shall not exceed 26,000 tons per 12 consecutive month period. For the first 12 months of operation, the limit shall be 2,167 tons per month.
- (j) The total VOC emissions (including DMIPA) from the mixers and core machines identified as P43 shall not exceed 0.36 pound per ton of cores.
- (k) The scrubber controlling the DMIPA emissions from the core machines identified as P43 and P44 shall have 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.
- (l) 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.
- (m) The Permittee shall only use dimethylisopropylamine (DMIPA) as a catalyst for the core machines identified as P43 and P44.
- (n) The SO<sub>2</sub> 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.
- (o) The NO<sub>x</sub> 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.
- (p) 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.

- (q) The core ovens shall use only natural gas as fuel.
- (r) The combined maximum capacity of the core machines identified as P44 shall not exceed 6 tons of cores per hour.
- (s) The combined maximum capacity of the core machines identified as P43 shall not exceed 20 tons of core per hour.

### **Charge makeup Operation P32**

#### 326 IAC 2-2 (PSD)

These emission units were constructed in 1996 and were reviewed under the requirements of 326 IAC 2-2 (PSD). The BACT requirements for these units include the following requirements.

- (a) 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 particulate matter emissions from the charge makeup operation P32 shall not exceed 0.005 gr/dscf and 1.0 pound per hour. Emissions shall be controlled by a baghouse.
- (b) 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 operation P32 shall not exceed 0.00004 pound per hour.
- (c) 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.

### **Ladle Preheating operation P53**

#### 326 IAC 2-2 (PSD)

These emission units were constructed in 1996 and were reviewed under the requirements of 326 IAC 2-2 (PSD). The BACT requirements for these units include the following.

- (a) 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 particulate matter emissions from the ladle preheating operation P53 shall not exceed 0.16 pound per hour.
- (b) Visible emissions from any baghouse exhaust shall not exceed 10% opacity.
- (c) 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 VOC emissions from the ladle preheating station P53 shall not exceed 0.06621 pound per hour.
- (d) 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.
- (e) 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.
- (f) 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 SO<sub>2</sub> emissions from the ladle preheating station P53 shall not exceed 0.00685 pounds per hour.

### **Ladle filling and iron transport P85**

#### **326 IAC 2-2 (PSD)**

These emission units were constructed in 1996 and were reviewed under the requirements of 326 IAC 2-2 (PSD). The BACT requirements for these units include the following requirements.

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 particulate matter emissions from the ladle filling and iron transport operation P85 shall not exceed 5.40 pounds per hour.

### **Ladle cleaning (with burn bars) P86**

#### **326 IAC 2-2 (PSD)**

These emission units were constructed in 1996 and were reviewed under the requirements of 326 IAC 2-2 (PSD). The BACT requirements for these units include the following requirements.

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 particulate matter emissions from the ladle cleaning (with burn bars) operation P86 shall not exceed 0.073 pounds per hour.

### **Insignificant degreasing operations**

#### **326 IAC 8-3-2 (Cold Cleaner Operations)**

The cold cleaners used in the degreaser (see Insignificant Activities) is subject to 326 IAC 8-3-2 (Cold Cleaner Operations) and 326 IAC 8-3-5 (Organic Solvent Degreasing Operation and Control). Pursuant to this rule, for cold degreasers, the Permittee shall:

- (a) equip the cleaner with a cover;
- (b) drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (c) provide a permanent, conspicuous label which lists the operating requirements; and
- (d) employ a solid, fluid stream at a pressure which does not cause excessive splashing, if solvent spray is used.

#### **326 IAC 8-3-5 (Cold Cleaner Degreaser Operation and Control)**

The Permittee shall comply with the following requirements for cold cleaner degreaser operation and control:

- (a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), for a cold cleaner degreaser facility, 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°C) (one hundred degrees Fahrenheit (100°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°C) (one hundred degrees Fahrenheit (100°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°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°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 or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), for a cold cleaning facility, 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.

### Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less 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 requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also 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.

The compliance monitoring requirements applicable to this source are as follows:

1. The cupolas have applicable compliance monitoring conditions as specified below:
  - (a) Pursuant to CP123-8451 issued February 4, 1998, a continuous monitoring system shall be installed, calibrated, maintained, and operated for measuring opacity from stack S09 of the Phase I and Phase II cupolas, to demonstrate compliance with the limitations and operation standards required by Operation Conditions D.1.1 and D.1.4. The continuous monitoring systems shall meet the performance specifications of 326 IAC 3-5-2.
  - (b) Pursuant to CP123-8451 issued February 4, 1998, compliance with the SO<sub>2</sub> limits for the Phase I and Phase II cupolas in Condition D.1.4, 326 IAC 2-2-3 shall be demonstrated by installing and operating a SO<sub>2</sub> continuous emissions monitor (CEMS) for each stack exhausting kiln emissions. The SO<sub>2</sub> CEMs shall be certified according to procedures contained in 326 IAC 3 as applicable. The continuous monitoring system shall be equipped with a flow monitor to provide data in pounds of SO<sub>2</sub> per hour. The SO<sub>2</sub> emissions on a per ton of iron basis shall be calculated by using the emissions rate information divided by the cupola production data. Compliance with the pound per hour limit (35.20 lb/hr) shall be determined based on a 3 hour average. Compliance with the pound per ton limit (0.22 lb/ton) shall be determined based on a 30 day rolling average.
  - (c) The Permittee shall record the total static pressure drop across each of the baghouses used in conjunction with the cupolas, at least once per shift when the associated cupola is in operation. When for any one reading, the pressure drop across a baghouse is outside the normal range of 3.0 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- Compliance Response Plan - Preparation, Implementation, Records, and Reports. 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 - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other 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) An inspection shall be performed each calendar quarter of all bags controlling the cupolas. Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.
  - (e) In the event that bag failure has been observed:

- (1) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit. If operations continue after bag failure is observed and it will be 10 days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.
  - (2) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (f) The Permittee shall record the alkaline dust injection rate (in pounds or cubic feet) of each dry alkaline injection system at least once per hour. 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- Compliance Response Plan - Preparation, Implementation, Records, and Reports. 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 - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.
- The instruments used for determining the alkaline dust injection rate shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.
- (g) An inspection shall be performed each calendar month for each dry alkaline injection system. Inspections required by this condition shall not be performed in consecutive months. A record shall be kept of the results of the inspection.
  - (h) In the event that the dry alkaline injection failure has been observed:  
  
The affected process will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response

steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. 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).

- (i) A continuous monitoring system shall be calibrated, maintained, and operated on the cupola for measuring temperature of the cupola gas stream. For the purposes of this condition, continuous shall mean no less often than once every minute. The output of this system shall be recorded as an hourly average. From the date of issuance of this permit until the approved stack test results are available, the Permittee shall take appropriate response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports whenever the hourly average temperature of the cupola gas stream is below 1667 °F. This minimum temperature requirement applies at all times during operation of either of the cupolas, except for the following:
- (1) periods when the cupola blast air is turned off for both cupolas;
  - (2) periods when the blast air has been turned on for less than 30 consecutive minutes for both cupolas; and
  - (3) during the last 30 minutes of operation of both of the cupolas prior to shutdown.

An hourly average temperature that is below 1667 °F is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports shall be considered a deviation from this permit.

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

- (j) An inspection shall be performed each calendar month for each recuperative incinerator system. Inspections required by this condition shall not be performed in consecutive months.
- (k) In the event that the recuperative incinerator failure has been observed:

The affected process will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. 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).

2. The other baghouses at this source have applicable compliance monitoring conditions as specified below:

- (a) Visible emission notations of each baghouse stack exhaust shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal. For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the

process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. 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. The Compliance Response Plan for these units shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

- (b) The Permittee shall record the total static pressure drop across each of the baghouses used in conjunction with the processes listed in this section, at least once per shift when the associated process is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 3.0 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- Compliance Response Plan - Preparation, Implementation, Records, and Reports. 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 - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

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

- (c) An inspection shall be performed each calendar quarter of all bags controlling the processes at this source. Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.
- (d) In the event that bag failure has been observed:
  - (1) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit. If operations continue after bag failure is observed and it will be 10 days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.
  - (2) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible

emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

3. The scrubber controlling the DMIPA emissions from the core machines has applicable compliance monitoring conditions as specified below:
  - (a) The Permittee shall monitor and record the pH of the scrubber solution and the pressure drop across the scrubber unit at least once per shift. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the scrubber shall be maintained within the range of 2 to 5 inches of water or a range established during the latest stack test. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pH level of the scrubbing liquid shall not exceed 4.5 or a maximum established during the latest stack test. The Compliance Response Plan for the scrubber shall contain troubleshooting contingency and response steps for when the pressure drop reading is outside of the normal range for any one reading or the pH level is above the normal maximum for any one reading. Failure to take response steps in accordance with Section C -Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.
  - (b) The Permittee shall continuously monitor the flow rate of the scrubbing liquid. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the flow rate shall be maintained at a minimum of 235 gallons per minute or a minimum level established during the latest stack test. The Compliance Response Plan for the scrubber shall contain troubleshooting contingency and response steps for when the flow rate reading is below the normal minimum for any one reading. Failure to take response steps in accordance with Section C -Compliance Response Plan - Preparation, Implementation, Records, and Reports, 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 - Pressure Gauge and Other 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) An inspection shall be performed each calendar month of the scrubber. Defective scrubber part(s) shall be replaced. Inspections required by this condition shall not be performed in consecutive months. A record shall be kept of the results of the inspection and the number of scrubber part(s) replaced.
  - (e) In the event that scrubber failure has been observed:
    - (1) The affected process will be shut down immediately until the failed unit has been replaced. Failure to take response steps in accordance with Section C -Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

- (2) Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion.

## **Conclusion**

The operation of this ductile iron foundry shall be subject to the conditions of the attached proposed Part 70 Permit No. T123-9234-00019.

# Appendix A

## BACT analysis

### Source Background and Description

Source Name: ThyssenKrupp Waupaca, Inc. Plant 5  
Source Location: 9856 State Highway 66, Tell City, IN 47586  
County: Perry  
SIC Code: 3321  
Operation Permit No.: T123-9234-00019  
Permit Reviewer: Nisha Sizemore

### SO<sub>2</sub> from Phase I and Phase II Cupola Operations

#### History

ThyssenKrupp Waupaca has applied for a modification to modify the BACT emission limits for SO<sub>2</sub> emissions from the Phase I and Phase II cupolas which both exhaust to stack S09. These facilities were reviewed pursuant the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) when they were originally constructed. PSD permit #CP123-4593 was issued January 19, 1996 for the Phase I cupola and PSD permit #123-8451 was issued February 4, 1998 for the Phase II cupola. PSD permit #123-8451 was also amended on May 22, 1998. The current SO<sub>2</sub> BACT limits for the cupolas are 35.20 pounds per hour and 0.22 pounds per ton, based on a 3 hour average. A CEMS is used to measure SO<sub>2</sub> emissions from both cupolas.

The Phase I cupola was installed in 1996. BACT for the cupola was determined to be a dry injection scrubber control system using lime (or an equivalent alkaline reagent). The SO<sub>2</sub> limit was established at 20 lb/hr, which was equivalent to 0.33 pounds per ton of metal melted. ThyssenKrupp Waupaca conducted a stack test and demonstrated compliance with this limit. The stack test was conducted when the cupola was operating normally at a high production rate, and did not account for emissions that would occur during startup, shutdown, or low production.

In 1998 the Phase II cupola was constructed and the Phase I cupola was modified to increase the capacity from 60 tons per hour to 80 tons per hour. SO<sub>2</sub> BACT for both cupolas was determined to be the use of a dry injection scrubber control system. The SO<sub>2</sub> limit was established at 0.22 pounds per ton of metal melted based on a 3-hour average. This limit was based on the test results conducted on the Phase I cupola in 1997. At full production, this limit is equivalent to SO<sub>2</sub> emissions of 35.2 pounds per hour. Unlike the original 1996 permit for the Phase I cupola, compliance with the new SO<sub>2</sub> limit for both cupolas was to be demonstrated using a CEMS.

Between July 2000 and March 2001, the SO<sub>2</sub> emissions from the cupolas exceeded the 0.22 lb/ton limit 334 times, or over 7% of all cupola production hours. All of these exceedances occurred during periods of either startup, shutdown, or low production. During the same period, emissions were always below 35.2 pounds per hour. On May 14, 2001 ThyssenKrupp Waupaca submitted a request to change the cupola SO<sub>2</sub> emission limitation.

Upon receiving the application to change the SO<sub>2</sub> BACT limit, IDEM requested that ThyssenKrupp Waupaca try new alkaline reagents in the dry scrubber system. On April 15, 2002, Waupaca began using an alternative reagent, sodium bicarbonate, in the SO<sub>2</sub> control system. For the later half of 2002, the new reagent resulted in an overall SO<sub>2</sub> emissions reduction of nearly 50%. However, exceedances of the 0.22 lb/ton emission limit still occurred during periods of startup, shutdown, and low production. During the same period, emissions were always below 35.2 pounds per hour.

Waupaca is now requesting that the SO<sub>2</sub> emission limit of 0.22 pounds per ton be changed from a 3-hour

average to a 30-day rolling average. Additionally ThyssenKrupp Waupaca proposes to adopt a new 35.2 lb/hr limitation which will be based on a 3-hour rolling average, which will preserve the air quality analysis for SO<sub>2</sub>. Historical CEMs measurements indicate that these limits are achievable. As part of this request, ThyssenKrupp Waupaca has submitted a new BACT analysis.

### **BACT General Discussion**

The Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ), has performed the following BACT review for the Phase I and Phase II cupolas which are owned and operated by ThyssenKrupp Waupaca. The source is located in Perry County which is designated as attainment for all criteria pollutants. The PSD Program requires a BACT review and an air quality analysis. BACT is an emission limitation based on the maximum degree of reduction of each pollutant subject to the PSD requirements. IDEM conducts BACT analyses in accordance with the *"Top-Down" Best Available Control Technology Guidance Document* specified in the 1990 draft USEPA *New Source Review Workshop Manual*, which specifies 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 by control effectiveness;
- (4) Evaluate the most effective controls and document the results; and
- (5) Select BACT.

Also in accordance with the *"Top-Down" Best Available Control Technology Guidance Document* outlined in the 1990 draft USEPA *New Source Review Workshop Manual*, BACT analyses take into account the energy, environmental, and economic impacts on the source. These reductions may be determined through the application of available control techniques, process design, and/or operational limitations. Such reductions are necessary to demonstrate that the emissions remaining after application of BACT will not cause or contribute to air pollution thereby protecting public health and the environment.

The following BACT determinations are based on the following information:

- (1) The BACT analysis submitted by ThyssenKrupp Waupaca on April 24, 2003;
- (2) Information IDEM gained from other regulatory agencies;
- (3) Other IDEM permits and permits from other regulatory agencies; and
- (4) The EPA RACT/BACT/LAER (RBLC) Clearinghouse.

### **Control Options**

ThyssenKrupp Waupaca proposes to use the existing dry scrubber system to control SO<sub>2</sub> emissions from the cupolas. This is considered to be the best available control option for SO<sub>2</sub> emissions; therefore, no additional analysis of control options is required.

### **Existing BACT Determinations**

The EPA RACT/BACT/LAER Clearinghouse (RBLC) is a database system that provides emission limit data for industrial processes throughout the United States. The following table represents the more stringent BACT/LAER emission limitations established for foundry cupolas since 1990:

Source and Location	Permit # and Issuance Date	Facility Description	BACT Emission Limit and Control Technology Used
ThyssenKrupp Waupaca, Inc. Plant 5, Tell City, IN <b><i>proposed limits</i></b>		two 80 tph cupolas	0.22 lb/ton (30-day avg); 35.2 lb/hr (3-hr avg); dry scrubber; CEMS
Waupaca Foundry Plant 6 Iron Foundry Project Etowah, Tennessee	Permit #952953P April 28, 2000	two 90 tph cupolas	0.22 lb/ton (30-day avg); 19.2 lb/hr each (30-day avg); dry scrubber; CEMS
Waupaca Foundry Plants 2/3 Waupaca, Wisconsin	99-RV-009 July 16, 1999	130 tph cupola	0.22 lb/ton; 28.6 lb/hr; max coke sulfur content 0.6%; max coke usage 15 tph; stack testing

### Evaluation and BACT Determination

The most stringent SO<sub>2</sub> BACT limit for cupolas is 0.22 lb/ton based on a 30-day rolling average, using a CEMS to demonstrate compliance. Waupaca also proposes to adopt an emission limit of 35.2 lb/hr based on a 3-hour average. Since these limits are the most stringent limits demonstrated in practice for this type of facility, they are determined to satisfy BACT for the cupolas.