



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

TO: Interested Parties / Applicant

DATE: February 2, 2009

RE: Harrison Steel Castings Company / 045-26985-00002

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

Notice of Decision: Approval – Effective Immediately

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

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

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

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

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

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



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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Pete Bodine
Harrison Steel Castings Company
900 N. Mound Street, P.O. Box 60
Attica, Indiana 47918

February 2, 2009

Re: 045-26985-00002
Significant Permit Modification to Part 70 No.
045-22716-00002

Dear Mr. Bodine:

Harrison Steel Castings Company was issued a Part 70 Operating Permit on June 02, 2008. A letter requesting changes to this permit was received on September 4, 2008. Pursuant to the provisions of 326 IAC 2-7-12(d) a significant permit modification to this permit is hereby approved as described in the attached Technical Support Document.

All other conditions of the permit shall remain unchanged and in effect. For your convenience, the entire Part 70 Operating Permit as modified will be provided at issuance.

This decision is subject to the Indiana Administrative Orders and Procedures Act – IC 4-21.5-3-5. If you have any questions on this matter, please contact Timothy R. Pettifor, OAQ, 100 North Senate Avenue, MC 61-53, Room 1003, Indianapolis, Indiana, 46204-2251, or call at (800) 451-6027, and ask for extension (4-5300), or dial (317) 234-5300.

Sincerely,

Tripurari P. Sinha, Ph. D., Section Chief
Permits Branch
Office of Air Quality

TP

cc: File -- Fountain County
Fountain County Health Department
Air Compliance Section



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PART 70 OPERATING PERMIT RENEWAL OFFICE OF AIR QUALITY

**Harrison Steel Castings Company
900 North Mound Street
Attica, Indiana 47918**

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

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

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

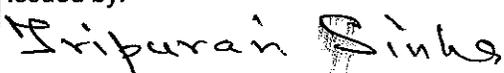
Operation Permit No.: T045-22716-00002	
Issued By/Original Signed By: Matthew Stuckey, Branch Chief Permits Branch Office of Air Quality	Issuance Date: June 2, 2008 Expiration Date: June 2, 2013
First Administrative Amendment No.: 045-26622-00002, issuance pending. First Significant Permit Modification No.: 045-25426-00002	
Second Significant Permit Modification No.: 045-26985-00002	
Issued by:  Tripurari P. Sinha, Ph. D., Section Chief Permits Branch Office of Air Quality	Issuance Date: February 2, 2009 Expiration Date: June 2, 2013

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

The Permittee owns and operates a stationary steel and ductile iron castings plant.

Source Address: 900 North Mound Street, Attica, Indiana 47918
Mailing Address: P.O. Box 60, Attica, Indiana 47918
SIC Code: 3325, 3321
County Location: Fountain County
Source Location Status: Attainment for all criteria pollutants
Source Status: Part 70 Permit Program
Major Source, under PSD;
Major Source, under Section 112 of the Clean Air Act
1 of 28 Source Categories

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

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

- (a) The scrap and charge handling process, constructed in 1951, with a maximum capacity of 24.5 tons of steel per hour, with emissions uncontrolled exhausting through stacks S8 and S10.
- (b) The melting process consisting of the following:
 - (1) One (1) electric arc furnace, identified as EAF2, constructed in 1951 with a maximum melt rate of 4.5 tons of steel or iron per hour with emissions controlled by one (1) baghouse, identified as DC4, exhausting through stack DC4.
 - (2) One (1) electric arc furnace, identified as EAF3, constructed prior to October 1974 with a maximum melt rate of 10 tons of steel or iron per hour with emissions controlled by one (1) baghouse, identified as DC5, exhausting through stack DC5.
 - (3) One (1) electric arc furnace, identified as EAF4, constructed in 1989 with a maximum melt rate of 10 tons of steel or iron per hour with emissions controlled by one (1) baghouse, identified as DC40, exhausting through stack DC40.

Note: Two (2) baghouses identified as DC38 and DC42 are used to control fugitive melt shop particulate emissions at the roof monitor.

- (c) The pouring, cooling, and shakeout operations consisting of the following:
 - (1) One (1) pouring/casting operation, identified as Floor Molding, constructed in or before 1951 with a maximum capacity of 20 tons of melted steel per hour and 183.68 tons of sand per hour with emissions uncontrolled.
 - (2) One (1) casting cooling operation, identified as Floor Molding, constructed in or before 1951 with a maximum capacity of 20 tons of melted steel per hour and 183.68 tons of sand per hour with emissions uncontrolled.

- (3) One (1) pouring/casting operation, identified as #2 EAF Steel, constructed in 1950, with a maximum capacity of 4.5 tons of melted steel per hour and 24.32 tons of sand per hour with emissions uncontrolled.
 - (4) One (1) casting cooling operation, identified as #2 EAF Steel, constructed in 1950, with a maximum capacity of 4.5 tons of melted steel per hour and 24.32 tons of sand per hour with emissions uncontrolled.
 - (5) One (1) shakeout system, identified as North Shakeout, constructed in 2007, with a maximum capacity of 4.5 tons of steel per hour and 8 tons of sand per hour with emissions controlled by three (3) baghouses, identified as DC2, DC3 and DC39.
- (d) One (1) magnesium treatment operation for producing ductile iron castings, identified as DCTLE, constructed in 1987, with a maximum capacity of 4.5 tons of steel per hour with emissions uncontrolled.
- (e) The shot blasting operations consisting of the following;
- (1) One (1) twin table blast machine, identified as L3/4 - STT, constructed in 1961, with a maximum capacity of 25 tons of steel per hour with emissions controlled by baghouse DC18.
 - (2) One (1) blast machine, identified as LN4-3 Wheel Blast, constructed in 2006, with a maximum capacity of 25 tons of steel per hour with emissions controlled by baghouse DC16.
 - (3) One (1) Nelle Belle shotblast machine, identified as Nelle, constructed in 1955 with a maximum capacity of 60 tons of steel per hour with emissions controlled by a baghouse, identified as DC7.
 - (4) One (1) Wheelabrator Frye shotblast machine, identified as #16 Monorail, constructed in 1976 with a maximum capacity of 25.7 tons of metal per hour with emissions controlled by a baghouse, identified as DC17.
 - (5) Two (2) room blast machines, identified as LN3-Rm and LN5-S Rm, constructed in 1962 and 1967, respectively, with a maximum capacity of 8 tons of steel per hour, each, with emissions from LN3-RM controlled by baghouse DC30 and emissions from LN5-S Rm controlled by baghouse DC28.
 - (6) One (1) room blast machine, identified as LN5-N, constructed in 1960 with a maximum capacity of 10 tons of steel per hour with emissions controlled by a baghouse, identified as DC11.
 - (7) One (1) room blast machine, identified as LN2-N, constructed in 1981 with a maximum capacity of 13 tons of steel per hour with emissions controlled by a baghouse, identified as DC23.
 - (8) One (1) tumble blast machine, identified as LN1-TMBL, constructed in 1945 with maximum capacity of 4.5 tons of steel per hour with emissions controlled by a baghouse, identified as DC10.
 - (9) One (1) blast machine, identified as LN7-3 wheel blast, constructed in 2004 with a maximum capacity of 25 tons of steel per hour with emissions controlled by a baghouse, identified as DC8.
 - (10) One (1) monorail blast machine, identified as #18 Monorail, constructed in 1980 with a maximum capacity of 11.4 tons of steel per hour with emissions controlled

by a baghouse, identified as DC21.

- (11) One (1) room blast machine, identified as LN2-S Rm, constructed in 1979 with a maximum capacity of 7 tons of steel per hour with emissions controlled by a baghouse, identified as DC33.
 - (12) One (1) chill room tumble blast machine, identified as Chill Tmbl, constructed July 1, 1977, with a maximum capacity of 11.4 tons of steel per hour with emissions controlled by a baghouse, identified as DC6.
 - (13) One (1) chill room cabinet blast machine, identified as Chill Cbnt, constructed in 1978 with a maximum capacity of 11.4 tons of steel per hour with emissions controlled by a baghouse, identified as DC6.
 - (14) One (1) pangborn rotoblast machine, identified as LN2-T, constructed in 2005 with a maximum capacity of 6 tons of steel per hour with emissions controlled by baghouse, identified as DC-22.
- (f) One (1) sand handling system, identified as North Lumpbreaker, constructed in 1988 and modified in 1994 with a maximum capacity of 8 tons of sand per hour with emissions controlled by a baghouse, identified as DC41.
- (g) One (1) sand handling system, identified as Core Sands System, constructed in 1967 and modified in 1988, with a maximum capacity of 5 tons of sand per hour, consisting of one silo controlled by a bin vent filter and one hopper controlled by a bin vent filter and vented internally, and equipped with a muller, identified as 1.5G Muller.
- (h) Core and mold making operations consisting of the following:
- (1) One (1) Airset core making process, identified as Jordan, consisting of two (2) core sand mixers, one constructed in 1989, identified as Small Airset Mixer, and the other constructed in 2005 identified as Zircon Mixer, with maximum capacities of 9 tons of sand per hour and 6 tons of sand per hour, respectively.
 - (2) One (1) Floor Molding Machine equipped with a mixer, constructed in 1994 with a maximum capacity of 45 tons of sand per hour with emissions uncontrolled.
 - (3) One (1) Airset core making machine equipped with a mixer, identified as Snap, constructed in 1992 with a maximum capacity of 9 tons of sand per hour with emissions uncontrolled.
 - (4) Five (5) Oil Sand core making benches, constructed in 1959, each with a maximum capacity of 0.4 tons of oil sand per hour or 0.6 tons of CO₂ sand per hour.
 - (5) Two (2) Shell core making machines, constructed in 1962 and 1973, each with a maximum capacity of 0.075 tons of sand per hour.
 - (6) One (1) Shell core making machine constructed in 1976, with a maximum capacity of 0.125 tons of sand per hour.
 - (7) One (1) Airset core making machine equipped with a mixer, identified as Medium Airset Core, constructed in 1976, with a maximum capacity of 16.5 tons of sand per hour.
 - (8) One (1) core wash process, constructed prior to 1977, with emissions uncontrolled and exhausting internally.

- (i) One (1) natural gas-fired surface combustion heat treat furnace, identified as L7SC, constructed in 1997 with a maximum capacity of 24.5 million British thermal units per hour, with emissions uncontrolled.
- (j) One (1) Airset molding line rated at a maximum steel production rate of 15.73 tons of steel or iron per hour and 47.2 tons of sand per hour. The Airset molding line consists of the following processes/equipment:
 - (1) pouring operations, constructed in 2001, with a maximum capacity of 15.73 tons of steel or ductile iron per hour and 47.2 tons of sand per hour, with emissions uncontrolled and exhausting through stacks S37 through S42;
 - (2) castings cooling operations, constructed in 2001, with a maximum capacity of 15.73 tons of steel or ductile iron per hour and 47.2 tons of sand per hour, with emissions uncontrolled and exhausting through stacks S37 through S42;
 - (3) shakeout operations, constructed in 2001, with a maximum capacity of 15.73 tons of steel or ductile iron per hour and 47.2 tons of sand per hour, with particulate emissions controlled by two (2) baghouses, identified as DC9 and DC12, and exhausting to stacks DC9 and DC12, respectively;
 - (4) sand handling operations, constructed in 2001, with a maximum capacity of 47.2 tons of sand per hour, with emissions controlled by a baghouse identified as DC46, and exhausting to stack DC46. The sand handling system consists of the following equipment:
 - (A) six sand storage silos, each controlled by a bin vent;
 - (B) four (4) sand heaters;
 - (C) covered pneumatic conveyors for transporting sand from silos to mixer;
 - (5) mechanical reclaim operations, constructed in 2001, with a maximum capacity of 47.2 tons of sand per hour, with emissions controlled by a baghouse identified as DC45 and exhausting to stack DC45;
 - (6) one natural gas fired thermal reclaimer, constructed in 2001, with a maximum heat input capacity of 2.83 million Btu per hour, with a maximum capacity of 2.85 tons of sand per hour, with emissions controlled by a baghouse identified as DC46 and exhausting to stack DC46;
 - (7) phenolic urethane no-bake mold making operations, constructed in 2001, with a maximum capacity of 47.2 tons of sand per hour. The mold making operation consists of the following equipment.
 - (A) one enclosed mixer for combining mold sand with resin, with VOC emissions controlled by the thermal sand reclaimer;
 - (B) strike off operations;
 - (C) rollover draw/strip operations;
 - (D) one natural gas fired preheat tunnel with a maximum heat input capacity of 0.8 million Btu per hour;
 - (E) mold wash operations with a maximum capacity of 230.69 pounds of mold wash per hour, which is equivalent to 11.34 gallons of mold wash per hour;
 - (F) one natural gas fired drying (curing) oven, with a maximum heat input capacity of 3.2 million Btu per hour; and
 - (G) one mold closer process which puts the two halves of the mold together.

Note: Each individual shakeout unit has a maximum design capacity of 10 tons of metal per hour; however, the pouring and cooling operations bottleneck the shakeout process,

such that the total hourly rate at shakeout cannot exceed 15.73 tons of metal per hour.

- (k) One core line, identified as "Over 500 lb Core Line", constructed in 2006, including:
- (1) one (1) phenolic urethane no bake mold making machine with a maximum capacity of 45 tons per hour;
 - (2) one (1) sand mixer with a maximum capacity of 45 tons per hour;
 - (3) one (1) 350-ton sand storage silo;
 - (4) two (2) 100 ton sand storage silo;
 - (5) one (1) sand transporter;
 - (6) two (2) compaction tables; and
 - (7) two (2) sand heaters

the sand silos and sand mixer are controlled by two (2) bin vents.

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

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

- (a) Machining where an aqueous cutting coolant continuously floods the machining interface. [326 IAC 6-3-2]
- (b) Furnaces used for melting metals other than beryllium with a brim full capacity of less than or equal to 450 cubic inches by volume. [326 IAC 6-3-2]
- (c) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations. [326 IAC 6-3-2]
 - (1) Grinding machines each with a maximum capacity of 18.9 pounds per hour with emissions controlled by baghouses, identified as DC13, DC14, DC26, and DC37.
 - (2) One (1) pattern woodworking shop with emissions controlled by a roto-clone, identified as DC1.
- (d) Flame cutting - natural gas and oxygen torch to remove gates, spurs, and rizers. [326 IAC 6-3-2]
- (e) Flame wash - arc welding like torch to smooth castings after flame cutting. [326 IAC 6-3-2]
- (f) One (1) paint booth for coating metal castings, constructed prior to 1977, utilizing air assisted airless spray type, with VOC emissions uncontrolled and overspray controlled by using a filter wall, with emissions exhausting to stack S154. [326 IAC 6-3-2(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][326 IAC 2-7-4(a)(1)(D)][IC 13-15-3-6(a)]

- (a) This permit, T045-22716-00002, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.

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

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

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

B.4 Enforceability [326 IAC 2-7-7]

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

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

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

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

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

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

- (a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. 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

the "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 or its equivalent, with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.
- (c) The "responsible official" is defined at 326 IAC 2-7-1(34).

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

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

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

and

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

- (b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) The annual compliance certification report shall include the following:
 - (1) The appropriate identification of each term or condition of this permit that is the basis of the certification;
 - (2) The compliance status;
 - (3) Whether compliance was continuous or intermittent;
 - (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-7-5(3); and
 - (5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

The submittal by the Permittee does require 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]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall maintain

and implement Preventive Maintenance Plans (PMPs) including the following information on each facility:

- (1) Identification of the individual(s), by job title, 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.
- (b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMPs do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

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

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or 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: 317-233-0178 (ask for Compliance Section)
Facsimile Number: 317-233-6865

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

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

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

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

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

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

The notification which shall be submitted by the Permittee does not require 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) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4(c)(9) be revised in response to an emergency.
- (f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.
- (g) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.
- (h) The Permittee shall include all emergencies lasting one (1) hour or more in the Quarterly Deviation and Compliance Monitoring Report unless the emergency report made pursuant to Condition B.11(b)(5) included a certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

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

of any law, regulation or standard, except for the requirement to obtain a Part 70 permit under 326 IAC 2-7 or for applicable requirements for which a permit shield has been granted.

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

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

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

- (a) All terms and conditions of permits established prior to T045-22716-00002 and issued pursuant to permitting programs approved into the state implementation plan have been either:
 - (1) incorporated as originally stated,
 - (2) revised under 326 IAC 2-7-10.5, or
 - (3) deleted under 326 IAC 2-7-10.5.
- (b) Provided that all terms and conditions are accurately reflected in this permit, all previous registrations and permits are superseded by this Part 70 operating permit.

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

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

B.15 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
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)] The notification by the Permittee does require 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.17 Permit Renewal [326 IAC 2-7-3][326 IAC 2-7-4][326 IAC 2-7-8(e)]

- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ, and shall include the information specified in 326 IAC 2-7-4. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require 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
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

- (b) A timely renewal application is one that is:
- (1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
 - (2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.18 Permit Amendment or Modification [326 IAC 2-7-11][326 IAC 2-7-12][40 CFR 72]

- (a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.
- (b) 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
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
- Any such application shall be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (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.19 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)][326 IAC 2-7-12(b)(2)]

- (a) No Part 70 permit revision 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.20 Operational Flexibility [326 IAC 2-7-20][326 IAC 2-7-10.5]

- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b),(c), or (e) without a prior permit revision, if each of the following conditions is met:

- (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
- (2) Any preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;
- (3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
- (4) The Permittee notifies the:

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

and

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

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

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

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

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

- (1) A brief description of the change within the source;

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

The notification which shall be submitted is not considered an application form, report or compliance certification. Therefore, the notification by the Permittee does not require 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 emissions increases and decreases at 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.
- (e) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.21 Source Modification Requirement [326 IAC 2-7-10.5] [326 IAC 2-2-2] [326 IAC 2-3-2]

- (a) A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2 and 326 IAC 2-7-10.5.
- (b) Any modification at an existing major source is governed by the requirements of 326 IAC 2-2-2 and/or 326 IAC 2-3-2.

B.22 Inspection and Entry [326 IAC 2-7-6][IC 13-14-2-2][IC 13-30-3-1][IC 13-17-3-2]

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

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

B.23 Transfer of Ownership or Operational Control [326 IAC 2-7-11]

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

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

The application which shall be submitted by the Permittee does require 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.24 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)][326 IAC 2-1.1-7]

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

B.25 Credible Evidence [326 IAC 2-7-5(3)][326 IAC 2-7-6][62 FR 8314] [326 IAC 1-1-6]

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

SECTION C

SOURCE OPERATION CONDITIONS

Entire Source

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

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

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

C.2 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (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. 326 IAC 4-1-3(a)(2)(D) and (E), 4-1-3(b)(2)(A) and (B), 4-1-3(b)(3)(D), 4-1-3(b)(4) and (5); 4-1-3(c)(1)(B)-(F), 4-1-3(c)(2)(B), 4-1-3(c)(6), 4-1-3(c)(8), and 4-1-6 are not federally enforceable.

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.

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

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

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

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

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

- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.
- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or

before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

- (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
- (2) If there is a change in the following:
 - (A) Asbestos removal or demolition start date;
 - (B) Removal or demolition contractor; or
 - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Asbestos Section, Office of Air Quality
100 North Senate Avenue
MC 61-52 IGCN 1003
Indianapolis, Indiana 46204-2251

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (e) **Procedures for Asbestos Emission Control**
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) **Demolition and Renovation**
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).
- (g) **Indiana Licensed Asbestos Inspector**
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos.

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

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

-
- (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,
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require 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 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.
- (d) The Permittee may request an extension of a deadline to conduct testing as provided by 40 CFR 60.8, 61.13, or 63.7.
- (e) In addition to any other testing required by this permit, if at any time the Permittee replaces a control device that is used to comply with an emission limitation listed in Section D, then the Permittee shall conduct a performance test no later than one hundred eighty (180) days after installation of the replacement control device in accordance with this Condition C.8.

Compliance Requirements [326 IAC 2-1.1-11]

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

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

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

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

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
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of

the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require 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.11 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.12 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

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

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

C.13 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

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

- (a) The Permittee prepared and submitted written emergency reduction plans (ERPs) consistent with safe operating procedures on March 18, 1999.
- (b) Upon direct notification by IDEM, OAQ, that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level.
[326 IAC 1-5-3]

C.14 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68]

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

C.15 Response to Excursions or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]

- (a) Upon detecting an excursion or exceedance, the Permittee shall restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:
 - (1) initial inspection and evaluation;
 - (2) recording that operations returned to normal without operator action (such as

- through response by a computerized distribution control system); or
- (3) any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.
- (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
- (1) monitoring results;
 - (2) review of operation and maintenance procedures and records;
 - (3) inspection of the control device, associated capture system, and the process.
- (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (e) The Permittee shall maintain the following records:
- (1) monitoring data;
 - (2) monitor performance data, if applicable; and
 - (3) corrective actions taken.

**C.16 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5]
[326 IAC 2-7-6]**

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall 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 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 documents submitted pursuant to this condition do not 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.17 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) Pursuant to 326 IAC 2-6-3(a)(1), the Permittee shall submit by July 1 of each year an emission statement covering the previous calendar year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:
 - (1) Indicate estimated actual emissions of all pollutants listed in 326 IAC 2-6-4(a);

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

The statement must be submitted to:
Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Quality
100 North Senate Avenue
MC 61-50 IGCN 1003
Indianapolis, Indiana 46204-2251

The emission statement does require 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.18 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [326 IAC 2-2]
[326 IAC 2-3]

- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.
- (c) If there is a reasonable possibility (as defined in 40 CFR 51.165 (a)(6)(vi)(A), 40 CFR 51.165 (a)(6)(vi)(B), 40 CFR 51.166 (r)(6)(vi)(a), and/or 40 CFR 51.166 (r)(6)(vi)(b)) that a "project" (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(II)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a "major modification" (as defined in 326 IAC 2-2-1(ee) and/or 326 IAC 2-3-1(z)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(rr) and/or 326 IAC 2-3-1(mm)), the Permittee shall comply with following:
- (1) Before beginning actual construction of the "project" (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(II)) at an existing emissions unit, document and maintain the following records:
- (A) A description of the project.
- (B) Identification of any emissions unit whose emissions of a regulated new source review pollutant could be affected by the project.
- (C) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including:
- (i) Baseline actual emissions;

- (ii) Projected actual emissions;
 - (iii) Amount of emissions excluded under section 326 IAC 2-2-1(rr)(2)(A)(iii) and/or 326 IAC 2-3-1 (mm)(2)(A)(iii); and
 - (iv) An explanation for why the amount was excluded, and any netting calculations, if applicable.
- (d) If there is a reasonable possibility (as defined in 40 CFR 51.165 (a)(6)(vi)(A) and/or 40 CFR 51.166 (r)(6)(vi)(a)) that a "project" (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(II)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a "major modification" (as defined in 326 IAC 2-2-1(ee) and/or 326 IAC 2-3-1(z)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(rr) and/or 326 IAC 2-3-1(mm)), the Permittee shall comply with following:
- (1) Monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that is emitted by any existing emissions unit identified in (1)(B) above; and
 - (2) Calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of five (5) years following resumption of regular operations after the change, or for a period of ten (10) years following resumption of regular operations after the change if the project increases the design capacity of or the potential to emit that regulated NSR pollutant at the emissions unit.

C.19 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2] [326 IAC 2-3]

- (a) 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
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (d) 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) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

- (f) If the Permittee is required to comply with the recordkeeping provisions of (d) in Section C- General Record Keeping Requirements for any "project" (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(II)) at an existing emissions unit, and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ :
- (1) The annual emissions, in tons per year, from the project identified in (c)(1) in Section C- General Record Keeping Requirements exceed the baseline actual emissions, as documented and maintained under Section C- General Record Keeping Requirements (c)(1)(C)(i), by a significant amount, as defined in 326 IAC 2-2-1(xx) and/or 326 IAC 2-3-1(qq), for that regulated NSR pollutant, and
 - (2) The emissions differ from the preconstruction projection as documented and maintained under Section C- General Record Keeping Requirements (c)(1)(C)(ii).
- (g) The report for project at an existing emissions unit shall be submitted within sixty (60) days after the end of the year and contain the following:
- (1) The name, address, and telephone number of the major stationary source.
 - (2) The annual emissions calculated in accordance with (d)(1) and (2) in Section C- General Record Keeping Requirements.
 - (3) The emissions calculated under the actual-to-projected actual test stated in 326 IAC 2-2-2(d)(3) and/or 326 IAC 2-3-2(c)(3).
 - (4) Any other information that the Permittee deems fit to include in this report,

Reports required in this part shall be submitted to:

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

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

Stratospheric Ozone Protection

C.20 Compliance with 40 CFR 82 and 326 IAC 22-1

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

- (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)]

- (a) The scrap and charge handling process, constructed in 1951 with a maximum capacity of 24.5 tons of steel per hour, with emissions uncontrolled exhausting through stacks S8 and S10.

Note: Emissions from the scrap yard are fugitive emissions.

- (b) One (1) electric arc furnace, identified as EAF2, constructed in 1951 with a maximum melt rate of 4.5 tons of steel or iron per hour with emissions controlled by one (1) baghouse, identified as DC4, exhausting through stack DC4.

- (c) One (1) electric arc furnace, identified as EAF3, constructed prior to October 1974 with a maximum melt rate of 10 tons of steel or iron per hour with emissions controlled by one (1) baghouse, identified as DC5, exhausting through stack DC5.

- (d) One (1) electric arc furnace, identified as EAF4, constructed in 1989 with a maximum melt rate of 10 tons of steel or iron per hour with emissions controlled by one (1) baghouse, identified as DC40, exhausting through stack DC40.

Note: Two (2) baghouses identified as DC38 and DC42 are used to control fugitive melt shop particulate emissions at the roof monitor.

(The information describing the processes 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 [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the following condition shall apply:

The particulate emission rate from the scrap and charge handling process shall not exceed 35.0 pounds per hour when operating at a process weight rate of 24.5 tons of charge materials per hour.

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

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

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

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

D.1.2 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the following conditions shall apply:

- (a) The PM emissions from the baghouse DC40 controlling the electric arc furnace (EAF4) shall not exceed 5.48 pounds per hour.
- (b) The PM10 emissions from the baghouse DC40 controlling the electric arc furnace (EAF4) shall not exceed 3.20 pounds per hour.

Compliance with these limits will limit PM and PM10 emissions to less than 25 and 15 tons per year, respectively. Therefore, the requirements of 326 IAC 2-2 (PSD) do not apply to 1989 modification.

D.1.3 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 electric arc furnaces and all baghouses listed in this section. The Operation and Maintenance Plan required pursuant to 40 CFR 63.7710 will satisfy the requirements of a Preventive Maintenance Plan for these units.

Compliance Determination Requirements

D.1.4 Testing Requirements [326 IAC 2-7-6(1),(6)] [40 CFR 60.275a][326 IAC 2-1.1-11]

Before August 15, 2012, the Permittee shall perform PM and PM10 testing for baghouse DC40 controlling the electric arc furnace EAF4 using methods as approved by the Commissioner, in order to demonstrate compliance with Condition D.1.2. These tests shall be repeated at least once every five (5) years from the date of a valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing. PM10 includes filterable and condensable PM10.

D.1.5 Particulate Control

In order to comply with the requirements of Conditions D.1.1 and D.1.2, the following conditions shall apply:

- (a) The baghouses DC40 and DC42 for PM and PM10 control shall be in operation at all times when the electric arc furnace EAF4 is in operation.
- (b) The baghouses DC42 and DC38 for PM and PM10 control shall be in operation at all times while oxygen lancing is conducted.

SECTION D.2

FACILITY OPERATION CONDITIONS

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

The pouring, cooling, and shakeout operations consisting of the following:

- (a) One (1) pouring/casting operation, identified as Floor Molding, constructed in or before 1951 with a maximum capacity of 20 tons of melted steel per hour and 183.68 tons of sand per hour with emissions uncontrolled.
- (b) One (1) casting cooling operation, identified as Floor Molding, constructed in or before 1951 with a maximum capacity of 20 tons of melted steel per hour and 183.68 tons of sand per hour with emissions uncontrolled.
- (c) One (1) pouring/casting operation, identified as #2 EAF Steel, constructed in 1950, with a maximum capacity of 4.5 tons of melted steel per hour and 24.32 tons of sand per hour with emissions uncontrolled.
- (d) One (1) casting cooling operation, identified as #2 EAF Steel, constructed in 1950, with a maximum capacity of 4.5 tons of melted steel per hour and 24.32 tons of sand per hour with emissions uncontrolled.
- (e) One (1) shakeout system, identified as North Shakeout, constructed in 2001 and modified in 2007, with a maximum capacity of 4.5 tons of steel per hour and 8 tons of sand per hour with emissions controlled by three (3) baghouses, identified as DC2, DC3 and DC-39.

(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 BACT for VOC [326 IAC 8-1-6]

Pursuant to 326 IAC 8-1-6 (BACT), the Permittee shall comply with the following BACT requirements:

- (a) The VOC emissions from the north shakeout operation shall be limited to 3.32 pounds per ton of metal, and the resin content in the mold shall not exceed 1.23% by weight.
- (b) The metal throughput to the North Shakeout shall be limited to 30,000 tons per 12 consecutive month period with compliance determined at the end of each month.

Compliance with the requirements of this condition will satisfy the requirements of 326 IAC 8-1-6 (BACT).

D.2.2 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the following conditions shall apply:

- (a) The particulate emission rate from the pouring/casting operation identified as Floor Molding shall not exceed 58.7 pounds per hour when operating at a process weight rate of 203.68 tons of metal and sand per hour.
- (b) The particulate emission rate from the casting cooling operation identified as Floor Molding shall not exceed 58.7 pounds per hour when operating at a process weight rate

of 203.68 tons of metal and sand per hour.

- (c) The particulate emission rate from the pouring/casting operation identified as #2 EAF Steel shall not exceed 39.0 pounds per hour when operating at a process weight rate of 28.8 tons of metal and sand per hour.
- (d) The particulate emission rate from the casting cooling operation identified as #2 EAF Steel shall not exceed 39.0 pounds per hour when operating at a process weight rate of 28.8 tons of metal and sand per hour.
- (e) The particulate emission rate from the North shakeout operation shall not exceed 22.27 pounds per hour when operating at a process weight rate of 12.5 tons of metal and sand per hour.

The pounds per hour limitations for (c), (d), and (e) were calculated with the following equation:

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

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

The pounds per hour limitations for (a) and (b) were calculated with the following equation:

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

$$E = 55 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

D.2.3 PM10 Emission Credits [326 IAC 2-2]

Pursuant to PSD Significant Source Modification Number 045-12788-00002 issued on June 13, 2001 and as revised in Significant Permit Modification Number 045-23578-00002, and in order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD) Rules) not applicable for the Airset mold line (constructed in 2001) for PM10, the following requirements shall apply.

- (a) The amount of metal throughput to the mold line identified as Floor Molding shall not exceed 30,000 tons per 12 consecutive month period with compliance determined at the end of each month.
- (b) The PM10 emissions from the pouring/casting and castings cooling operation identified as Floor Molding shall not exceed 0.28 pounds per ton of metal throughput.

D.2.4 PM10 Emissions [326 IAC 2-2]

Pursuant to Fourth Significant Source Modification No.: 045-23527-00002, issued on March 21, 2007, the PM10 emissions from the baghouses identified as DC2, DC3 and DC39 controlling the shakeout system identified as the North shakeout, shall not exceed the following:

- (a) The amount of metal throughput to the shakeout system identified as the North shakeout shall be limited to less than 30,000 tons per 12 consecutive month period with compliance determined at the end of each month.
- (b) The PM10 emissions from the shakeout system identified as the North shakeout shall not exceed 0.35 pounds per ton of metal throughput.

Compliance with these limits shall render 326 IAC 2-2 (PSD) not applicable to 2007 modification.

D.2.5 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 each baghouse listed in this section.

Compliance Determination Requirements

D.2.6 Particulate Control

In order to comply with the requirements of Condition D.2.2(e), the following conditions shall apply:

- (a) The baghouses, DC2, DC3 and DC39, for PM and PM10 control shall be in operation at all times when the North Shakeout system is in operation.
- (b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

D.2.7 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

- (a) Within 60 days after the North Shakeout system achieves maximum production, but no later than 180 days after initial start up of the North Shakeout system, in order to demonstrate compliance with D.2.1, the Permittee shall perform VOC testing from the North Shakeout system, using methods as approved by the Commissioner, in order to demonstrate compliance with Condition D.2.1(a). Testing shall be conducted in accordance with Section C - Performance Testing.
- (b) Within 60 days after the North Shakeout system achieves maximum production, but no later than 180 days after initial start up of the North Shakeout system, the Permittee shall perform PM10 emissions testing on the baghouses DC2, DC3 and DC39 used to control the North shakeout system. Testing shall be conducted using methods as approved by the Commissioner, in order to demonstrate compliance with Condition D.2.4. The tests on the baghouses 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. PM10 includes filterable and condensable PM10.

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

D.2.8 Visible Emissions Notations

- (a) Daily visible emission notations of each of the baghouse stack exhausts shall be performed during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

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

D.2.9 Parametric Monitoring

The Permittee shall record the pressure drop across each of the baghouses used in conjunction with the north shakeout system, at least once per day when the north shakeout system is in operation. When for any one reading, the pressure drop across the baghouse identified as DC3 is outside the range of 2.0 - 8.0 inches of water or a range established during the latest stack test; and the pressure drop across the baghouses identified as DC2 and DC39 is outside the range of 1.0 - 7.0 inches of water or a range established during the latest stack test; the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions and Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions and Exceedances, shall be considered a deviation from this permit.

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

D.2.10 Broken or Failed Bag Detection

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

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

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

D.2.11 Record Keeping Requirements

- (a) To document compliance with Condition D.2.8, the Permittee shall maintain records of visible emission notations of the shakeout system stack exhausts once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).
- (b) To document compliance with Condition D.2.9, the Permittee shall maintain records of the pressure drop once per day during normal operation. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).
- (c) To document compliance with Conditions D.2.1, D.2.3 and D.2.4, the Permittee shall maintain records of the metal throughputs to the north shakeout and the Floor Molding line. These records shall be complete and sufficient to establish compliance with the emission limits established in D.2.1, D.2.3 and D.2.4.
- (d) To document compliance with Condition D.2.1(a), the Permittee shall maintain records of the percent by weight resin content of the mold used in the north shakeout system.
- (e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.2.12 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.2.1(b), D.2.3(a) and D.2.4(a) 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 or six (6) month period) being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

SECTION D.3

FACILITY OPERATION CONDITIONS

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

One (1) magnesium treatment operation for the production of ductile iron, identified as DCTLE, constructed in 1987, with a maximum capacity of 4.5 tons of iron per hour with emissions uncontrolled.

(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 [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the magnesium treatment process identified as DCTLE shall not exceed 11.2 pounds per hour when operating at a process weight rate of 4.5 tons of iron per hour.

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

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

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

D.3.2 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the following conditions shall apply:

- (a) The amount of iron throughput to the magnesium ductile treatment (DCTLE) operation shall not exceed 26,630 tons of iron per 12 consecutive month period with compliance determined at the end of each month.
- (b) The PM emissions from the magnesium ductile treatment operation (DCTLE) shall not exceed 1.80 pounds per ton of iron throughput.

Compliance with these limits will limit PM emissions to less than 25 tons per year. Therefore, the requirements of 326 IAC 2-2 (PSD) do not apply.

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

D.3.3 Record keeping Requirements

- (a) To document compliance with Condition D.3.2(a), the Permittee shall maintain records of the metal throughput to the magnesium ductile treatment process in tons of iron per month.
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.3.4 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.3.2(a) shall be submitted to the address listed in Section C - General Reporting Requirements, using the reporting form located at the end of this permit, or its equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does not require the

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

SECTION D.4

FACILITY OPERATION CONDITIONS

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

The shot blasting operations consisting of the following:

- (a) One (1) twin table blast machine, identified as L3/4 - STT, constructed in 1961, with a maximum capacity of 25 tons of steel per hour with emissions controlled by baghouse DC18.
- (b) One (1) blast machine, identified as LN4-3 Wheel Blast, constructed in 2006, with a maximum capacity of 25 tons of steel per hour with emissions controlled by baghouse DC16.
- (c) One (1) Nelle Belle shotblast machine, identified as Nelle, constructed in 1955 with a maximum capacity of 60 tons of steel per hour with emissions controlled by a baghouse, identified as DC7.
- (d) One (1) Wheelabrator Frye shotblast machine, identified as #16 Monorail, constructed in 1976 with a maximum capacity of 25.7 tons of metal per hour with emissions controlled by a baghouse, identified as DC17.
- (e) Two (2) room blast machines, identified as LN3-Rm and LN5-S Rm, constructed in 1962 and 1967, respectively, with a maximum capacity of 8 tons of steel per hour each with emissions from LN3-RM controlled by baghouse DC30 and emissions from LN5-S Rm controlled by baghouse DC28.
- (f) One (1) room blast machine, identified as LN5-N, constructed in 1960 with a maximum capacity of 10 tons of steel per hour with emissions controlled by a baghouse, identified as DC11.
- (g) One (1) room blast machine, identified as LN2-N, constructed in 1981 with a maximum capacity of 13 tons of steel per hour with emissions controlled by a baghouse, identified as DC23.
- (h) One (1) tumble blast machine, identified as LN1-TMBL, constructed in 1945 with maximum capacity of 4.5 tons of steel per hour with emissions controlled by a baghouse, identified as DC10.
- (i) One (1) blast machine, identified as LN7-3 wheel blast, constructed in 2004 with a maximum capacity of 25 tons of steel per hour with emissions controlled by a baghouse, identified as DC8.
- (j) One (1) monorail blast machine, identified as #18 Monorail, constructed in 1980 with a maximum capacity of 11.4 tons of steel per hour with emissions controlled by a baghouse, identified as DC21.
- (k) One (1) room blast machine, identified as LN2-S Rm, constructed in 1979 with a maximum capacity of 7 tons of steel per hour with emissions controlled by a baghouse, identified as DC33.
- (l) One (1) chill room tumble blast machine, identified as Chill Tmbl, constructed July 1, 1977, with a maximum capacity of 11.4 tons of steel per hour with emissions controlled by a baghouse, identified as DC6.
- (m) One (1) chill room cabinet blast machine, identified as Chill Cbnt, constructed in 1978 with a maximum capacity of 11.4 tons of steel per hour with emissions controlled by a baghouse, identified as DC6.
- (n) One (1) pangborn rotoblast machine, identified as LN2-T, constructed in 2005 with a maximum capacity of 6 tons of steel per hour with emissions controlled by baghouse, identified as DC-22.

(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 [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the following conditions shall apply:

- (a) The particulate emission rate from the baghouse DC18 controlling the shotblast machine identified as the twin table shotblast machine L3/4-STT, shall not exceed 35.4 pounds per hour when operating at a process weight rate of 25 tons of metal castings per hour.
- (b) The particulate emission rate from the baghouse DC7 controlling the shotblast machine identified as the Nelle Belle shotblast machine (Nelle) shall not exceed 46.3 pounds per hour when operating at a process weight rate of 60 tons of metal castings per hour.
- (c) The particulate emission rate from the baghouse DC17 controlling the shotblast machine identified as the Wheelabrator Frye shotblast machine (#16 Monorail) shall not exceed 36.1 pounds per hour when operating at a process weight rate of 25.7 tons of metal castings per hour.
- (d) The particulate emission rate from each of the baghouses DC30 and DC28 controlling the shotblast machines identified as the room blast shotblast machines LN3-Rm and LN5-S Rm, shall not exceed 16.5 pounds per hour when operating at a process weight rate of 8 tons of metal castings per hour each.
- (e) The particulate emission rate from the baghouse DC11 controlling the shotblast machine identified as the room blast shotblast machine LN5-N shall not exceed 19.2 pounds per hour when operating at a process weight rate of 10 tons of metal castings per hour.
- (f) The particulate emission rate from the baghouse DC23 controlling the shotblast machine identified as the room blast shotblast machine LN2-N shall not exceed 22.9 pounds per hour when operating at a process weight rate of 13 tons of metal castings per hour.
- (g) The particulate emission rate from the baghouse DC10 controlling the shotblast machine identified as the tumble blast shotblast machine LN1-TMBL shall not exceed 11.2 pounds per hour when operating at a process weight rate of 4.5 tons of metal castings per hour.
- (h) The allowable PM emission rate from the baghouse DC8 controlling the shotblast machine identified as the LN7-3 wheel blast shall not exceed 35.4 pounds per hour when operating at a process weight rate of 25 tons of metal castings per hour.
- (i) The particulate emission rate from the baghouse DC21 controlling the shotblast machine identified as the #18 monorail shotblast machine shall not exceed 20.9 pounds per hour when operating at a process weight rate of 11.4 tons of metal castings per hour.
- (j) The particulate emission rate from the baghouse DC33 controlling the shotblast machine identified as the room blast shotblast machine LN2-S Rm shall not exceed 15.1 pounds per hour when operating at a process weight rate of 7 tons of metal castings per hour.
- (k) The particulate emission rate from the baghouse DC6 controlling the shotblast machines identified as the chill room tumble blast shotblast machine (Chill Tmbl) and the chill room cabinet blast shotblast machine (Chill Cbnt) shall not exceed 33.3 pounds per hour when operating at a combined process weight rate of 22.8 tons of metal castings per hour.
- (l) The particulate emission rate from the baghouse DC22 controlling the shotblast machine identified as LN2-T rotoblast shall not exceed 13.62 pounds per hour when operating at a process weight rate of 6 tons of metal castings per hour.
- (m) The particulate emission rate from the baghouse DC16 controlling the shotblast machine identified as the LN4-3 Wheel Blast, shall not exceed 35.4 pounds per hour when operating at a process weight rate of 25 tons of metal castings per hour.

The pounds per hour limitations for (a), and (c) through (m) above were calculated with the following equation:

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

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

The pounds per hour limitation for (b) above was calculated with the following equation:

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

$$E = 55 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

D.4.2 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the following conditions shall apply:

- (a) The PM emissions from the baghouse DC23 controlling the LN2-N shot blast machine shall not exceed 5.48 pounds per hour.
- (b) The PM emissions from the baghouse DC21 controlling the #18 Monorail shot blast machine shall not exceed 5.48 pounds per hour.
- (c) The PM emissions from the baghouse DC33 controlling the LN2-S Rm shot blast machine shall not exceed 5.48 pounds per hour.
- (d) The PM emissions from the baghouse DC6 controlling the Chill room tumble blast shot blast machine (Chill Tmbl) and the Chill room cabinet blast shotblast machine (Chill Cbnt) shall not exceed 5.48 pounds per hour.
- (e) The PM emissions from the baghouse DC8 controlling the LN7-3 shot blast machine shall not exceed 4.50 pounds per hour.
- (f) The PM emissions from the baghouse DC22 controlling the LN2-T shot blast machine shall not exceed 1.18 pounds per hour.
- (g) The PM emissions from the baghouse DC16 controlling the LN4-3 shot blast machine shall not exceed 4.25 pounds per hour.
- (h) The PM10 emissions from the baghouse DC8 controlling the LN7-3 shot blast machine shall not exceed 2.70 pounds per hour.
- (i) The PM10 emissions from the baghouse DC22 controlling the LN2-T shot blast machine shall not exceed 0.70 pounds per hour.
- (j) The PM10 emissions from the baghouse DC16 controlling the LN4-3 shot blast machine shall not exceed 2.70 pounds per hour.

Compliance with these limits will limit PM and PM10 emissions to less than 25 and 15 tons per year, respectively. Therefore, the requirements of 326 IAC 2-2 (PSD) shall not apply.

D.4.3 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 each of the control devices listed in this section.

Compliance Determination Requirements

D.4.4 Particulate Control

In order to comply with the requirements of Conditions D.4.1 and D.4.2, the following conditions shall apply:

- (a) The baghouse, DC16, for PM and PM10 control shall be in operation at all times when the LN4-3 shot blast machine is in operation.
- (b) The baghouse, DC18, for PM and PM10 control shall be in operation at all times when the L3/4-STT shot blast machine is in operation.
- (c) The baghouse, DC7, for PM and PM10 control shall be in operation at all times when the Nelle Belle shot blast machine is in operation.
- (d) The baghouse, DC17, for PM and PM10 control shall be in operation at all time when the Wheelabrator Frye shot blast machine is in operation.
- (e) The baghouse, DC30, for PM and PM10 control shall be in operation at all times when the LN3-Rm shot blast machine is in operation.
- (f) The baghouse, DC28, for PM and PM10 control shall be in operation at all times when the LN5-SRm shot blast machine is in operation.
- (g) The baghouse, DC11, for PM and PM10 control shall be in operation at all times when the LN5-N shot blast machine is in operation.
- (h) The baghouse, DC23, for PM and PM10 control shall be in operation at all times when the LN2-N shot blast machine is in operation.
- (i) The baghouse, DC10, for PM and PM10 control shall be in operation at all times when the LN1-TMBL shot blast machine is in operation.
- (j) The baghouse, DC8, for PM and PM10 control shall be in operation at all times when the LN7-3 shot blast machine is in operation.
- (k) The baghouse, DC21, for PM and PM10 control shall be in operation at all times when the #18 Monorail shot blast machine is in operation.
- (l) The baghouse, DC33, for PM and PM10 control shall be in operation at all times when the LN2-S Rm shot blast machine is in operation.
- (m) The baghouse, DC6, shall be in operation at all times when the Chill Tmbl and Chill Cbnt shot blast machines are in operation.
- (n) The baghouse, DC22, for PM and PM10 control shall be in operation at all times when the LN2-T shot blast machine is in operation.
- (o) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

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

D.4.5 Visible Emissions Notations [40 CFR Part 64]

- (a) Visible emission notations of each of the shot blasting machines stack exhausts shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

Compliance with the above monitoring condition shall also satisfy the requirements of 40 CFR 64, Compliance Assurance Monitoring for the shot blasting machines (L3/4 STT, Nelle Belle, #16 Monorail, LN7-3 and LN4-3).

D.4.6 Parametric Monitoring [40 CFR Part 64]

The Permittee shall record the pressure drop across each of the baghouses used in conjunction with the shot blasting machines, at least once per day when the shot blasting machines are in operation. When for any one reading, the pressure drop across the baghouses DC11 and DC30 is outside the range of 0.2 - 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions and Exceedances. When for any one reading, the pressure drop across each of the other baghouses listed in this section is outside the range of 2.0 - 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions and Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions and Exceedances, shall be considered a deviation from this permit.

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

Compliance with the above monitoring condition shall also satisfy the requirements of 40 CFR 64, Compliance Assurance Monitoring for the shot blasting machines (L3/4 STT, Nelle Belle, #16 Monorail, LN7-3 and LN4-3).

D.4.7 Broken or Failed Bag Detection [40 CFR Part 64]

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

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature,

flow rate, air infiltration, leaks, dust traces or triboflows.

Compliance with the above monitoring condition shall also satisfy the requirements of 40 CFR 64, Compliance Assurance Monitoring for the shot blasting machines (L3/4 STT, Nelle Belle, #16 Monorail, LN7-3 and LN4-3).

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

D.4.8 Record Keeping Requirements

- (a) To document compliance with Condition D.4.5, the Permittee shall maintain records of visible emission notations of the shot blasting machines stack exhausts once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).
- (b) To document compliance with condition D.4.6, the Permittee shall maintain records of the pressure drop across each baghouse once per day. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.5

FACILITY OPERATION CONDITIONS

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

- (a) One (1) sand handling system, identified as North Lumpbreaker, constructed in 1988 and modified in 1994 with a maximum capacity of 8 tons of sand per hour with emissions controlled by a baghouse, identified as DC41.
- (b) One (1) sand handling system, identified as Core Sands System, constructed in 1967 and modified in 1988, with a maximum capacity of 5 tons of sand per hour, consisting of one silo controlled by a bin vent filter and one hopper controlled by a bin vent filter and vented internally, and equipped with a muller, identified as 1.5G Muller.

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 [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the following conditions shall apply:

- (a) The particulate emission rate from the baghouse DC41 controlling the North Lumpbreaker shall not exceed 16.5 pounds per hour when operating at a process weight rate of 8 tons of sand per hour.
- (b) The particulate emission rate from the Core Sands System shall not exceed 12.1 pounds per hour when operating at a process weight rate of 5 tons of sand per hour.

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

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

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

D.5.2 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the following conditions shall apply:

- (a) The PM emissions from the baghouse DC41 controlling the North Lumpbreaker shall not exceed 0.072 pound per ton of sand.
- (b) The PM10 emissions from the baghouse DC41 controlling the North Lumpbreaker shall not exceed 0.39 pounds per ton of sand.
- (c) The sand throughput to the North Lumpbreaker shall not exceed 72,000 tons per 12 consecutive month period with compliance determined at the end of each month.
- (d) The PM emissions from the Core Sands System shall not exceed 0.072 pound per ton of sand.
- (e) The PM10 emissions from the Core Sands System shall not exceed 0.005 pound per ton of sand.
- (f) The sand throughput to the Core Sands System shall not exceed 22,000 tons per 12

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

Compliance with (e) and (f) of this condition are necessary in order that the requirements of 326 IAC 2-2 (PSD) shall not apply to the Airset mold line, as described in Section D.7 of this permit. Therefore, the requirements of 326 IAC 2-2 (PSD) shall not apply.

D.5.3 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 the baghouse listed in this section.

Compliance Determination Requirements

D.5.4 Particulate Control

In order to comply with the requirements of Conditions D.5.1 and D.5.2, the following conditions shall apply:

- (a) The baghouse, DC41, for PM and PM10 control shall be in operation at all times when the North Lumpbreaker is in operation.
- (b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

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

D.5.5 Visible Emissions Notations

- (a) Daily visible emission notations of the North Lumpbreaker stack exhausts shall be performed during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

D.5.6 Parametric Monitoring

The Permittee shall record the pressure drop across the baghouse DC41 used in conjunction with the North Lumpbreaker, at least once per day when the North Lumpbreaker is in operation. When for any one reading, the pressure drop across the baghouse is outside the range of 2.0 - 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions and Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions and Exceedances, shall be considered a deviation from this permit.

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

D.5.7 Broken or Failed Bag Detection

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

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

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

D.5.8 Record Keeping Requirements

- (a) In order to document compliance with Condition D.5.5, the Permittee shall maintain records of visible emission notations of the North Lumpbreaker stack exhaust once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).
- (b) In order to document compliance with condition D.5.6, the Permittee shall maintain records of the pressure drop once per day during normal operation. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).
- (c) In order to document compliance with Condition D.5.2(c) and (f), the Permittee shall maintain records of the sand throughputs to the North Lumpbreaker and Core Sands System in tons of sand per month.
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.5.9 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.5.2(c) and (f) shall be submitted to the address listed in Section C - General Reporting Requirements, using the reporting form located at the end of this permit, or its equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

SECTION D.6

FACILITY OPERATION CONDITIONS

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

Core and mold making operations consisting of the following:

- (a) One (1) Airset core making process, identified as Jordan, consisting of two (2) core sand mixers, one constructed in 1989, identified as Small Airset Mixer, and the other constructed in 2005 identified as Zircon Mixer, with maximum capacities of 9 tons of sand per hour and 6 tons of sand per hour, respectively.
- (b) One (1) Floor Molding Machine, constructed in 1994 with a maximum capacity of 45 tons of sand per hour with emissions uncontrolled.
- (c) One (1) Airset core making machine equipped with a mixer, identified as Snap, constructed in 1992 with a maximum capacity of 9 tons of sand per hour with emissions uncontrolled.
- (d) Five (5) Oil Sand core making benches, constructed in 1959, each with a maximum capacity of 0.4 tons of oil sand per hour or 0.6 tons of CO₂ sand per hour.
- (e) Two (2) Shell core making machines, constructed in 1962 and 1973, each with a maximum capacity of 0.075 tons of sand per hour.
- (f) One (1) Shell core making machine, constructed in 1976, with a maximum capacity of 0.125 tons of sand per hour.
- (g) One (1) Airset core making machine equipped with a mixer, identified as Medium Airset Core, constructed in 1976, with a maximum capacity of 16.5 tons of sand per hour.
- (h) One (1) core wash process, constructed prior to 1977, with emissions uncontrolled and exhausting internally.

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 VOC BACT Determination and PSD Minor Source Limits [326 IAC 8-1-6] [326 IAC 2-2]

Pursuant to 326 8-1-6 (New Facilities, General Reduction Requirements), IDEM has established the following as BACT for volatile organic compounds (VOCs) for the floor molding machine:

- (a) The resin usage for the Floor Molding Machine shall not exceed 2,455,384 pounds of resin per 12 consecutive month period with compliance determined at the end of each month.
- (b) The VOC emissions from the Floor Molding Machine shall not exceed 0.0325 pounds of VOC per pound of resin.

Compliance with the above BACT limits will limit the potential VOC emissions from the Floor Molding Machine to less than 40 tons per year and render the requirements of 326 IAC 2-2 not applicable to the Floor Molding Machine permitted under T 045-26985-00002.

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

In order to render the requirements of 326 IAC 8-1-6 (BACT) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, the following conditions shall apply:

- (a) The total resin usage for the Zircon Mixer, constructed in 2005, shall be limited to less than

- 1,000,000 pounds of resin per 12 consecutive month period with compliance determined at the end of each month. This is equivalent to VOC emissions of less than 25 tons per year.
- (b) The VOC emissions from the Zircon Mixer shall not exceed 0.05 pounds of VOC per pound of core resin.
 - (c) The total resin usage for the airset core making machine (Small Airset Mixer), constructed in 1989, shall be limited to less than 854,700 pounds of resin per 12 consecutive month period with compliance determined at the end of each month.
 - (d) The VOC emissions from the airset core making machine (Small Airset Mixer) shall not exceed 0.0585 pounds of VOC per pound of core resin.
 - (e) The total resin usage for the airset core making machine (Snap), constructed in 1992, shall be limited to less than 854,700 pounds of resin per 12 consecutive month period with compliance determined at the end of each month.
 - (f) The VOC emissions from the airset core making machine (Snap) shall not exceed 0.0585 pounds of VOC per pound of core resin.

Compliance with these limits will limit VOC emissions to less than 25 tons per year, therefore, the requirements of 326 IAC 8-1-6 (BACT) shall not apply. Compliance with above limits will also render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

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

D.6.3 Record Keeping Requirements

- (a) In order to document compliance with Condition D.6.1(a), the Permittee shall maintain records of the total resin usage for the Floor Molding Machine, constructed in 1994.
- (b) In order to document compliance with Condition D.6.2(a) the Permittee shall maintain records of the total resin usage for the Zircon Mixer, constructed in 2005.
- (c) In order to document compliance with Condition D.6.2(c), the Permittee shall maintain records of the total resin usage for the Airset core making machine (Small Airset Mixer), constructed in 1989.
- (d) In order to document compliance with Condition D.6.2(e), the Permittee shall maintain records of the total resin usage for the Airset core making machine (Snap), constructed in 1992.
- (e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.6.4 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.6.1(a) and D.6.2(a), (c), and (e) shall be submitted to the address listed in Section C - General Reporting Requirements, using the reporting form located at the end of this permit, or its equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

SECTION D.7

FACILITY OPERATION CONDITIONS

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

One (1) new Airset molding line rated at a maximum steel production rate of 15.73 tons of steel or iron per hour and 47.2 tons of sand per hour. The Airset molding line consists of the following processes/equipment:

- (a) pouring operations, constructed in 2001, with a maximum capacity of 15.73 tons of steel or ductile iron per hour and 47.2 tons of sand per hour, with emissions uncontrolled and exhausting through stacks S37 through S42;
- (b) castings cooling operations, constructed in 2001, with a maximum capacity of 15.73 tons of steel or ductile iron per hour and 47.2 tons of sand per hour, with emissions uncontrolled and exhausting through stacks S37 through S42;
- (c) shakeout operations, constructed in 2001, with a maximum capacity of 15.73 tons of steel or ductile iron per hour and 47.2 tons of sand per hour, with particulate emissions controlled by two (2) baghouses, identified as DC9 and DC12, and exhausting to stacks DC9 and DC12, respectively;
- (d) sand handling operations, constructed in 2001, with a maximum capacity of 47.2 tons of sand per hour, with emissions controlled by a baghouse identified as DC46, and exhausting to stack DC46. The sand handling system consists of the following equipment:
 - (1) six sand storage silos, each controlled by a bin vent;
 - (2) four (4) sand heaters;
 - (3) covered pneumatic conveyors for transporting sand from silos to mixer;
- (e) mechanical reclaim operations, constructed in 2001, with a maximum capacity of 47.2 tons of sand per hour, with emissions controlled by a baghouse identified as DC45 and exhausting to stack DC45;
- (f) one natural gas fired thermal reclaimer, constructed in 2001, with a maximum heat input capacity of 2.83 million Btu per hour, with a maximum capacity of 2.85 tons of sand per hour, with emissions controlled by a baghouse identified as DC46 and exhausting to stack DC46;
- (g) phenolic urethane no-bake mold making operations, constructed in 2001, with a maximum capacity of 47.2 tons of sand per hour. The mold making operation consists of the following equipment:
 - (1) one enclosed mixer for combining mold sand with resin, with VOC emissions controlled by the thermal sand reclaimer;
 - (2) strike off operations;
 - (3) rollover draw/strip operations;
 - (4) one natural gas fired preheat tunnel with a maximum heat input capacity of 0.8 million Btu per hour;
 - (5) mold wash operations with a maximum capacity of 230.69 pounds of mold wash per hour, which is equivalent to 11.34 gallons of mold wash per hour;
 - (6) one natural gas fired drying (curing) oven, with a maximum heat input capacity of 3.2 million Btu per hour; and
 - (7) one mold closer process which puts the two halves of the mold together.

Note: Each individual shakeout unit has a maximum design capacity of 10 tons of metal per hour; however, the pouring and cooling operations bottleneck the shakeout process, such that the total hourly rate at shakeout cannot exceed 15.73 tons of metal per hour.

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

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

D.7.1 BACT for VOC [326 IAC 2-2-3(a)(3)] [326 IAC 8-1-6]

Pursuant PSD/SSM No. 045-12788-00002, issued on June 13, 2001; PSD/SSM No. 045-20845-00002, issued on May 19, 2006; PSD/SSM No. 045-25405-00002; 326 IAC 2-2-3(a)(3) (Prevention of Significant Deterioration (PSD) Rules); and 326 IAC 8-1-6 (BACT), the Permittee shall comply with the following BACT requirements:

- (a) The VOC emissions from the pouring and castings cooling operations shall be limited to 1.8 pounds per ton of metal poured.
- (b) The resin content shall not exceed 1.23%.
- (c) The VOC emissions from the Airset molding line shakeout operations shall be limited to 3.32 pounds per ton of metal.
- (d) The metal throughput to the Airset mold line shall be limited to less than 55,400 tons per 12 consecutive month period with compliance determined at the end of each month.
- (e) The VOC emissions from the mold making process shall be limited to 1.17 pounds per ton of sand and 22.20 pounds per hour.
- (f) The VOC content of the mold wash shall not exceed 0.0 percent by weight.
- (g) The mold production shall be limited to less than 166,200 tons per 12 consecutive month period and the binder usage shall be limited to less than 1,662 tons per 12 consecutive month period with compliance determined at the end of each month.
- (h) The VOC emissions from the thermal sand reclamation system, which controls the mold sand mixer, shall not exceed 2.2 pounds per hour.
- (i) The maximum throughput rate to the shakeout process shall not exceed 15.73 tons of metal per hour.

Compliance with the requirements of this condition will also satisfy the requirements of 326 IAC 8-1-6 (BACT).

D.7.2 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the following conditions shall apply:

- (a) The particulate emission rate from the pouring/casting and castings cooling process shall not exceed 46.7 pounds per hour each when operating at a process weight rate of 15.73 tons of metal per hour each and 47.2 tons of sand per hour each, for a total process weight rate of 62.9 tons per hour each.
- (b) The total particulate emission rate from the baghouses DC9 and DC12 controlling the shakeout process shall not exceed 46.7 pounds per hour when operating at a process weight rate of 15.73 tons of metal per hour and 47.2 tons of sand per hour, for a total process weight rate of 62.9 tons per hour.
- (c) The particulate emission rate from the baghouse DC46 controlling the sand handling process and the thermal reclaimer shall not exceed 44.0 pounds per hour when operating at a process weight rate of 47.2 tons of sand per hour. The baghouse identified as DC46 shall be in operation at all times the sand handling process is in operation, in order to

comply with this limit.

- (d) The particulate emission rate from the baghouse DC45 controlling the mechanical reclaim process shall not exceed 44.0 pounds per hour when operating at a process weight rate of 47.2 tons of sand per hour.

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

Interpolation and extrapolation of the data for the process weight rate greater than 60,000 pounds per hour shall be accomplished by use of the equations:

$$E = 55 P^{0.11} - 40$$

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

D.7.3 PM and PM10 Emissions [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD) Rules) not applicable for PM and PM10, the Permittee shall comply with the following requirements:

- (a) At least 99% of all particulate matter (PM and PM-10,) emissions generated during sand handling, mechanical reclaim, and thermal reclaim operations shall be captured by a baghouse and controlled such that visible emissions from any building opening shall not exceed three percent (3%) opacity based on a six-minute average (24 readings taken in accordance with 40 CFR Part 60, Appendix A, Method 9).
- (b) At least 96% of all particulate matter (PM and PM-10,) emissions generated during shakeout operations shall be captured by a baghouse and controlled such that visible emissions from any building opening shall not exceed three percent (3%) opacity based on a six-minute average (24 readings taken in accordance with 40 CFR Part 60, Appendix A, Method 9).
- (c) The PM emissions from the baghouses DC9 and DC12 controlling the shakeout operations shall be limited to a total of 0.25 pounds per ton of metal throughput.
- (d) The PM10 emissions from the baghouses DC9 and DC12 controlling the shakeout operations shall be limited to a total of 0.25 pounds per ton of metal throughput.
- (e) The PM emissions from the baghouse DC46 controlling the Airset sand handling operations and the thermal reclaimer shall be limited to 0.008 pounds per ton of sand throughput to the Airset sand handling system.
- (f) The PM10 emissions from the baghouse DC46 controlling the sand handling operations and the thermal reclaimer shall be limited to 0.008 pounds per ton of sand throughput.
- (g) The sand throughput to the thermal sand reclamation system shall not exceed 24,930 tons per 12 consecutive month period with compliance determined at the end of each month.
- (h) The sand throughput to the sand handling system shall not exceed 166,200 tons per 12 consecutive month period with compliance determined at the end of each month.
- (i) The PM emissions from the baghouse DC45 controlling the mechanical reclaimer shall be limited to 0.008 pounds per ton of sand throughput.
- (j) The PM10 emissions from the baghouse DC45 controlling the mechanical reclaimer shall be limited to 0.008 pounds per ton of sand throughput.

- (k) The PM emissions from the pouring and cooling processes combined shall be limited to 0.4 pounds per ton of metal throughput.
- (l) The PM10 emissions from the pouring and cooling processes combined shall be limited to 0.14 pounds per ton of metal throughput.

Therefore, the requirements of 326 IAC 2-2 will not apply for PM and PM10 emissions.

D.7.4 Lead Emissions [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD) Rules) not applicable for lead, the Permittee shall comply with the following requirement.

The combined lead emissions from the Airset pouring/casting and castings cooling operations shall be limited to 0.13 pounds per hour.

Therefore, the requirements of 326 IAC 2-2 (PSD) will not apply for lead emissions.

D.7.5 Carbon Monoxide Emissions [326 IAC 2-2]

In order to make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD) Rules) not applicable, the carbon monoxide emissions from the Airset molding line pouring, castings cooling, and shakeout combined operations shall be less than 3.55 pounds per ton of metal poured.

Compliance with the above limit, combined with the metal throughput limit in Condition D.7.1(c) and the potential to emit carbon monoxide of other emission units from the 2001 modification, shall limit the carbon monoxide emissions from the 2001 modification to less than 100 tons per twelve (12) consecutive month period and render 326 IAC 2-2 not applicable.

D.7.6 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 the baghouses DC9 and DC12 controlling the shakeout operations, baghouse DC45 controlling the mechanical reclaimer, the thermal reclaimer and the baghouse DC46 controlling the thermal reclaimer, and the five bin vents controlling the six sand silos.

Compliance Determination Requirements

D.7.7 Particulate Control

In order to comply with the limits in Conditions D.7.2, D.7.3 and D.7.4, the following conditions shall apply:

- (a) The baghouses DC9 and DC12 for particulate control shall be in operation and control emissions from the shakeout operation at all times that the shakeout process is in operation.
- (b) The baghouse DC45 for particulate control shall be in operation and control emissions from the mechanical reclaimer at all times that the mechanical reclaimer is in operation.
- (c) The baghouse DC46 for particulate control shall be in operation and control emissions from the thermal reclaimer and the sand handling system at all times that the thermal reclaimer or the sand handling system is in operation.
- (d) The bin vents for particulate control shall be in place and control emissions from each of the six sand silos at all times that sand is being transferred into or out of the silos.
- (e) All conveyors associated with the sand handling system, mechanical reclamation system, and thermal reclamation system shall be completely enclosed.

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

D.7.8 Volatile Organic Compound (VOC) Controls

In order to comply with D.7.1(h), the thermal sand reclaimer for VOC control shall be in operation and control emissions from the sand mixer at all times that the mixing process is in operation. When operating, the thermal reclamation system shall maintain a minimum operating temperature of 1400 °F during operation or a temperature and fan amperage as determined from the most recent compliant stack test, as approved by IDEM.

D.7.9 Volatile Organic Compounds (VOC) Content and Usage Limitations

Compliance with the VOC content and usage limitations contained in Condition D.7.1(f) shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the mold wash solvent manufacturer.

D.7.10 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

- (a) Within ninety (90) days of issuance of Significant Permit Modification No. 045-25426-00002, the Permittee shall perform VOC testing from the thermal sand reclaimer controlling the mold sand mixer, using methods as approved by the Commissioner, in order to demonstrate compliance with Condition D.7.1(h). This test shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.
- (b) The Permittee shall perform PM and PM10 testing from the facilities as shown in the table below no later than September 30, 2008.

Facility Identification	Control Device Identification
Airset shakeout units (both units)	baghouses DC9 and DC12
Airset sand handling system and thermal reclaimer	baghouse DC46
Airset mechanical reclaimer	baghouse DC45

Testing shall be conducted using methods as approved by the Commissioner, in order to demonstrate compliance with Conditions D.7.2 and D.7.3. The tests on the baghouses 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. PM10 includes filterable and condensable PM10.

- (c) Any stack which has multiple processes which exhaust to the same stack shall operate all of the processes simultaneously in accordance with 326 IAC 3-6 (Source Sampling Procedures) unless IDEM, OAQ approves an alternative source sampling protocol.

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

D.7.11 Visible Emissions Notations [40 CFR Part 64]

- (a) Visible emission notations of the baghouses DC9, DC12, DC45, and DC46 stack exhausts shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

Compliance with the above monitoring condition shall also satisfy the requirements of 40 CFR 64, Compliance Assurance Monitoring for the Airset line sand handling and shakeout processes, and mechanical reclaimer.

D.7.12 Parametric Monitoring [40 CFR Part 64]

The Permittee shall record the pressure drop across the baghouses DC9, DC12, DC45, and DC46 used in conjunction with the shakeout, sand handling, mechanical reclamation, and thermal reclamation processes, at least once per day when these processes are in operation. When for any one reading, the pressure drop across the baghouse is outside the range of 2.0 - 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions and Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions and Exceedances, shall be considered a deviation from this permit.

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

Compliance with the above monitoring condition shall also satisfy the requirements of 40 CFR 64, Compliance Assurance Monitoring for the Airset line sand handling and shakeout processes, and mechanical reclaimer.

D.7.13 Broken or Failed Bag Detection [40 CFR Part 64]

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

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

Compliance with the above monitoring condition shall also satisfy the requirements of 40 CFR 64, Compliance Assurance Monitoring for the Airset line sand handling and shakeout processes, and mechanical reclaimer.

D.7.14 Thermal Reclaimer Monitoring

- (a) A continuous monitoring system shall be calibrated, maintained, and operated on the

thermal sand reclamation system for measuring the operating temperature. The output of this system shall be recorded, and that temperature shall be greater than or equal to 1400 degrees Fahrenheit or the temperature used to demonstrate compliance during the most recent compliance stack test, as approved by IDEM.

- (b) The duct pressure or fan amperage shall be observed at least once per day when the thermal sand reclaimer is in operation. This pressure or amperage shall be maintained within the range specified by the manufacturer or a range as established in the most recent compliant stack test, as approved by IDEM.
- (c) The Permittee shall take the troubleshooting contingency and response steps in accordance with Section C – Response to Excursions and Exceedances when the reading is outside the above mentioned range for any one reading. Failure to take response steps in accordance with Section C – Response to Excursions and Exceedances, shall be considered a violation of this permit.

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

D.7.15 Record Keeping Requirements

- (a) To document compliance with Condition D.7.11, the Permittee shall maintain records of visible emission notations of the baghouses DC9, DC12, DC45, and DC46 stack exhausts once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).
- (b) In order to document compliance with Condition D.7.12, the Permittee shall maintain records of the pressure drop once per day during normal operation. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).
- (c) To document compliance with Conditions D.7.1 and D.7.3, the Permittee shall maintain records of the metal and sand throughputs to the Airset mold line. These records shall be complete and sufficient to establish compliance with the emission limits established in D.7.1 and D.7.3.
- (d) To document compliance with Conditions D.7.1, D.7.8, and D.7.14, the Permittee shall maintain records in accordance with (1) and (2) below.
 - (1) The continuous temperature records for the thermal reclaimer and the temperature used to demonstrate compliance during the most recent compliance stack test.
 - (2) Records of the duct pressure or fan amperage once per day.
- (e) In order to document compliance with Conditions D.7.1, the Permittee shall maintain records in accordance with (1) through (4) below.
 - (1) Copies of the Material Safety Data Sheets for each mold wash material used at the Airset mold line;
 - (2) The amount of binder usage in the Airset mold line, each month of operation;
 - (3) The sand throughput to the thermal sand reclaimer, each month of operation; and
 - (4) The percent by weight resin content of the Airset line pouring/cooling operation.

D.7.16 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.7.1 and D.7.3 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 or six (6) month period) being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

SECTION D.8

FACILITY OPERATION CONDITIONS

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

One core line, identified as "Over 500 lb Core Line", constructed in 2006, including:

- (a) one (1) phenolic urethane no bake mold making machine with a maximum capacity of 45 tons per hour;
- (b) one (1) sand mixer with a maximum capacity of 45 tons per hour;
- (c) one (1) 350-ton sand storage silo;
- (d) two (2) 100 ton sand storage silo;
- (e) one (1) sand transporter;
- (f) two (2) compaction tables; and
- (g) two (2) sand heaters

the sand silos and sand mixer are controlled by two (2) bin vents.

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

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

D.8.1 VOC Emissions [326 IAC 8-1-6] [326 IAC 2-2]

The following conditions shall apply to the "over 500 lb core line":

- (a) The total resin usage for the "over 500 lb core line", constructed in 2006, shall be limited to less than 996,000 pounds of resin per 12 consecutive month period with compliance determined at the end of each month.
- (b) The VOC emissions from the "over 500 lb core line" shall be limited to 0.05 pounds of VOC per pound of core resin.

Compliance with the above limits shall limit VOC emissions to less than 25 tons per year and render 326 IAC 8-1-6 (BACT) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to 2006 modification.

D.8.2 PSD Minor Limit [326 IAC 2-2]

The following conditions shall apply:

- (a) The PM emissions from the sand system at the "over 500 lb core line" shall be less than 1.4 pounds per hour.
- (b) The PM10 emissions from the sand system at the "over 500 lb core line" shall be less than 0.6 pounds per hour.

Compliance with these limits in conjunction with the PM and PM10 limits in Conditions D.4.2(g)

and D.4.2(j)), respectively, will limit PM and PM10 emissions to less than 25 and 15 tons per year, respectively and render 326 IAC 2-2 (PSD) not applicable to the 2006 modification.

D.8.3 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 the dust collector and bin vents controlling the "over 500 lb core line" listed in this section.

Compliance Determination Requirements

D.8.4 Particulate Control

In order to comply with condition D.8.2, the bin vents for particulate control shall be in operation and control emissions from the sand system at the "over 500 lb core line" at all times that the sand system at the "over 500 lb core line" is in operation.

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

D.8.5 Record Keeping Requirements

- (a) In order to document compliance with Condition D.8.1, the Permittee shall maintain records of the amount of resin usage in the "over 500 lb core line", each month of operation.
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.8.6 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.8.1(a) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

SECTION D.9

FACILITY OPERATION CONDITIONS

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

Insignificant activities including the following:

- (a) Machining where an aqueous cutting coolant continuously floods the machining interface. [326 IAC 6-3-2]
- (b) Furnaces used for melting metals other than beryllium with a brim full capacity of less than or equal to 450 cubic inches by volume. [326 IAC 6-3-2]
- (c) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations. [326 IAC 6-3-2]
 - (1) Grinding machines each with a maximum capacity of 18.9 pounds per hour with emissions controlled by baghouses, identified as DC13, DC14, DC26, and DC37.
 - (2) One (1) pattern woodworking shop with emissions controlled by a roto-clone, identified as DC1.
- (d) Flame cutting - natural gas and oxygen torch to remove gates, spurs, and rizers. [326 IAC 6-3-2]
- (e) Flame wash - arc welding like torch to smooth castings after flame cutting. [326 IAC 6-3-2]
- (f) One (1) paint booth for coating metal castings, constructed prior to 1977, utilizing air assisted airless spray type, with VOC emissions uncontrolled and overspray controlled by using a filter wall, with emissions exhausting to stack S154. [326 IAC 6-3-2(d)]

(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.9.1 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable PM emission rate from each of the above listed processes, except the paint booth, shall not exceed the pounds per hour limitations as calculated with the following formula:

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

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

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

D.9.2 Particulate [326 IAC 6-3-2(d)]

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

Compliance Determination Requirements

D.9.3 Particulate Control

In order to comply with the requirements of Condition D.9.1, the control devices listed in this section for particulate emissions control shall be in operation at all times when the associated facility is in operation.

SECTION E.1

FACILITY OPERATION CONDITIONS

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

The melting process consisting of the following:

- (1) One (1) electric arc furnace, identified as EAF2, constructed in 1951 with a maximum melt rate of 4.5 tons of steel or iron per hour with emissions controlled by one (1) baghouse, identified as DC4, exhausting through stack DC4.
- (2) One (1) electric arc furnace, identified as EAF3, constructed prior to October 1974 with a maximum melt rate of 10 tons of steel or iron per hour with emissions controlled by one (1) baghouse, identified as DC5, exhausting through stack DC5.
- (3) One (1) electric arc furnace, identified as EAF4, constructed in 1989 with a maximum melt rate of 10 tons of steel or iron per hour with emissions controlled by one (1) baghouse, identified as DC40, exhausting through stack DC40.

Note: Two (2) baghouses identified as DC38 and DC42 are used to control fugitive melt shop particulate emissions at the roof monitor.

- (4) The scrap and charge handling process, constructed in 1951 with a maximum capacity of 24.5 tons of steel per hour, with emissions uncontrolled exhausting through stacks S8 and S10.

Note: Emissions from the scrap yard are fugitive emissions.

Under NESHAP Subpart EEEEE, the three electric arc furnaces (EAF-2, EAF-3 and EAF-4) and the fugitive emissions from foundry operations are considered existing affected sources.

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

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

E.1.1 General Provisions Relating to NESHAP EEEEE [326 IAC 20-1] [40 CFR Part 63, Subpart A]

Pursuant to 40 CFR 63.7760, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1, as specified in Table 1 of 40 CFR Part 63, Subpart EEEEE in accordance with schedule in 40 CFR 63 Subpart EEEEE.

E.1.2 Iron and Steel Foundries NESHAP [40 CFR Part 63, Subpart EEEEE]

The Permittee that operates an iron and steel foundry, which is a major source of hazardous air pollutants shall comply with the following provisions of 40 CFR Part 63, Subpart EEEEE (included as Attachment A of this permit), with a compliance date of April 23, 2007:

- (1) 40 CFR 63.7680;
- (2) 40 CFR 63.7681;
- (3) 40 CFR 63.7682(a), (b) and (c);
- (4) 40 CFR 63.7683(a), (b) and (f);
- (5) 40 CFR 63.7690(a)(1), (a)(7) and (b)(2);
- (6) 40 CFR 63.7700(a), (b), (c)(1)(i), (c)(2) and (c)(3);
- (7) 40 CFR 63.7710(a), (b)(1) and (b)(3) through (b)(6);
- (8) 40 CFR 63.7720;
- (9) 40 CFR 63.7730;

- (10) 40 CFR 63.7731;
- (11) 40 CFR 63.7732(a), (b)(1), (b)(2), (b)(4), (c)(1), (c)(2), (c)(4), (d), (h) and (i);
- (12) 40 CFR 63.7733(b), (e) and (f);
- (13) 40 CFR 63.7734(a)(1), (a)(7), (b)(1) and (b)(2);
- (14) 40 CFR 63.7735(a) and (b);
- (15) 40 CFR 63.7736(b) and (c);
- (16) 40 CFR 63.7740(b), (c) and (d);
- (17) 40 CFR 63.7741(b), (c) and (f);
- (18) 40 CFR 63.7742;
- (19) 40 CFR 63.7743(a)(1), (a)(7), (a)(12), (c) and (d);
- (20) 40 CFR 63.7744(a) and (b);
- (21) 40 CFR 63.7745;
- (22) 40 CFR 63.7746;
- (23) 40 CFR 63.7747;
- (24) 40 CFR 63.7750(a), (b), (d) and (e);
- (25) 40 CFR 63.7751;
- (26) 40 CFR 63.7752;
- (27) 40 CFR 63.7753;
- (28) 40 CFR 63.7760;
- (29) 40 CFR 63.7761;
- (30) 40 CFR 63.7765; and
- (31) Table 1.

SECTION E.2

FACILITY OPERATION CONDITIONS

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

One (1) paint booth for coating metal castings, constructed prior to 1977, utilizing air assisted airless spray type, with VOC emissions uncontrolled and overspray controlled by using a filter wall, with emissions exhausting to stack S154. [326 IAC 6-3-2(d)]

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

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

E.2.1 General Provisions Relating to NESHAP MMMM [326 IAC 20-1] [40 CFR Part 63, Subpart A]

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

E.2.2 Surface Coating of Miscellaneous Metal Parts and Products NESHAP [40 CFR Part 63, Subpart MMMM]

The Permittee that engages in surface coating of miscellaneous metal parts and products, at a major source of hazardous air pollutants shall comply with the following provisions of 40 CFR Part 63, Subpart MMMM (included as Attachment B of this permit), with a compliance date of January 2, 2007:

- (1) 40 CFR 63.3880
- (2) 40 CFR 63.3881(a)(1), (a)(2) and (b)
- (3) 40 CFR 63.3882
- (4) 40 CFR 63.3883(b) and (d)
- (5) 40 CFR 63.3890(b)(1)
- (6) 40 CFR 63.3891(a) and (b)
- (7) 40 CFR 63.3892(a) and (b)
- (8) 40 CFR 63.3893(a)
- (9) 40 CFR 63.3900(a)(1) and (b)
- (10) 40 CFR 63.3901
- (11) 40 CFR 63.3910(a), (b), (c)(1)-(c)(7), (c)(8)(i), and (c)(8)(ii)
- (12) 40 CFR 63.3920(a)(1), (a)(2), (a)(3)(i)-(v), and (a)(4)-(6)
- (13) 40 CFR 63.3930(a), (b), (c)(1)-(3), (d)-(h), and (j)
- (14) 40 CFR 63.3931
- (15) 40 CFR 63.3940
- (16) 40 CFR 63.3941
- (17) 40 CFR 63.3942
- (18) 40 CFR 63.3950
- (19) 40 CFR 63.3951
- (20) 40 CFR 63.3952
- (21) 40 CFR 63.3980
- (22) 40 CFR 63.3981
- (23) Tables 2, 3, and 4 of 40 CFR 63, Subpart MMMM

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

**PART 70 OPERATING PERMIT
CERTIFICATION**

Source Name: Harrison Steel Castings Company
Source Address: 900 North Mound Street, Attica, Indiana 47918
Mailing Address: P.O. Box 60, Attica, Indiana 47918
Part 70 Permit No.: T045-22716-00002

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

Please check what document is being certified:

- Annual Compliance Certification Letter
- Test Result (specify)
- Report (specify)
- Notification (specify)
- Affidavit
- 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 BRANCH
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
Phone: 317-233-0178
Fax: 317-233-6865**

**PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT**

Source Name: Harrison Steel Castings Company
Source Address: 900 North Mound Street, Attica, Indiana 47918
Mailing Address: P.O. Box 60, Attica, Indiana 47918
Part 70 Permit No.: T045-22716-00002

This form consists of 2 pages

Page 1 of 2

- | |
|--|
| <input type="checkbox"/> This is an emergency as defined in 326 IAC 2-7-1(12) <ul style="list-style-type: none">• 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• The Permittee must submit notice by mail or facsimile within two (2) days (Facsimile Number: 317-233-5967), and follow the other requirements of 326 IAC 2-7-16. |
|--|

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

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

Harrison Steel Castings Company
Attica, Indiana
Permit Reviewer: AB/EVP, Laura Spriggs

Second SPM No: 045-26985-00002
Modified by: Josiah Balogun/Timothy R.
Pettifor

Page 68 of 85
T 045-22716-00002

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

Page 2 of 2

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

Form Completed by:

Title / Position:

Date:

Phone:

A certification is not required for this report.

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

Part 70 Quarterly Report

Source Name: Harrison Steel Castings Company
Source Address: 900 North Mound Street, Attica, Indiana 47918
Mailing Address: P.O. Box 60, Attica, Indiana 47918
Part 70 Permit No.: T045-22716-00002
Facility: North Shakeout system
Parameter: metal throughput to the system
Limit: Less than 30,000 tons per 12 consecutive month period for the North Shakeout system with compliance determined at the end of each month.

YEAR:

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

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

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

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: Harrison Steel Castings Company
Source Address: 900 North Mound Street, Attica, Indiana 47918
Mailing Address: P.O. Box 60, Attica, Indiana 47918
Part 70 Permit No.: T045-22716-00002
Facility: Floor Molding Mold Line
Parameter: Metal throughput
Limit: Shall not exceed 30,000 tons per 12 consecutive month period with compliance determined at the end of each month.

YEAR:

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

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

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

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: Harrison Steel Castings Company
Source Address: 900 North Mound Street, Attica, Indiana 47918
Mailing Address: P.O. Box 60, Attica, Indiana 47918
Part 70 Permit No.: T045-22716-00002
Facility: Magnesium ductile treatment operation
Parameter: Metal throughput to treatment operation
Limit: 26,630 tons per 12 consecutive month period with compliance determined at the end of each month.

YEAR:

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

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

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

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: Harrison Steel Castings Company
 Source Address: 900 North Mound Street, Attica, Indiana 47918
 Mailing Address: P.O. Box 60, Attica, Indiana 47918
 Part 70 Permit No.: T045-22716-00002
 Facility: North Lumpbreaker and Core Sands systems
 Parameter: sand throughput to each system
 Limit: 72,000 tons per 12 consecutive month period for the North Lumpbreaker system; and
 22,000 tons per 12 consecutive month period for the Core Sands system with compliance
 determined at the end of each month

YEAR:

North Lumpbreaker Sand System

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

Core Sands System

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

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

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

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: Harrison Steel Castings Company
Source Address: 900 North Mound Street, Attica, Indiana 47918
Mailing Address: P.O. Box 60, Attica, Indiana 47918
Part 70 Permit No.: T045-22716-00002
Facility: Floor Molding Machine
Parameter: VOC
Limit: Resin Usage shall be limited to less than 2,455,384 pounds of resin per 12 consecutive month period with compliance determined at the end of each month.

YEAR:

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

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

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

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: Harrison Steel Castings Company
Source Address: 900 North Mound Street, Attica, Indiana 47918
Mailing Address: P.O. Box 60, Attica, Indiana 47918
Part 70 Permit No.: T045-22716-00002
Facility: Zircon Mixer (constructed in 2005)
Parameter: VOC
Limit: Total resin usage for the Zircon Mixer (constructed in 2005) shall be limited to less than 1,000,000 pounds of resin per 12 consecutive month period with compliance determined at the end of each month.

YEAR:

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

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

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

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: Harrison Steel Castings Company
Source Address: 900 North Mound Street, Attica, Indiana 47918
Mailing Address: P.O. Box 60, Attica, Indiana 47918
Part 70 Permit No.: T045-22716-00002
Facility: Airset Core Making Machine (Small Airset Mixer) (constructed in 1989)
Parameter: VOC
Limit: Total resin usage for the Airset core making machine (Small Airset Mixer) (constructed in 1989) shall be limited to less than 854,700 pounds of resin per 12 consecutive month period with compliance determined at the end of each month.

YEAR:

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

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

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

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: Harrison Steel Castings Company
Source Address: 900 North Mound Street, Attica, Indiana 47918
Mailing Address: P.O. Box 60, Attica, Indiana 47918
Part 70 Permit No.: T045-22716-00002
Facility: Airset Core Making Machine (Snap) (constructed in 1992)
Parameter: VOC
Limit: Total resin usage for the Airset core making machine (Snap) (constructed in 1992) shall be limited to less than 854,700 pounds of resin per 12 consecutive month period with compliance determined at the end of each month.

YEAR:

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

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

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

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: Harrison Steel Castings Company
Source Address: 900 North Mound Street, Attica, Indiana 47918
Mailing Address: P.O. Box 60, Attica, Indiana 47918
Part 70 Permit No.: T045-22716-00002
Facility: Airset Mold Line
Parameter: Metal throughput
Limit: Less than 55,400 tons per 12 consecutive month period with compliance determined at the end of each month.

YEAR:

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

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

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

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: Harrison Steel Castings Company
Source Address: 900 North Mound Street, Attica, Indiana 47918
Mailing Address: P.O. Box 60, Attica, Indiana 47918
Part 70 Permit No.: T045-22716-00002
Facility: Airset Mold Line
Parameter: Mold Production
Limit: Less than 166,200 tons per 12 consecutive month period with compliance determined at the end of each month.

YEAR:

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

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

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

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: Harrison Steel Castings Company
Source Address: 900 North Mound Street, Attica, Indiana 47918
Mailing Address: P.O. Box 60, Attica, Indiana 47918
Part 70 Permit No.: T045-22716-00002
Facility: Airset Mold Line
Parameter: Binder usage
Limit: Less than 1,662 tons per 12 consecutive month period with compliance determined at the end of each month.

YEAR:

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

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

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

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: Harrison Steel Castings Company
Source Address: 900 North Mound Street, Attica, Indiana 47918
Mailing Address: P.O. Box 60, Attica, Indiana 47918
Part 70 Permit No.: T045-22716-00002
Facility: Thermal sand reclamation system
Parameter: Sand throughput
Limit: Shall not exceed 24,930 tons per 12 consecutive month period with compliance determined at the end of each month.

YEAR:

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

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

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

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: Harrison Steel Castings Company
Source Address: 900 North Mound Street, Attica, Indiana 47918
Mailing Address: P.O. Box 60, Attica, Indiana 47918
Part 70 Permit No.: T045-22716-00002
Facility: Airset sand handling operations
Parameter: Sand throughput
Limit: Shall not exceed 166,200 tons per 12 consecutive month period with compliance determined at the end of each month.

YEAR:

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

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

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

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: Harrison Steel Castings Company
Source Address: 900 North Mound Street, Attica, Indiana 47918
Mailing Address: P.O. Box 60, Attica, Indiana 47918
Part 70 Permit No.: T045-22716-00002
Facility: "Over 500 lb Core Making Machine" (constructed in 2006)
Parameter: VOC
Limit: Total resin usage for the "Over 500 lb Core Machine" (constructed in 2006) shall be limited to less than 996,000 pounds of resin per 12 consecutive month period with compliance determined at the end of each month.

YEAR:

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

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

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

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: Harrison Steel Castings Company
Source Address: 900 North Mound Street, Attica, Indiana 47918
Mailing Address: P.O. Box 60, Attica, Indiana 47918
Part 70 Permit No.: T045-22716-00002

Months: _____ to _____ Year: _____

Page 1 of 2

<p>This report is an affirmation that the source has met all the requirements stated in this permit. 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>	
<input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
<input type="checkbox"/> THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD	
Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

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

Form Completed By:

Title/Position:

Date:

Phone:

Attach a signed certification to complete this report.

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

**Addendum to the
Technical Support Document (TSD) for a Part 70 Operating Permit Modification**

Source Name:	Harrison Steel Castings Company
Source Location:	900 North Mound Street, Attica, Indiana 47918
County:	Fountain
SIC Code:	3325, 3321
Operation Permit No.:	T 045-22716-00002
Operation Permit Issuance Date:	June 2, 2008
Significant Permit Modification No.:	T045-26985-00002
Permit Reviewer:	Timothy R. Pettifor

On December 8, 2008, the Office of Air Quality (OAQ) had a notice published in the Fountain County Neighbor, Attica, Indiana, stating that Harrison Steel Castings Company had applied for a modification to their Part 70 Operating Permit. The notice also stated that OAQ proposed to issue a Part 70 Operating Permit modification for this operation and provided information on how the public could review the proposed Part 70 Operating Permit modification 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 Part 70 Operating Permit modification should be issued as proposed.

On December 10, 2008, OAQ received comments from Teal Briles, a citizen of Attica, Indiana. On December 11, 2008, OAQ received comments from Kristopher Kirby, also a citizen of Attica, Indiana. The summary of the comments and IDEM, OAQ responses are as follows:

Comment 1: Teal Briles wrote, " I am deeply concerned about the amount of pollution this facility is releasing into the air and water in our town. The odor and haze that hangs over this town at night is terrible. I am also enclosing a website I would like you to visit in regards to USA Today's' articles printed this week in regards to air quality for schools across the nation. They have run three consecutive days of articles reporting on contamination by area industry and the poor air quality at our schools. Why is this pertinent in this case you may ask? Attica High School is located less than 2 blocks from Harrison Steel. We are listed on page 10A in USA Today's paper dated 12/8/08 as one of twenty two schools in the state of Indiana with air quality that is worse than Meredith Hitchens Elementary (a school closed in 2005 near Cincinnati, OH because of a 50 times greater risk of cancer to its students because it was located near a plastics plant). What does that say about air quality in Attica? We are ranked 47th out of 127,800 schools for the worst air quality. Only 46 schools have air quality worse than we do. The EPA estimates the contamination to be greater than the models identify. Every citizen in Attica has a right to know their school ranks 47th for the worst air quality in the nation". Kristopher Kirby similarly wrote, " In regards to the Harrison Steel Permit...I think this website shows exactly how the community would feel about it. Something needs to be done to improve the air quality in our town. <http://content.usatoday.com/news/nation/environment/smokestack/interactive/4> ".

Response 1: The federal Clean Air Act requires the United States Environmental Protection Agency (U.S. EPA) to set National Ambient Air Quality Standards (NAAQS) for six criteria pollutants. These criteria pollutants are carbon monoxide, lead, sulfur dioxide, particulate

matter to a diameter of 2.5 microns (PM2.5), nitrogen oxides and ground level ozone. The U.S. EPA sets these standards at levels that protect human health, which is why the NAAQS are often referred to as the federal health standards for outdoor air. The NAAQS limit for all criteria pollutants is set low enough to protect human health, including the health of sensitive persons, such as asthmatics, children, and the elderly. More information about each of these pollutants is available at <http://www.epa.gov/air/airpollutants.html> on U.S. EPA's website. The complete table of the NAAQS for all six criteria pollutants can be found at the <http://www.epa.gov/air/criteria.html> website. EPA's website <http://www.epa.gov/air/urbanair/6poll.html> provides more detailed information about the health effects of these six common air pollutants and why they are regulated. Fountain County meets all of these national health based standards. The proposed modification is below the Prevention of Significant Deterioration (PSD) thresholds, levels established to prevent an increase in criteria pollutant emissions from causing a county to no longer meet these health based standards.

IDEM does not regulate odor. However, odor can be an indication that a process is not operating correctly. The Harrison Steel Castings Company permit contains specific compliance requirements to insure that Harrison Steel Castings Company is in continuing compliance with all applicable regulations. Anyone noticing an unusual odor or any suspected permit violation should contact IDEM's Complaint Coordinator toll free at (800) 451-6027 ext. 24464, or by sending a written complaint to IDEM, Attn: Complaint Coordinator, 100 North Senate Avenue, MC 50-03 IGCN 1313, Indianapolis, IN 46204-2251 or by using the IDEM complaint form at <http://www.in.gov/idem/5274.htm> on the internet. Spills and other environmental emergencies should be immediately reported to IDEM at (888) 233-7745.

Recent news articles suggest that certain Indiana schools may be unsafe. IDEM does not believe this to be true. The U.S. EPA screening tool used for the recent reports is sufficient to identify areas of concern, but it is not accurate enough to determine the risk presented to human health or our environment. The data used does not represent the air children breathe at school throughout the course of a year or even one day. Many of the conclusions reached by these reports are based on health protective modeling that often overestimates the true risk posed by air pollutants. This is why the recent USA TODAY articles state that their monitoring found concentrations hundreds of thousands of times lower than what the screening tool predicted. IDEM does not see an immediate risk to children in schools based on the minimal information presented in the articles.

Comment 2: Teal Briles also wrote, " If that is not enough we are also facing a major contamination by RMC a facility now shut down because of a major contamination of chemicals and gases in our city. The EPA held a meeting here this summer and explained we are facing contamination to our water supply as well as many residents located in a plume facing soil and air contamination. We are supposed to be getting a water purification system installed but have yet to see that this has been accomplished. According to the EPA it will take 30 years to clean up this contamination. We have yet another plant identified as a major contributor by the report in USA Today to the pollution in our city and that is C&D Technologies. We are a small town of approximately 3500 people. We seem to be inundated with industry that is polluting our air and water. I think because we are a small town nobody is paying attention. Every citizen in Attica has a right to know they are drinking contaminated water".

Response 2: IDEM, OAQ recognizes that concerns outside of air quality regulations are important to those who expressed them; however, they do not have a direct impact on how IDEM reviews and makes decisions on air permit applications. OAQ's air permit review, by law, cannot address issues for which it does not have direct regulatory authority. OAQ's air permitting functions do not involve ground water cleanup.

C & D Technologies has a Federally Enforceable State Operating Permit (FESOP). This type of source is required to limit their air emissions of criteria pollutants to less than 100 tons per year. In addition, they must also limit their emissions of Hazardous Air Pollutants (HAPs) to less than 10 tons per year for any single HAP and less than 25 tons per year for any combination of HAPs. Harrison Steel Castings Company was issued a Part 70 Operating Permit renewal on June 02, 2008. During the permit application review process, Harrison Steel Castings Company was determined to be in compliance with all applicable rules. The Part 70 Operating Permit contains conditions that will ensure that Harrison Steel Castings remains in compliance with these rules. Harrison Steel Castings Company is subject to requirements of the National Emissions Standards for Hazardous Air Pollutants, 40 CFR 63, Subpart EEEE as well as all applicable state rules including several PSD minor limits.

There are inspectors assigned to both of these sources. The issuance of permits insures that both C & D Technologies and Harrison Steel Castings Company understand applicable regulatory requirements. The permits are the basis for IDEM, OAQ's future inspections of these sources. Anyone seeing any suspected permit violation should contact IDEM's Complaint Coordinator toll free at (800) 451-6027 ext. 24464, or by sending a written complaint to IDEM, Attn: Complaint Coordinator, 100 North Senate Avenue, MC 50-03 IGCN 1313, Indianapolis, IN 46204-2251 or by using the IDEM complaint form at <http://www.in.gov/idem/5274.htm> on the internet. Spills and other environmental emergencies should be immediately reported to IDEM at (888) 233-7745.

Comment 3: Teal Briles further wrote, " I personally am a cancer survivor diagnosed at the age of 37. Just to give you an idea of the amount of cancer in our area I was in a card club of 9 women. Would you believe that 5 of us have had breast cancer? Near my home in Attica where I grew up and still live I made a list of people I have known to be diagnosed with cancer within 2 minutes of my home. I had a list of 125 people and that is only the ones I am aware of. Some homes had as many as 4 people in them with cancer. I have more friends who have had cancer than not. The time has come to find out what is contributing to the high rate of cancer here! I cannot personally ignore the pollution in our city anymore. I am a concerned citizen that wants to be informed as to what this permit will allow and proof that Harrison Steel is meeting all government required guidelines for emissions. The last meeting the EPA had here the citizens were not notified except by some emails (asking us to tell anyone we thought might be interested) and word of mouth. I have spoken to too many who knew nothing about it. I intend to follow up on that as well".

Response 3: IDEM, OAQ recognizes that these concerns are very important to those who expressed them; however, they do not have a direct impact on how IDEM, OAQ reviews and makes decisions on air permit applications. IDEM, OAQ's air permit review by law can address only issues that are part of the air pollution control regulations.

IDEM, OAQ would not issue this permit if the permit terms were not protective of human health and the environment. The permit contains all the applicable regulatory requirements that are protective of human health and the environment. IDEM, OAQ's role as the environmental regulator is to make sure that Harrison Steel Castings Company is complying with all air pollution control laws. In addition to being below the PSD thresholds, this modification is subject to the Best Available Control Technology (BACT). Harrison Steel Castings Company's final permit includes all applicable requirements found in both federal and state regulations and is protective of air quality. The notice of issuance of the permits contains information on how any person who does not agree with the final permit may petition the Indiana Office of Environmental Adjudication for review of the permit.

Concerned citizens may stay informed of IDEM, OAQ permitting decisions by visiting the following website: <http://www.in.gov/ai/appfiles/idem-caats/>.

No changes to the permit have been made as a result of these comments.

Upon further review IDEM, OAQ has made the following changes to the Significant Permit Modification.

1. A typographical error in the heading of Appendix C-Cost Analysis has been corrected as follows:

Appendix C-Cost Analysis
HARRISON STEEL CASTING COMPANY
Cost Effectiveness Evaluation for
Significant ~~Source~~ **Permit** Modification No. 045-~~26949~~ **26985**-00002

Indiana Department of Environmental Management Office of Air Quality

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

Source Description and Location

Source Name:	Harrison Steel Castings Company
Source Location:	900 North Mound Street, Attica, Indiana 47918
County:	Fountain County
SIC Code:	3325, 3321
Operation Permit No.:	T 045-22716-00002
Operation Permit Issuance Date:	June 2, 2008
Significant Permit Modification No.:	T 045-26985-00002
Permit Reviewer:	Josiah Balogun, Timothy R. Pettifor

Existing Approvals

The source was issued Part 70 Operating Permit No. T 045-22716-00002 on June 2, 2008. The source has since received the following approvals:

Permit Type	Permit Number	Issuance Date
Significant Source Modification	045-25405-00002	July 29, 2008
Significant Permit Modification	045-25426-00002	August 15, 2008
Administrative Amendment	045-26622-00002	June 6, 2008

County Attainment Status

The source is located in Fountain County.

Pollutant	Designation
SO ₂	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O ₃	Unclassifiable or attainment effective June 15, 2004, for the 8-hour ozone standard. ¹
PM ₁₀	Unclassifiable effective November 15, 1990.
NO ₂	Cannot be classified or better than national standards.
Pb	Not designated.
¹ Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005. Unclassifiable or attainment effective April 5, 2005, for PM2.5.	

(a) Ozone Standards

- (1) On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in Indiana.
- (2) On September 6, 2007, the Indiana Air Pollution Control Board finalized a temporary emergency rule to re-designate Allen, Clark, Elkhart, Floyd, LaPorte, and St. Joseph as attainment for the 8-hour ozone standard.

- (3) On November 9, 2007, the Indiana Air Pollution Control Board finalized a temporary emergency rule to re-designate Boone, Clark, Elkhart, Floyd, LaPorte, Hamilton, Hancock, Hendricks, Johnson, Madison, Marion, Morgan, Shelby, and St. Joseph as attainment for the 8-hour ozone standard.
 - (4) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to ozone. Fountain County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (b) **PM2.5**
Fountain County has been classified as attainment for PM2.5. On May 8, 2008 U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM2.5 emissions, and the effective date of these rules was July 15th, 2008. Indiana has three years from the publication of these rules to revise its PSD rules, 326 IAC 2-2, to include those requirements. The May 8, 2008 rule revisions require IDEM to regulate PM10 emissions as a surrogate for PM2.5 emissions until 326 IAC 2-2 is revised.
- (c) **Other Criteria Pollutants**
Fountain County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (d) Since this source is classified as a grey iron foundry, it is considered one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).
- (e) **Fugitive Emissions**
Since this type of operation is in one of the twenty-eight (28) listed source categories under 326 IAC 2-2, fugitive emissions are counted toward the determination of PSD applicability.

Source Status

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

Pollutant	Emissions (ton/yr)
PM	>100
PM ₁₀	>100
SO ₂	<100
VOC	>100
CO	>100
NO _x	<100

- (a) This existing source is a major stationary source, under PSD (326 IAC 2-2), because a regulated pollutant is emitted at a rate of 100 tons per year or more, and it is one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).
- (b) These emissions are based upon Part 70 Operating Permit T 0454-22716-00002.

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

HAPs	Potential To Emit (ton/yr)
Single Worst HAP (Benzene)	>10
Total HAPs	>25

This existing source is a major source of HAPs, as defined in 40 CFR 63.2, because HAP emissions are greater than ten (10) tons per year for a single HAP and greater than twenty-five (25) tons per year for a combination of HAPs. Therefore, this source is a major source under Section 112 of the Clean Air Act (CAA).

Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed a modification application, submitted by Harrison Steel Castings Company on September 4, 2008, relating to an increase in the amount of resin used for the Floor Molding Machine from 1,532,307 pounds of resin per twelve consecutive month period to 2,455,384 pounds of resin per twelve consecutive month period. The following is a list of the modified emission unit:

- (a) One (1) Floor Molding Machine equipped with a mixer, constructed in 1994 with a maximum capacity of 45 tons of sand per hour with emissions uncontrolled.

Enforcement Issues

There are no pending enforcement actions related to this modification.

Emission Calculations

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

Permit Level Determination – Part 70

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

The modification will be incorporated into the Part 70 Operating Permit through a significant permit modification issued pursuant to 326 IAC 2-7-12, because the modification requires a case by case determination of the emission limits.

Permit Level Determination – PSD

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

Process / Emission Unit	Potential to Emit (ton/yr)					
	PM	PM ₁₀	SO ₂	VOC	CO	NO _x
Floor Molding Machine	--	--	--	39.9	--	--
Total for Modification	--	--	--	39.9	--	--
Significant Level	25	15	40	40	100	40

This modification to an existing major stationary source is not major because the VOC emissions increase is less than the PSD significant level. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

Federal Rule Applicability Determination

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

NSPS:

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) included in this proposed permit.

NESHAP:

- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in this proposed permit due to this modification.

CAM:

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

The requirements of 40 CFR Part 64, CAM are not applicable to the Floor Molding Machine because this unit does not use a control device, as defined in 40 CFR 64.1.

State Rule Applicability Determination

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

326 IAC 2-2 (PSD)

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

- (a) The resin usage for the Floor Molding Machine shall not exceed 2,455,384 pounds of resin per 12 consecutive month period with compliance determined at the end of each month.
- (b) The VOC emissions from the Floor Molding Machine shall not exceed 0.0325 pounds of VOC per pound of resin.

Compliance with these limits will limit the potential VOC emissions from the Floor Molding Machine with mixer to less than 40 tons per year and render the requirements of 326 IAC 2-2 not applicable to the Floor Molding Machine permitted under T 045-26985-00002.

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

The uncontrolled VOC emissions from the Floor Molding Machine are more than 25 tons per year. Therefore, the Floor Molding Machine is subject to the requirements of 326 IAC 8-1-6. Pursuant to 326 8-1-6 (New Facilities, General Reduction Requirements), IDEM has established the following as BACT for volatile organic compounds (VOCs) for the floor molding machine:

- (a) The resin usage for the Floor Molding Machine shall not exceed 2,455,384 pounds of resin per 12 consecutive month period with compliance determined at the end of each month.
- (b) The VOC emissions from the Floor Molding Machine shall not exceed 0.0325 pounds of VOC per pound of resin.

Compliance Determination and Monitoring Requirements

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

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

There are no new compliance monitoring requirements applicable to this modification.

Proposed Changes

The changes listed below have been made to Part 70 Operating Permit No. T 045-22716-00002. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

- Change 1: The PSD Minor limit and BACT limit for the Floor Molding Machine have been added as Condition D.6.1. The other conditions in Section D.6 have been renumbered. In addition, Conditions 6.2, 6.4, and 6.5 have been updated.

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

D.6.1 VOC BACT Determination and PSD Minor Source Limits [326 IAC 8-1-6] [326 IAC 2-2]

Pursuant to 326 8-1-6 (New Facilities, General Reduction Requirements), IDEM has established the following as BACT for volatile organic compounds (VOCs) for the floor molding machine:

- (a) **The resin usage for the Floor Molding Machine shall not exceed 2,455,384 pounds of resin per 12 consecutive month period with compliance determined at the end of each month.**

- (b) The VOC emissions from the Floor Molding Machine shall not exceed 0.0325 pounds of VOC per pound of resin.**

Compliance with the above BACT limits will limit the potential VOC emissions from the Floor Molding Machine to less than 40 tons per year and render the requirements of 326 IAC 2-2 not applicable to the Floor Molding Machine permitted under T 045-26985-00002.

D.6.4 2 VOC Emissions [326 IAC 8-1-6] [326 IAC 2-2]

In order to render the requirements of 326 IAC 8-1-6 (BACT) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, the following conditions shall apply:

- ~~(a)~~ The VOC emissions from the Floor Molding Machine shall not exceed 0.0325 pounds of VOC per pound of resin.
- ~~(b)~~ The resin usage for the Floor Molding Machine shall not exceed 1,532,307 pounds of resin per 12 consecutive month period with compliance determined at the end of each month.
- ~~(e)~~**(a)** The total resin usage for the Zircon Mixer, constructed in 2005, shall be limited to less than 1,000,000 pounds of resin per 12 consecutive month period with compliance determined at the end of each month. This is equivalent to VOC emissions of less than 25 tons per year.
- ~~(d)~~**(b)** The VOC emissions from the Zircon Mixer shall not exceed 0.05 pounds of VOC per pound of core resin.
- ~~(e)~~**(c)** The total resin usage for the airset core making machine (Small Airset Mixer), constructed in 1989, shall be limited to less than 854,700 pounds of resin per 12 consecutive month period with compliance determined at the end of each month.
- ~~(f)~~**(d)** The VOC emissions from the airset core making machine (Small Airset Mixer) shall not exceed 0.0585 pounds of VOC per pound of core resin.
- ~~(g)~~**(e)** The total resin usage for the airset core making machine (Snap), constructed in 1992, shall be limited to less than 854,700 pounds of resin per 12 consecutive month period with compliance determined at the end of each month.
- ~~(h)~~**(f)** The VOC emissions from the airset core making machine (Snap) shall not exceed 0.0585 pounds of VOC per pound of core resin.

Compliance with these limits will limit VOC emissions to less than 25 tons per year, therefore, the requirements of 326 IAC 8-1-6 (BACT) shall not apply. Compliance with above limits will also render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

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

D.6.2 3 Record Keeping Requirements

- (a) In order to document compliance with Condition D.6.1~~(b)~~**(a)**, the Permittee shall maintain records of the total resin usage for the Floor Molding Machine, constructed in 1994.
- (b) In order to document compliance with Condition D.6.4~~(e)~~**2(a)**, the Permittee shall maintain records of the total resin usage for the Zircon Mixer, constructed in 2005.
- (c) In order to document compliance with Condition D.6.4~~(e)~~**2(c)**, the Permittee shall maintain records of the total resin usage for the Airset core making machine (Small Airset Mixer), constructed in 1989.
- (d) In order to document compliance with Condition D.6.4~~(g)~~**2(e)**, the Permittee shall maintain records of the total resin usage for the Airset core making machine (Snap), constructed in 1992.

- (e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.6.3 4 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.6.1(~~b~~)(a), D.6.1(c), D.6.1(e) and D.6.1(g) **D.6.2(a), (c), and (e)** shall be submitted to the address listed in Section C - General Reporting Requirements, using the reporting form located at the end of this permit, or its equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- Change 2: The Part 70 Quarterly Reporting Form for the Floor Molding Machine has also been updated.

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

Part 70 Quarterly Report

Source Name: Harrison Steel Castings Company
Source Address: 900 North Mound Street, Attica, Indiana 47918
Mailing Address: P.O. Box 60, Attica, Indiana 47918
Part 70 Permit No.: T045-22716-00002
Facility: Floor Molding Machine
Parameter: VOC
Limit: Resin Usage shall be limited to less than ~~1,532,307~~ **2,455,384** pounds of resin per 12 consecutive month period with compliance determined at the end of each month.

...

- Change 3: The source has also requested a correction to Condition D.2.9. The pressure drop range for the baghouses identified as DC2 and DC39 should be 1.0 to 7.0.

D.2.9 Parametric Monitoring

The Permittee shall record the pressure drop across each of the baghouses used in conjunction with the north shakeout system, at least once per day when the north shakeout system is in operation. When for any one reading, the pressure drop across the baghouse **identified as DC3** is outside the range of 2.0 - 8.0 inches of water or a range established during the latest stack test; **and the pressure drop across the baghouses identified as DC2 and DC39 is outside the range of 1.0 - 7.0 inches of water or a range established during the latest stack test;** the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions and Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions and Exceedances, shall be considered a deviation from this permit.

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

Conclusion and Recommendation

The modification shall be subject to the conditions of the attached proposed Part 70 Significant Permit Modification No. 045-26985-00002. The staff recommends to the Commissioner that this Part 70 Significant Source and Significant Permit Modification be approved.

**Appendix A: Secondary Gray Iron Foundry Operations
Core and Mold Making Emissions**

Company Name: Harrison Steel Castings Company
Address City IN Zip: 900 North Mound Street, Attica, IN 47918
Significant Permit Modification No.: T 045-26985-00002
Reviewer: Timothy R. Pettifor

Uncontrolled emissions

Machine	Date of Construction	Capacity (tons cores/hr)	Maximum Resin Content (%)	VOC Emission Factor from Resin Evaporation (lb/ton cores)	Potential VOC Emissions from resin evap (tons/yr)
Mold Making					
Pepset Mold Making Machine	1994	45	1%	0.65	128.12
Total					128.12

Limited Emissions

Core Machines	Sand Throughput (tons/yr)	Resin Usage Limit (lbs/yr)	VOC EF for resin evaporation (lb/ton cores)	VOC EF for resin evaporation (lb VOC/lb resin)	VOC Limit (tons/yr)
Mold Making					
Pepset Mold Making Machine	73,846.80	2,455,384	0.65	0.0325	39.90

Emission factors based on study by Ohio Cast Metals Association (OCMA) study.

Uncontrolled VOC emissions (tons/yr) = capacity (tons/hr) * emission factor (lbs VOC/ton core * 8760 hr/yr * ton/2000 lb.

Appendix B – BACT Analyses

Indiana Department of Environmental Management Office of Air Quality

Technical Support Document (TSD)
Significant Permit Modification (SPM) of Part 70 Operating Permit

Source Background and Description

Source Name:	Harrison Steel Castings Company
Source Location:	900 North Mound Street, Attica, Indiana 47918
County:	Fountain County
SIC Code:	3325, 3321
Operation Permit No.:	T 045-22716-00002
Operation Permit Issuance Date:	June 2, 2008
Significant Permit Modification No.:	T 045-26985-00002
Permit Reviewer:	Josiah Balogun

Proposed Expansion

On September 04, 2008, the Office of Air Quality (OAQ) received an application from Harrison Steel Castings Company to increase the amount of resin used in the Floor Molding Machine located at 900 North Mound Street, Attica, Indiana, Fountain County. The amount of resin will be increased from 1,532,307 pounds of resin per twelve consecutive month period to 2,455,384 pounds of resin per twelve consecutive month period.

Requirement for Best Available Control Technology (BACT)

The requirements of 326 IAC 8-1-6 (New Facilities, General Reduction Requirements) applies to facilities located anywhere in the state that were constructed on or after January 1, 1980, which have potential volatile organic compounds (VOC) emissions greater than 25 tons per year, and which are not otherwise regulated by other provisions of 326 IAC 8 rule, and requires the reduction of VOC emissions using Best Available Control Technology (BACT). The proposed one (1) floor molding machine has potential VOC emissions of greater than 25 tons per year and is therefore subject to this rule.

326 IAC 8-1-6 requires a best available control technology (BACT) review to be performed on the proposed modification for this emission unit:

- (1) One (1) Floor Molding Machine equipped with a mixer, constructed in 1994 with a maximum capacity of 45 tons of sand per hour with emissions uncontrolled.

Summary of the Best Available Control Technology (BACT) Process

BACT is a mass emission limitation based on the maximum degree of pollution reduction of emissions, which is achievable on a case-by-case basis. BACT analysis takes into account the energy, environmental, and economic impacts on the source. These reductions may be determined through the application of available control techniques, process design, work practices, and operational limitations. 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.

Federal guidance on BACT requires an evaluation that follows a “top down” process. In this approach, the applicant identifies the best-controlled similar source on the basis of controls required by regulation or permit, or controls achieved in practice. The highest level of control is then evaluated for technical feasibility.

The five (5) basic steps of a top-down BACT analysis are listed below:

Step 1: Identify Potential Control Technologies

The first step is to identify potentially “available” control options for each emission unit and for each pollutant under review. Available options should consist of a comprehensive list of those technologies with a potentially practical application to the emissions unit in question. The list should include lowest achievable emission rate (LAER) technologies, innovative technologies, and controls applied to similar source categories.

Step 2: Eliminate Technically Infeasible Options

The second step is to eliminate technically infeasible options from further consideration. To be considered feasible, a technology must be both available and applicable. It is important in this step that any presentation of a technical argument for eliminating a technology from further consideration be clearly documented based on physical, chemical, engineering, and source-specific factors related to safe and successful use of the controls. Innovative control means a control that has not been demonstrated in a commercial application on similar units. Only available and proven control technologies are evaluated. A control technology is considered available when there are sufficient data indicating that the technology results in a reduction in emissions of regulated pollutants.

Step 3: Rank the Remaining Control Technologies by Control Effectiveness

The third step is to rank the technologies not eliminated in Step 2 in order of descending control effectiveness for each pollutant of concern. The ranked alternatives are reviewed in terms of environmental, energy, and economic impacts specific to the proposed modification. If the analysis determines that the evaluated alternative is not appropriate as BACT due to any of the impacts, then the next most effective is evaluated. This process is repeated until a control alternative is chosen as BACT. If the highest ranked technology is proposed as BACT, it is not necessary to perform any further technical or economic evaluation, except for the environmental analyses.

Step 4: Evaluate the Most Effective Controls and Document the Results

The fourth step entails an evaluation of energy, environmental, and economic impacts for determining a final level of control. The evaluation begins with the most stringent control option and continues until a technology under consideration cannot be eliminated based on adverse energy, environmental, or economic impacts.

Step 5: Select BACT

The fifth and final step is to select as BACT the most effective of the remaining technologies under consideration for each pollutant of concern. For the technologies determined to be feasible, there may be several different limits that have been set as BACT for the same control technology. The permitting agency has to choose the most stringent limit as BACT unless the applicant demonstrates in a convincing manner why that limit is not feasible. The final BACT determination would be the technology with the most stringent corresponding limit that is economically feasible. BACT must, at a minimum, be no less stringent than the level of control required by any applicable New Source Performance Standard (NSPS) and National Emissions Standard for Hazardous Air Pollutants (NESHAP) or state regulatory standards applicable to the emission units included in the permits.

Particulate Matter (PM/PM₁₀) BACT –

Step 1: Identify Potential Control Technologies

- (a) Thermal oxidizer;
- (b) Catalytic oxidation;
- (c) Flare; and
- (d) Reclamation Control Methods

Step 2: Eliminate Technically Infeasible Options

Thermal Oxidizers

A thermal oxidizer controls VOC emissions by using incineration equipment to raise the exhaust gas temperature to the combustion temperature of VOC. A thermal oxidizer can be recuperative or regenerative. A recuperative thermal incinerator controls VOC in gas stream pre-heated by exiting flue gas from the same system in a heat exchanger or recuperator. For the floor molding machine, baghouses would be required to pre-clean the exhaust gases in advance of the incineration control equipment. Although add-on controls such as thermal oxidizers are not used in practice on other green sand systems, thermal oxidizers are considered technically feasible to control VOC emissions from floor molding machine at foundries. A recuperative design is expected to be less sensitive to the residual contaminants leaving the baghouse system than the regenerative design. A regenerative thermal oxidizer (RTO) uses a direct contact heat exchanger consisting of a bed of porous ceramic packing or other structured, high heat capacity media. RTO is technically feasible to control the VOC emissions from the floor molding machine. Since this add-on control device is technically feasible to control VOC emissions, economic feasibility will be evaluated. Harrison Steel Castings Company conducted an assessment of the cost effectiveness of the use of a regenerative thermal oxidizer for the floor molding machine.

Catalytic Oxidizers

A catalytic oxidizer is an add-on control device to control VOC emissions by using a bed of catalyst that facilitates the oxidation of combustible gases. The catalyst increases the reaction rate and allows the conversion of VOC at lower temperature than a thermal incinerator. Typical problems encountered when using a catalytic incinerator is that the contaminants in the exhaust stream can poison or foul the catalyst bed. Given the nature of foundry operations, this is a serious problem.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of a catalytic oxidizer is not a technically feasible option for the floor molding machine at this source.

Flare

A flare is not technically feasible because the exhaust stream concentration must be high enough to sustain combustion, requiring a VOC inlet concentration of greater than 13,000 ppm, which is not feasible with the floor molding machine operations. They require a high heating value waste gas (in excess of 300 BTU/scf) or supplemental fuel. Flares will not be considered as BACT for this operation, and no additional analysis will be conducted.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of a flare is not a technically feasible option for the floor molding machine at this source.

Reclamation Control Methods

Organic compounds may be reclaimed by one of three possible methods; adsorption, absorption (scrubbing) or condensation. In general, the organic compounds are separated from the emission stream and reclaimed for reuse or disposal. Depending on the nature of the contaminant and the inlet concentration of the emission stream, recovery technologies can reach efficiencies of 98%.

Adsorption: is a surface phenomenon where attraction between the carbon and VOC molecules binds the pollutants to the carbon surface. Both carbon and VOC are chemically intact after adsorption. The VOCs may be removed, or desorbed, from the carbon bed reclaimed and destroyed. Adsorption processes can be used to capture VOCs in low concentration exhaust; however, it is typically only used for exhaust that is not loaded with other pollutants which can plug the bed. Based on a review of the RBLC, this type of control has been used in the printing and petroleum refinery industries. This type of control is not typically used in the foundry industry and based on the pollutant loading of the exhaust stream, adsorption is not considered technically feasible for the floor molding machine as plugging of the adsorption media would likely occur

Absorption: is a unit operation where components of a gas phase mixture (Pollutants) are selectively transferred to a relatively nonvolatile liquid, usually water. Sometimes, organic liquids, such as mineral oil or nonvolatile hydrocarbons, are suitable absorption solvents. The choice of solvent depends on cost and solubility of the pollutant in the solvent. Absorption processes are typically used to recover products or purify gas streams with high concentrations of organic compounds such as in the ethanol production and soybean oil refinery industries. In the foundry industry, scrubbers are sometimes used to control emissions from core making processes; however, it is not considered a technically feasible application for VOC control of emissions from the floor molding machine due to the low concentration of VOC in the exhaust.

Condensation: is the separation of VOCs from an emission stream through a phase change, by increasing the system pressure or, more commonly, lowering the system temperature below the dew point of the VOC vapor. When condensers are used for air pollution control, they usually operate at the pressure of the emission stream, and typically require a refrigeration unit to obtain the temperature necessary to condense the VOCs from the emission stream. Condensers may be used to control VOC emissions with high VOC concentrations (usually greater than 5,000 ppmv). The RBLC shows that this type of control has been used for botanical extraction processes and petroleum refineries. Condensers are not typically used in the foundry industry for VOC control and are not considered technically feasible for the application of controlling VOC emissions from the floor molding machine due to the low concentration of VOC in the exhaust.

Step 3: Rank the Remaining Control Technologies by Control Effectiveness

Based on the technical feasibility analysis in Step 2, the remaining control technologies may be ranked as follows for controlling VOC emissions from the pouring, cooling and shakeout operations.

- (1) Recuperative thermal oxidation (98% VOC Reduction)

Step 4: Evaluate the Most Effective Controls and Document the Results

The following table lists the proposed VOC BACT determination along with the existing VOC BACT determinations for floor molding machine. All data in the table is based on the information obtained from the permit application submitted by Harrison Steel Casting Company, the U.S. EPA RACT/BACT/LAER Clearinghouse (RBLC), and electronic versions of permits available at the websites of other permitting agencies.

VOC BACT Limits – Floor Molding Machine					
Company	County/ State	Date Issued	Description	Controls	BACT
Harrison Steel Castings Company – Attica, IN (Proposed permit 045-26949-00002) Floor Molding Machine Capacity 45 tons per hour	Fountain, IN	2009	Floor Molding Machine	No control	Limits of 0.0325 lbs VOC/lb resin and 2455385 lbs/year
Waupaca Foundry, Inc. – Plant 6	McMinn, TN	8/24/2001	Warmbox Core Making	None	5.18 lb/hr VOC limit
Harrison Steel Casting Company	Attica, IN	6/13/2001	Airset Phenolic Urethane No-Bake Mold Making Operations	Thermal Reclaimer Controlling the Mixer	Limits of 1.17 lbs VOC/ton sand and 166,200 tons of mold sand/year for mold making process; BACT for thermal reclaimer is 2.2 lb VOC/hr*
Ardmore Foundry, Inc.	Carter, OK	5/22/2000	Mold & Core Making	None	Limit VOC content of chemicals

The mold making process consists of mixing two part resins, which are molded into a casting or pattern. The molten metal is later poured into these sand castings. The Floor Molding Machine is located in a large open room and neither this unit nor the process areas are ventilated. The molds are not poured on a line but are poured in place on the floor and therefore, the physical area to be controlled would be large. In order for control equipment to be an option, an enclosure would need to be constructed, but given the nature of the operations, and the need to move the equipment and molds around, an enclosure is not technically feasible.

VOCs are emitted throughout the entire mold making process including mixing, mold formation, transport and storage up to the point the mold is poured. The VOC limit of 0.0325 lb VOC/lb resin established in the permit is for the entire process and is not limited to the mixer.

The only add-on control technology found in the BACT search was for our Airset Phenolic Urethane No-Bake Mold Making operation installed in 2001. At that time, it was determined that BACT would be using the existing thermal sand reclaimer to control VOC emissions from the mixer. This is not feasible for the Floor Molding Machine given the proximity of the unit to the thermal sand reclaimer. The distance between the two units is very significant and therefore, this is not a practical solution. We are not aware of any other designs in operation for similar processes.

The regenerative thermal oxidizer (RTO) is not technically feasible for this process since the recommended VOC concentration when using a RTO is greater than 20 ppm and the estimated VOC concentration from this operation is less than 10 ppm, however, a cost effectiveness assessment for a RTO was performed. We conservatively assumed an air flow rate of 10,000 cfm (although we believe the actual air flow rate would be significantly higher) and we have assumed a 90% capture and 98% control efficiency (note that the cost included here is for the RTO only and does not include additional capital to improve the capture efficiency, such that a 90% capture rate is a very conservative estimate). Additionally, the emission factor of 0.0325 lb VOC/lb ton used to calculate the potential emissions is an emission factor for the entire process; however, for the purposes of the cost effectiveness scenario, we have assigned all of the emissions to the mixer unit, thereby overestimating the actual emissions from this part of the process. Even with all of these conservative assumptions described here, the cost to control the VOC emissions from this operation is \$15,026 tons per year, which is not cost effective.

Step 5: Select BACT

Pursuant to 326 IAC 8-1-6 (New Facilities, General Reduction Requirements), IDEM has established the following as BACT for volatile organic compounds (VOC) for the floor molding machine.

The VOC emissions from the floor molding machine shall not exceed 0.0325 lbs VOC/lb resin of material used and the usage limit shall not exceed 2,455,385 lbs per year. Since the total emission is more than 25 tons per year, the floor molding machine is subject to the requirements of 326 IAC 8-1-6.

**Appendix C-Cost Analysis
HARRISON STEEL CASTING COMPANY
Cost Effectiveness Evaluation for
RTO Control of Floor Molding Process**

**Harrison Steel Castings Company
Significant Permit Modification No. 045-26985-00002
Permit Reviewer: Josiah Balogun
Incinerator Cost**

Cost Item	Average Cost Factor		Cost (\$)	Basis of Costs
Direct Costs:				
20,000 CFM RTO to control Floor Molding Machine			\$ 902,205	EPA Cost Manual
Taxes	0.05		\$ 45,110	EPA Cost Manual Table 2.8
Freight	0.05		\$ 45,110	EPA Cost Manual Table 2.8
Base Price:			\$ 992,425	
Installation costs, direct:				
Foundations/Supports	0.08		\$ -	Included in Quote
Erection/handling	0.14		\$ -	
Electrical	0.04		\$ -	
Piping	0.02		\$ -	
Insulation	0.01		\$ -	
Painting	0.01		\$ -	
Total Installation Costs:			\$ -	
TOTAL DIRECT COSTS (Base Price + Installation)=			\$ 992,425	
Installation costs, indirect:				
Engineering/supervision	0.10			Included in Quote
Construction/field expenses	0.05			
Construction fee	0.10			
Start-up	0.02			
Performance Test	0.01		\$ 5,000	Engineering Estimate to test five stacks
Contingencies	0.03			Included in Quote
TOTAL INDIRECT COSTS=			\$ 5,000	
TOTAL CAPITAL COSTS (Direct + Indirect)=			\$ 997,425	
Direct Operating Costs:				
		hours/year		
Operator (\$/HR X HRS/YR)	16.79	2190	\$ 36,770	EPA guidance - 2 hour per shift per device
Supervision(15% of labor)			\$ 5,516	EPA Cost Manual
Operating Materials:				
Maintenance Labor	20.99	1095	\$ 22,984	EPA Guidance (1 hour/shift/device)
Maintenance Materials (100% of labor)			\$ 22,984	
Replacement parts (as required)	5% of equipment costs		\$ 45,110	
Utilities:				
Electricity	0.0534	\$/KW	\$ 72,974	Engineering Estimate
	156	KW		
Gas	\$9.41	\$/MMBtu	\$ 84,294	Engineering estimate
	1.02	MMBtu/hr		
TOTAL DIRECT OPERATING COSTS (A)=			\$ 290,632	
Indirect operating (fixed) costs:				
Overhead	60% of O & M labor/materials		\$ 52,952	EPA Cost Manual
Property Tax	1% of capital costs		\$ 9,974	
Insurance	1% of capital costs		\$ 9,974	
Administration	2% of capital costs		\$ 19,949	
Capital Recovery CRF=	0.14569	1.5% for 10 years	\$ 145,315	
TOTAL FIXED COSTS (B)=			\$ 238,164	
TOTAL ANNUALIZED COSTS (A +B)=			\$ 528,796	
Uncontrolled Emissions Rate (tons/year) based on 6.0 lbs CO/ton of metal poured (for PCS) and 76,572 tons/year metal poured limit.				
			39.90	
Control System Efficiency based on 90 capture and 98% control				
			88.2%	
Controlled Emissions Rate (tons/year)=				
			4.71	
VOC Controlled, tons/year				
			35.19	
Cost (\$/ton)=				
			\$15,026	

EPA Air Pollution Control Cost Manual, Sixth Edition, EPA-452-02-001, January 2002.

TOTAL ANNUAL COST SPREADSHEET PROGRAM--REGENERATIVE THERMAL OXIDIZERS

COST BASE DATE: December 1988 [1]
VAPCCI (Third Quarter 1995) 104.9

INPUT PARAMETERS

-- Gas flowrate (scfm): 10000
 -- Reference temperature (oF) 77
 -- Inlet gas temperature (oF) 80
 -- Inlet gas density (lb/scf) 0.0739
 -- Primary heat recovery (f) 0.95
 -- Waste gas heat content (f) 0
 -- Waste gas heat content (f) 0.00
 -- Gas heat capacity (BTU/lb) 0.255
 -- Combustion temperature (oF) 1400
 -- Heat loss (fraction): 0.01
 -- Exit temperature (oF): 146
 -- Fuel heat of combustion 21502
 -- Fuel density (lb/ft3): 0.0408

DESIGN PARAMETERS

Auxiliary Fuel Requirement 0.695
 (sc 17.0 1.0 MMBtu/hr
 Total Gas Flowrate (scfm): 10017

TOTAL CAPITAL INVESTMENT (\$) [3]
 (Cost correlations range: 5000 to 500,000 scfm)

@ 95 % heat recovery--bas: 786,390
 --esc: 902,205