INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
MC 61-53 IGCN 1003
(317) 232-8603
(800) 451-6027
www.IN.gov/idem

TO: Interested Parties / Applicant

DATE: October 23, 2007

RE: Warsaw Foundry Company, Inc. / 085-24317-00006

FROM: Nisha Sizemore
Chief, Permits Branch
Office of Air Quality

Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, 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 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

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

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

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

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

Enclosures
FNPER.dot 03/23/06

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Mr. John Petro
Warsaw Foundry Company, Inc.
1212 North Detroit Street
Warsaw, Indiana 46580

October 23, 2007

Re: 085-24317-00006
First Significant Permit Revision to
FESOP No. 085-14520-00006

Dear Mr. Petro:

Warsaw Foundry Company, Inc. was issued a Federally Enforceable State Operating Permit (FESOP) on October 20, 2006, for a stationary gray and ductile iron foundry. A letter requesting changes to this permit was received on February 12, 2007. Pursuant to the provisions of 326 IAC 2-8-11.1, a significant permit revision to this permit is hereby approved as described in the attached Technical Support Document (TSD) and Addendum to the TSD.

The modification consists of the following changes:

1. Revise the stack testing schedule for the existing cupola;

2. Revise and amend the permit to reflect that emissions from pouring/casting operations are uncontrolled;

3. Revise the metal throughput rate for the existing electric induction furnace to reflect the process melt rate;

4. Revise the throughput capacity for the existing emission/process units (charge handling operation, pouring/casting operation, castings cooling operation, castings shakeout operation, wheelbrator shot blast unit, sand handling operation, and inoculation/magnesium treatment processes);

5. Delete emission statement requirement from Section C of the permit; and

6. Adjust the emission cap limitations under 326 IAC 2-2 (PSD) and 326 IAC 2-8 (FESOP).

After these revisions, the Permittee will continue to comply with the provisions of 326 IAC 2-8 (FESOP) by limiting the potential emissions from the entire source of each criteria pollutant and HAPs under major source threshold levels.

The following conditions are applicable to the proposed project:

1. Effective Date of the Permit: Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

2. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

Pursuant to 326 IAC 2-8-11.1, this permit shall be revised by incorporating the significant permit revision into the permit. All other conditions of the permit shall remain unchanged and in effect. Please find attached a copy of the revised permit.

Pursuant to Contract No. A305-5-65, IDEM, OAQ has assigned the processing of this application to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Bryan Lange, ERG, 1600 Perimeter Park Drive, Morrisville, North Carolina 27560, or call (919) 468-7854 to speak directly to Mr. Lange. Questions may also be directed to Duane Van Laningham at IDEM, OAQ, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana, 46204, or call (800) 451-6027and ask for Duane Van Laningham or extension 3-6878, or dial (317) 233-6878.

Sincerely/Original Signed By,

Nisha Sizemore, Chief
Permits Branch
Office of Air Quality

Attachments

ERG/BL

cc: File - Kosciusko County
U.S. EPA, Region V
Kosciusko County Health Department
IDEM - Northern Regional Office
Air Compliance Section Inspector
Compliance Data Section
Administrative and Development
Technical Support and Modeling
Billing, Licensing, & Training Section

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FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) OFFICE OF AIR QUALITY

Warsaw Foundry Company, Inc.
1212 North Detroit Street
Warsaw, Indiana 46580

(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. 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.

Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a FESOP under 326 IAC 2-8.

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 2-8 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.: F 085-14520-00006	
Original signed by: Nisha Sizemore, Chief Permits Branch Office of Air Quality	Issuance Date: October 20, 2006 Expiration Date: October 20, 2011

First Significant Permit Revision No.: 085-24317-00006	Affected Pages: Entire Permit
Issued by/Original Signed By: Nisha Sizemore, Chief Permits Branch Office of Air Quality	Issuance Date: October 23, 2007 Expiration Date: October 20, 2011

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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 2-8-3(b)]

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

Source Address:	1212 North Detroit Street, Warsaw, Indiana 46580
Mailing Address:	P.O. Box 227, Warsaw, Indiana 46581
General Source Phone Number:	574-267-8772
SIC Code:	3321
County Location	Kosciusko
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit (FESOP) Minor Source, under PSD Rules; Minor Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

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

(a) One (1) charge handling operation, identified as EU1, installed prior to 1960, capacity: 1.6 tons of metal per hour.

(b) One (1) cupola, identified as EU2, installed prior to 1960, equipped with a natural gas-fired afterburner rated at 1.0 million British thermal units per hour, and a venturi scrubber, exhausted through Stack C1, capacity: 5.0 tons of metal per hour. This unit will serve as a back-up unit.

(c) One (1) electric induction furnace, identified as EU3, installed in November 2000, capacity: 1.6 tons of metal per hour.

(d) One (1) magnesium treatment process, installed in 2000, capacity: 1.5 tons of metal per hour.

(e) One (1) inoculation process, identified as inoculation process, installed in 1960, capacity: 1.6 tons of metal per hour.

(f) One (1) pouring/casting operation, identified as EU4, installed prior to 1979, with emissions uncontrolled, capacity: 1.6 tons of metal per hour and 9.6 tons of sand per hour.

(g) One (1) castings cooling operation, identified as EU5A and EU5B, installed prior to 1979, with south area EU5A controlled by Mold/Dump Baghouse (MDBH) and exhausted through Stack B4, and east area EU5B controlled by Main Baghouse (MBH) and exhausted through Stack B3, capacity: 1.6 tons of metal per hour and 9.6 tons of sand per hour.

(h) One (1) castings shakeout operation, identified as EU6, installed prior to 1979, equipped with a baghouse, identified as Main Baghouse (MBH), installed in 1991, exhausted through Stack B3, capacity: 1.6 tons of metal per hour and 9.6 tons of sand per hour.

(i) One (1) cleaning and finishing operation, identified as EU8A and EU8B, installed prior to 1979, consisting of the following:

(1) One (1) grinding area (EU8A), consisting of two (2) single station and two (2) double station grinding machines, equipped with a baghouse, identified as Grinding Baghouse (GBH), exhausted through Stack B1, capacity: 1.6 tons of metal per hour.

(2) One (1) Wheelabrator shot blast unit (EU8B), equipped with a baghouse, identified as Wheelabrator Baghouse (WBH), exhausted through Stack B2, capacity: 1.6 tons of metal per hour.

(j) One (1) sand handling operation, identified as EU9, installed prior to 1979, equipped with a baghouse, identified as Main Baghouse (MBH), installed in 1991, exhausted through Stack B3, capacity: 9.6 tons of sand per hour.

(k) One (1) natural gas-fired oil core oven, identified as EU10, installed in 1946, exhausted through Stack O1, rated at 0.5 million British thermal units per hour, capacity: 0.75 tons of sand per hour.

(l) One (1) core wash and mold parting, identified as EU12, installed prior to 1987, capacity: 0.85 tons of cores per hour, 0.178 pounds of core wash per hour, 0.226 pounds of thinner per hour, and 2.76 pounds of liquid parting per hour.

(m) One (1) core making operation, consisting of fifteen (15) shell core machines, collectively identified as EU11, capacity: 0.75 tons of sand per hour, total, consisting of the following:

(1) Three (3) U180 Shalco machines, installed in 1998, capacity: 200 pounds per hour, each.

(2) One (1) U150 Shalco machine, installed in 1998, capacity: 100 pounds per hour.

(3) Three (3) Dependable 100 machines, installed between 1960 and 1980, capacity: 100 pounds per hour, each.

(4) Five (5) Dependable 200 machines, installed between 1960 and 1980, capacity: 150 pounds per hour, each.

(5) One (1) Dependable 300 machines, installed between 1960 and 1980, capacity: 200 pounds per hour.

(6) Two (2) Redford HP43 machines, installed between 1960 and 1980, capacity: 200 pounds per hour, each.

A.3 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-8-3(c)(3)(I)]

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

(a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour with a total rating of 1.20 million British thermal units per hour consisting of:

Two (2) ladle heating torches, identified as EU13, installed prior to 1987, capacity: 0.60 million British thermal units per hour, total.

(b) The following VOC and HAP storage containers: vessels storing lubricating oil, hydraulic oils, machining oils, and machining fluids.

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

(d) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment. [326 IAC 6-3-2]

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

(f) Paved and unpaved roads and parking lots with public access.

A.4 FESOP Applicability [326 IAC 2-8-2]

This stationary source, otherwise required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) for a Federally Enforceable State Operating Permit (FESOP).

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-8-1]

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 2-8-4(2)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]

(a) This permit, F085-14520-00006, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

(b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

B.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 2-8-6]

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 2-8-4(4)]

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 2-8-4(5)(D)]

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

B.7 Duty to Provide Information [326 IAC 2-8-4(5)(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 an “authorized individual” as defined by 326 IAC 2-1.1-1(1). 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 2-8-3(d)][326 IAC 2-8-4(3)(C)(i)][326 IAC 2-8-5(1)]

(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 an “authorized individual” of truth, accuracy, and completeness. This

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

(b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.

(c) an "authorized individual" is defined at 326 IAC 2-1.1-1(1).

B.9 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]

(a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted 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

(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 2-8-4(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 an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

B.10 Compliance Order Issuance [326 IAC 2-8-5(b)]

IDEM, OAQ may issue a compliance order to this Permittee upon discovery that this permit is in nonconformance with an applicable requirement. The order may require immediate compliance or contain a schedule for expeditious compliance with the applicable requirement.

B.11 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)][326 IAC 2-8-5(a)(1)]

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

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

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

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

The PMP extension notification does not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(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 an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

B.12 Emergency Provisions [326 IAC 2-8-12]

(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 except as provided in 326 IAC 2-8-12.

(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 notifies 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 2-8-4(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 an “authorized individual” as defined by 326 IAC 2-1.1-1(1).

(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 2-8-3(c)(6) 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 2-8 and any other applicable rules.

(g) Operations may continue during an emergency only if the following conditions are met:

(1) 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.

(2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:

(A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and

(B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

Any operations shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

(h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

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

(a) All terms and conditions of permits established prior to F085-14520-00006 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

(2) revised, or

(3) deleted.

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

B.14 Termination of Right to Operate [326 IAC 2-8-9][326 IAC 2-8-3(h)]

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) monthsprior to the date of expiration of the source’s existing permit, consistent with 326 IAC 2-8-3(h) and 326 IAC 2-8-9.

B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(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 an “authorized individual” as defined by 326 IAC 2-1.1-1(1).

(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 2-8-4(5)(C)] [326 IAC 2-8-7(a)] [326 IAC 2-8-8]

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Federally Enforceable State 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 2-8-4(5)(C)]The notification by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(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 2-8-8(a)]

(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 2-8-8(b)]

(d) The reopening and revision of this permit, under 326 IAC 2-8-8(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 2-8-8(c)]

B.17 Permit Renewal [326 IAC 2-8-3(h)]

(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 2-8-3. 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 an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
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) monthsprior 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 2-8 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 Revision [326 IAC 2-8-10][326 IAC 2-8-11.1]

(a) Permit amendments and revisionsare governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 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 an “authorized individual” as defined by 326 IAC 2-1.1-1(1).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.19 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-8-15(b) through (d)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 approval required by 326 IAC 2-8-11.1 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 2-8-

15(b) through (d). 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 2-8-15(b)(2), (c)(1), and (d).

(b) Emission Trades [326 IAC 2-8-15(c)]
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(c).

(c) Alternative Operating Scenarios [326 IAC 2-8-15(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 2-8-4(7). No prior notification of IDEM, OAQ, or U.S. EPA is required.

(d) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.20 Source Modification Requirement [326 IAC 2-8-11.1]

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2 and 326 IAC 2-8-11.1.

B.21 Inspection and Entry [326 IAC 2-8-5(a)(2)][IC 13-14-2-2][IC 13-17-3-2][IC13-30-3-1]

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

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

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

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

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

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

B.22 Transfer of Ownership or Operational Control [326 IAC 2-8-10]

(a) The Permittee must comply with the requirements of 326 IAC 2-8-10 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 an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16][326 IAC 2-1.1-7]

(a) The Permittee shall pay annual fees to IDEM, OAQ, within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ, the applicable fee is due April 1 of each year.

(b) Except as provided in 326 IAC 2-7-19(e), failure to pay may result in administrative enforcement action or revocation of this permit.

(c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.24 Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][62 FR 8314] [326 IAC 1-1-6]

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

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-8-4(1)]

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

Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) and 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 Overall Source Limit [326 IAC 2-8] [326 IAC 2-2]

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

(a) Pursuant to 326 IAC 2-8:

(1) The potential to emit any regulated pollutant, except particulate matter (PM), from the entire source shall be limited to less than one-hundred (100) tons per twelve (12) consecutive month period. This limitation shall also make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable;

(2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and

(3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.

(b) Pursuant to 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), potential to emit particulate matter (PM) from the entire source shall be limited to less than one-hundred (100) tons per twelve (12) consecutive month period. This limitation shall also make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

(c) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided the source's potential to emit does not exceed the above specified limits.

(d) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

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

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

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

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2.

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

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

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

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

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

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

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

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

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

(A) Asbestos removal or 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 an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(e) Procedures for Asbestos Emission Control
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

(f) Demolition and Renovation
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).

(g) Indiana Accredited Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos.

Testing Requirements [326 IAC 2-8-4(3)]

C.9 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 an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(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 an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

Compliance Requirements [326 IAC 2-1.1-11]

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

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

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

C.11 Compliance Monitoring [326 IAC 2-8-4(3)][326 IAC 2-8-5(a)(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 an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

C.12 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.13 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)][326 IAC 2-8-5(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 2-8-4][326 IAC 2-8-5(a)(1)]

C.14 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

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

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

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

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

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

The ERP does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) If the ERP is disapproved by IDEM, OAQ, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.

(d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.

(e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.

(f) Upon direct notification by IDEM, OAQ that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

C.15 Risk Management Plan [326 IAC 2-8-4] [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.16 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]

(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.17 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4][326 IAC 2-8-5]

(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 response action documents submitted pursuant to this condition do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

C.18 General Record Keeping Requirements.[326 IAC 2-8-4(3)] [326 IAC 2-8-5]

(a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.19 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

(a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by an “authorized individual” as defined by 326 IAC 2-1.1-1(1).

(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 an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(e) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years, 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) 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 2-8-4(10)]: Melting, pouring operations

(a) One (1) charge handling operation, identified as EU1, installed prior to 1960, capacity: 1.6 tons of metal per hour.

(b) One (1) cupola, identified as EU2, installed prior to 1960, equipped with a natural gas-fired afterburner rated at 1.0 million British thermal units per hour, and a venturi scrubber, exhausted through Stack C1, capacity: 5.0 tons of metal per hour.

(c) One (1) electric induction furnace, identified as EU3, installed in November 2000, capacity: 1.6 tons of metal per hour.

(d) One (1) magnesium treatment process, installed in 2000, capacity: 1.5 tons of metal per hour.

(e) One (1) inoculation process, identified as inoculation process, installed in 1960, capacity: 1.6 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 2-8-4(1)]

D.1.1 Metal Throughput Limit [326 IAC 2-8-4]

The total combined metal throughput to the one (1) cupola and the one (1) electric induction furnace shall be limited to less than 11,300 tons per twelve (12) consecutive month period, with compliance determined at the end of each month. Therefore, the requirements of 326 IAC 2-7 and 326 IAC 2-2 are not applicable.

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

(a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the charge handling operation (EU1), shall not exceed 5.61 pounds per hour when operating at a process weight rate of 1.6 tons per hour.

(b) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the one (1) electric induction furnace (EU3) shall not exceed 5.61 pounds per hour when operating at a process weight rate of 1.6 tons per hour.

(c) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the magnesium treatment process shall not exceed 5.38 pounds per hour when operating at a process weight rate of 1.5 tons per hour.

(d) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the inoculation process shall not exceed 5.61 pounds per hour when operating at a process weight rate of 1.6 tons per hour.

The above 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:

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

D.1.3 Particulate [326 IAC 11-1]

Pursuant to 326 IAC 11-1 (Existing Foundries), the particulate emission rate from the one (1) cupola shall not exceed 16.65 pounds per hour when operating at a process weight rate of 5.0 tons per hour.

D.1.4 Particulate Matter (PM_{10}) [326 IAC 2-8-4] [326 IAC 2-2]

(a) The PM_{10} emission rate from the one (1) charge handling operation (EU1) shall not exceed 0.36 pounds per ton of metal melted.

(b) The PM_{10} emission rate from the one (1) cupola (EU2) after controls shall not exceed 12.4 pounds per ton of metal melted.

(c) The PM_{10} emission rate from the one (1) electric induction furnace (EU3) shall not exceed 0.86 pounds per ton of metal melted.

(d) The PM_{10} emission rate from the one (1) magnesium treatment process shall not exceed 1.80 pounds per ton of metal melted.

(e) The PM_{10} emission rate from the one (1) inoculation process shall not exceed 4.00 pounds per ton of metal melted.

Compliance with these limits, in conjunction with the other PM10 limits included in this permit, limit the source-wide emissions to less than 100 tons per year and render 326 IAC 2-2 (Prevention of Significant Deterioration) and 326 IAC 2-7 (Part 70 Program) not applicable.

D.1.5 Particulate Matter (PM) [326 IAC 2-2]

(a) The PM emission rate from the one (1) charge handling operation (EU1) shall not exceed 0.60 pounds per ton of metal melted.

(b) The PM emission rate from the one (1) cupola (EU2) after controls shall not exceed 13.8 pounds per ton of metal melted.

(c) The PM emission rate from the one (1) electric induction furnace (EU3) shall not exceed 0.90 pounds per ton of metal melted.

(d) The PM emission rate from the one (1) magnesium treatment process shall not exceed 1.80 pounds per ton of metal melted.

(e) The PM emission rate from the one (1) inoculation process shall not exceed 4.00 pounds per ton of metal melted.

Compliance with these limits, in conjunction with the other PM limits included in this permit, limit the source-wide emissions to less than 100 tons per year and render 326 IAC 2-2 (Prevention of Significant Deterioration) and 326 IAC 2-7 (Part 70 Program) not applicable.

D.1.6 Carbon Monoxide (CO) [326 IAC 2-8-4] [326 IAC 2-2]

The CO emission rate from the one (1) cupola (EU2) after controls shall not exceed 10.87 pounds per ton of metal melted. Compliance with this limit, in conjunction with the other CO limits included in this permit, limit source-wide emissions to less than 100 tons per year and render 326 IAC 2-2 (Prevention of Significant Deterioration) and 326 IAC 2-7 (Part 70 Program) not applicable.

D.1.7 Metallic HAP Minor Limits [326 IAC 2-8-4] [326 IAC 2-2]

(a) Emissions of lead emission from the cupola (EU2) shall not exceed 6.22 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

(b) Emissions of manganese from the cupola (EU2) shall not exceed 2.42 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

(c) Emission of any combination of HAPs from the cupola shall not exceed 8.87 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

(d) Emissions of lead from the electric induction furnace shall not exceed 0.70 ton per twelve (12) consecutive month period, with compliance determined at the end of each month;

(e) Emissions of manganese from the electric induction furnace shall not exceed 0.20 ton per twelve (12) consecutive month period, with compliance determined at the end of each month;

(f) Emissions of any combination of HAPs from the electric induction furnace shall not exceed 0.92 ton per twelve (12) consecutive month period, with compliance determined at the end of each month;

Compliance with the lead and manganese emission limits above in conjunction with the other lead and manganese limits included in this permit limit source-wide lead emissions and source-wide manganese emissions to less than 10 tons per year, each. Compliance with the combined metal HAP limits above in conjunction with the other combined HAP limits included in this permit limit source-wide emissions of any combination of HAPs to less than 25 tons per year. Therefore, the requirements of 326 IAC 2-7 (Part 70 Program) and 326 IAC 2-2 (Prevention of Significant Deterioration) are not applicable.

(g) The Permittee shall operate the cupola afterburner such that the 15-minute average combustion zone temperature does not fall below 1,400 degrees Fahrenheit (°F). Periods when the cupola is off blast and for 15 minutes after going on blast from an off blast condition are not included in the 15-minute average.

D.1.8 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the one (1) cupola, the cupola charge door, and any control devices.

Compliance Determination Requirements

D.1.9 Emission Controls

In order to comply with Conditions D.1.3, D.1.4(b), D.1.5(b), D.1.6, and D.1.7(a), D.1.7(b), and D.1.7(c), the afterburner and wet scrubber for PM, PM_{10}, CO and lead control shall be in operation and control emissions from the one (1) cupola at all times that the one (1) cupola is in operation.

D.1.10 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

Within 180 days after the first day of restarting operation of the cupola, in order to demonstrate compliance with Conditions D.1.3, D.1.4(b), D.1.5(b), D.1.6, D.1.7(a), D.1.7(b), and D.1.7(c), the Permittee shall perform CO, PM, PM_{10}, lead, manganese, and total metal HAPs testing utilizing methods as approved by the Commissioner. This testing shall be repeated at least once every two and one-half (2.5) years from the date of this valid compliance demonstration. PM_{10} includes filterable and condensable PM_{10}. Testing shall be conducted in accordance with Section C - Performance Testing.

D.1.11 Metal HAP Emissions

Compliance with the HAP limits in condition D.1.7 shall be demonstrated using the following equations:

(a) Lead Emissions from the cupola (tons/yr) = EF_{CPb} (lb/ton) x M_C (tons per twelve (12) consecutive month period) x (1 ton / 2000 pounds)

Where:

EF_{CPb} = 1.10 pound lead per ton of metal throughput (or an emission factor determined from the most recent compliance stack test)
M_C = total metal throughput to the cupola (tons per twelve (12) consecutive month period)

(b) Lead Emissions from the electric induction furnace (tons/yr) = EF_{FPb} (lb/ton) x M_F (tons per twelve (12) consecutive month period) x (1 ton / 2000 pounds)

Where:
EF_{FPb} = 0.10 pound lead per ton of metal throughput (or an emission factor determined from the most recent compliance stack test)
M_F = total metal throughput to the electric induction furnace and (tons per twelve (12) consecutive month period)

(c) Manganese Emissions from the cupola (tons/yr) = EF_{CMn} (lb/ton) x M_C (tons per twelve (12) consecutive month period) x (1 ton / 2000 pounds)

Where:
EF_{CMn} = 0.4278 pound manganese per ton of metal throughput (or an emission factor determined from the most recent compliance stack test)
M_C = total metal throughput to the cupola (tons per twelve (12) consecutive month period)

(d) Manganese Emissions from the electric induction furnace (tons/yr) = EF_{FMn} (lb/ton) x M_F (tons per twelve (12) consecutive month period) x (1 ton / 2000 pounds)

Where:
EF_{FMn} = 0.0279 pound manganese per ton of metal throughput (or an emission factor determined from the most recent compliance stack test)
M_F = total metal throughput to the electric induction furnace (tons per twelve (12) consecutive month period)

(e) Total Metal HAP Emissions from the cupola (tons/yr) = EF_{CTM} (lb/ton) x M_C (tons per twelve (12) consecutive month period) x (1 ton / 2000 pounds)

Where:
EF_{CTM} = 1.57 pound combined metal HAP per ton of metal throughput (or an emission factor determined from the most recent compliance stack test)
M_C = total metal throughput to the cupola (tons per twelve (12) consecutive month period)

(f) Total Metal HAP Emissions from the electric induction furnace (tons/yr) = EF_{FTM} (lb/ton) x M_F (tons per twelve (12) consecutive month period) x (1 ton / 2000 pounds)

Where:
EF_{FTM} = 0.13 pound combined metal HAP per ton of metal throughput (or an emission factor determined from the most recent compliance stack test)
M_F = total metal throughput to the electric induction furnace (tons per twelve (12) consecutive month period)

(g) Upon IDEM approval of lead and manganese compliance stack test results on the cupola and electric induction furnace, the following shall apply:

(1) The lead and manganese emission factors in pound per ton obtained from the IDEM approved stack test results shall be used for the variables identified above as EF_{CPb}, EF_{CMn}, EF_{FPb}, and EF_{FMn}.

(2) The total metal HAP emission factor in pound per ton that shall be used for the variables EF_{CTM} and EF_{FTM} shall be the sum of the lead emission factor

obtained from the stack test, the manganese emission factor obtained from the stack test and the remaining non-lead and non-manganese metal HAP emission factors used to calculate emissions.

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

D.1.12 Visible Emissions Notations

(a) Visible emission notations of the cupola stack exhaust (Stack C1) and the cupola charge door 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.

D.1.13 Parametric Monitoring

The Permittee shall record the flow rate and the pressure drop across the scrubber at least once per day when the one (1) cupola is in operation. When for any one (1) reading, the pressure drop across the scrubber is less than the minimum of 16.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. When for any one (1) reading, the flow rate for the scrubbing liquor is less than the minimum of 198 gallons of water per minute or a flow rate established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure reading or a flow rate less than the above mentioned minimums is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

The instrument used for determining the flow rate and pressure drop 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.1.14 Failure Detection

In the event that a scrubber failure has been observed:

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

D.1.15 Afterburner Temperature

(a) A continuous monitoring system shall be calibrated, maintained, and operated on the afterburner for measuring operating temperature. For the purpose of this condition, continuously means no less than once per minute. The output of this system shall be recorded as an hourly average. From the date of issuance of this permit until the approved stack

test results are available, the Permittee shall take appropriate response steps in accordance with Section C - Response to Excursions or Exceedances whenever the hourly average temperature of the afterburner is below 1400°F. An hourly average temperature that is below 1400°F is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

(b) The Permittee shall determine the hourly average temperature from the most recent valid stack test that demonstrates compliance with limits in Conditions D.1.3, D.1.4(b), D.1.5(b), D.1.6 and D.1.7, as approved by IDEM.

(c) On and after the date the approved stack test results are available, the Permittee shall take appropriate response steps in accordance with Section C - Response to Excursions or Exceedances whenever the hourly average temperature of the afterburner is below the hourly average temperature as observed during the compliant stack test. An hourly average temperature that is below the hourly average temperature as observed during the compliant stack test is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.1.16 Record Keeping Requirements

(a) To document compliance with Condition D.1.1, the Permittee shall maintain monthly records of the amount of metal melted in the one (1) cupola and the amount of metal melted in the one (1) electric induction furnace.

(b) To document compliance with Condition D.1.7, the Permittee shall maintain records of the following:

(1) tons of metal throughput to the cupola and electric induction furnace for each month;

(2) Metallic HAP stack test results for the cupola and electric induction furnace as applicable;

(3) Metallic HAP emission calculations performed using the equations in condition D.1.11; and

(4) Metallic HAP emissions in tons per year.

(c) To document compliance with Condition D.1.12, the Permittee shall maintain records of once per day visible emission notations of the cupola stack exhaust (Stack C1) and the cupola charge door. 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).

(d) To document compliance with Condition D.1.13, the Permittee shall maintain once per day records of the pressure drop and flow rate. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of visible emission notation, (e.g. the process did not operate that day).

(e) To document compliance with Condition D.1.15, the Permittee shall maintain the continuous temperature records (reduced to an hourly average basis) for the afterburner and the hourly average temperature used to demonstrate compliance during the most recent compliant stack test.

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

D.1.17 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.1.1 and D.1.7 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 "authorized individual" as defined by 326 IAC 2-1.1-1(1).

SECTION D.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]: Casting, cooling, sand and finishing

(f) One (1) pouring/casting operation, identified as EU4, installed prior to 1979, with emissions uncontrolled, capacity: 1.6 tons of metal per hour and 9.6 tons of sand per hour.

(g) One (1) castings cooling operation, identified as EU5A and EU5B, installed prior to 1979, with south area EU5A controlled by Mold/Dump Baghouse (MDBH) and exhausted through Stack B4, and east area EU5B controlled by Main Baghouse (MBH) and exhausted through Stack B3, capacity: 1.6 tons of metal per hour and 9.6 tons of sand per hour.

(h) One (1) castings shakeout operation, identified as EU6, installed prior to 1979, equipped with a baghouse, identified as Main Baghouse (MBH), installed in 1991, exhausted through Stack B3, capacity: 1.6 tons of metal per hour and 9.6 tons of sand per hour.

(i) One (1) cleaning and finishing operation, identified as EU8A and EU8B, installed prior to 1979, consisting of the following:

(1) One (1) grinding area (EU8A), consisting of two (2) single station and two (2) double station grinding machines, equipped with a baghouse, identified as Grinding Baghouse (GBH), exhausted through Stack B1, capacity: 1.6 tons of metal per hour.

(2) One (1) Wheelabrator shot blast unit (EU8B), equipped with a baghouse, identified as Wheelabrator Baghouse (WBH), exhausted through Stack B2, capacity: 1.6 tons of metal per hour.

(j) One (1) sand handling operation, identified as EU9, installed prior to 1979, equipped with a baghouse, identified as Main Baghouse (MBH), installed in 1991, exhausted through Stack B3, capacity: 9.6 tons of sand 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 2-8-4(1)]

D.2.1 Particulate [326 IAC 6-3-2]

(a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the grinding area (EU8A), exhausting to Stack B1, shall not exceed 5.61 pounds per hour when operating at a process weight rate of 1.6 tons per hour.

(b) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the Wheelabrator shot blast (EU8B), exhausting to Stack B2, shall not exceed 5.61 pounds per hour when operating at a process weight rate of 1.6 tons per hour.

(c) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the east casting cooling operation (EU5B), and the castings shakeout process (EU6) when operating at a process weight rate of 1.6 tons per hour, and the sand handling system (EU9), when operating at a process weight rate of 9.6 tons per hour, all exhausting to Stack B3, shall not exceed a total of 20.6 pounds per hour when operating at a process weight rate of 11.2 tons per hour.

(d) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the south casting cooling operation

(EU5A), exhausting to Stack B4, shall not exceed a total of 5.61 pounds per hour when operating at a process weight rate of 1.6 tons per hour.

(e) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the pouring and casting operation (EU4) shall not exceed 5.61 pounds per hour when operating at a process weight rate of 1.6 tons per hour.

The above pounds per hour limitations were calculated with the following equations:

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.2.2 Particulate Matter (PM_{10}) [326 IAC 2-8-4] [326 IAC 2-2]

(a) The PM_{10} emission rate from the grinding area (EU8A), exhausting to Stack B1, after controls shall not exceed 0.05 pounds per ton of metal melted.

(b) The PM_{10} emission rate from the Wheelabrator shot blast (EU8B), exhausting to Stack B2, after controls shall not exceed 0.05 pounds per ton of metal melted.

(c) The PM_{10} emission rate from Stack B3 after controls shall not exceed 1.24 pounds per hour.

(d) The PM_{10} emission rate from Stack B4 after controls shall not exceed 0.59 pounds per hour.

(e) The PM_{10} emission rate from pouring/casting operation shall not exceed 2.06 pounds per hour.

Compliance with these limits, in conjunction with the other PM10 limits included in this permit, limit the source-wide emissions to less than 100 tons per year and render 326 IAC 2-2 (Prevention of Significant Deterioration) and 326 IAC 2-7 (Part 70 Program) not applicable.

D.2.3 Particulate Matter (PM) [326 IAC 2-2]

(a) The PM emission rate from the grinding area (EU8A), exhausting to Stack B1, after controls shall not exceed 0.51 pounds per ton of metal melted.

(b) The PM emission rate from the Wheelabrator shot blast (EU8B), exhausting to Stack B2, after controls shall not exceed 0.51 pounds per ton of metal melted.

(c) The PM emission rate from Stack B3 after controls shall not exceed 4.32 pounds per hour.

(d) The PM emission rate from Stack B4 after controls shall not exceed 1.24 pounds per hour.

(e) The PM emission rate from pouring/casting operation shall not exceed 4.20 pounds per hour.

Compliance with these limits, in conjunction with the other PM limits included in this permit, limit the source-wide emissions to less than 100 tons per year and render 326 IAC 2-2 (Prevention of Significant Deterioration) and 326 IAC 2-7 (Part 70 Program) not applicable.

D.2.4 Carbon Monoxide (CO) [326 IAC 2-8-4] [326 IAC 2-2]

The CO emission rate from the one (1) pouring/casting operation (EU4), the one (1) castings cooling operation (EU5A and EU5B) and the one (1) castings shakeout operation (EU6), exhausting to Stacks B3 and B4, shall not exceed a total of 6.0 pounds per ton of metal melted. Compliance with this limit, in conjunction with the other CO limits included in this permit, limit source-wide emissions to less than 100 tons per year and render 326 IAC 2-2 (Prevention of Significant Deterioration) and 326 IAC 2-7 (Part 70 Program) not applicable.

D.2.5 Organic HAP Minor Limits [326 IAC 2-8-4] [326 IAC 2-2]

The total emissions of any combination of organic HAPs from the pouring/casting cooling operations shall not exceed 4.50 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with the combined organic HAP limits above in conjunction with the other combined HAP limits included in this permit limit source-wide emissions of any combination of HAPs to less than 25 tons per year.

D.2.6 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

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

Compliance Determination Requirements

D.2.7 Particulate Matter (PM)

In order to comply with Conditions D.2.1, D.2.2 and D.2.3:

(a) The Main Baghouse (MBH) exhausting to stack B3, for PM and PM_{10} control shall be in operation and control emissions from the east castings cooling (EU5B), the casting shakeout (EU6) and the sand handling operation (EU9) at all times that any of the facilities is in operation.

(b) The Mold/Dump Baghouse (MDBH) exhausting to stack B4, for PM and PM_{10} control shall be in operation and control emissions from the south castings cooling operation (EU5A) at all times that the facility is in operation.

(c) The Grinding Baghouse (GBH) exhausting to stack B1, for PM and PM_{10} control shall be in operation and control emissions from the grinding area (EU8A) at all times that the facility is in operation.

(d) The Wheelabrator Baghouse (WBH) exhausting to stack B2, for PM and PM_{10} control shall be in operation and control emissions from the Wheelabrator shot blast (EU8B) at all times that the facility is in operation.

(e) 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.2.8 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

(a) Within 180 days after issuance of permit No. F085-14520-00006, in order to demonstrate compliance with Conditions D.2.1, D.2.2 and D.2.3, the Permittee shall perform PM and PM_{10} testing of the castings cooling operation (EU5A and EU5B), the castings shakeout process (EU6) and the sand handling process (EU9), utilizing methods as approved by the Commissioner. This testing shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM_{10} includes filterable and condensable PM_{10}. Testing shall be conducted in accordance with Section C - Performance Testing.

(b) Within 180 days after issuance of permit No. F085-14520-00006, in order to demonstrate compliance with Condition D.2.5, the Permittee shall perform total organic HAP testing of the pouring and casting operation (EU4) utilizing methods as approved by the Commissioner. This testing shall be repeated at least once every five (5) years from the date of this valid compliance demonstration.

D.2.9 Organic HAP Emissions

Compliance with the HAP limit in condition D.2.5 shall be demonstrated using the following equation:

Total organic HAPs emissions from the Pouring/Casting Cooling operations (EU4) = EF_{PCCTO} (lb/ton) x M_{PCC} (tons per twelve (12) consecutive month period) x (1 ton / 2000 pounds)

Where:

EF_{PCCTO} = total organic HAPs emissions from Pouring/Casting Cooling operations (0.64 pound per ton of metal throughput or an emission factor determined from the most recent compliance stack test)

M_{PCC} = total metal throughput to the Pouring/Casting Cooling operations (tons per twelve (12) consecutive month period)

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

D.2.10 Visible Emissions Notations

(a) Visible emission notations of the castings cooling operation, the castings shakeout operation, the cleaning and finishing operations, and the sand handling system stack exhausts (Stacks B1, B2, B3 and B4) 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.

D.2.11 Parametric Monitoring

(a) The Permittee shall record the pressure drop across the Main Baghouse (MBH) used in conjunction with the east castings cooling operation, the castings shakeout process and the sand handling process, at least once per day when any of the processes are in operation. When for any one reading, the pressure drop across the MBH is outside the normal range of 1.0 and 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 or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

(b) The Permittee shall record the pressure drop across the Grinding Baghouse (GBH) used in conjunction with the cleaning and finishing operations, at least once per day when the cleaning and finishing operations are in operation. When for any one reading, the pressure drop across the GBH is outside the normal range of 1.0 and 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 or Exceedances. A pressure reading that is outside the above mentioned ranges is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

(c) The Permittee shall record the pressure drop across the Wheelabrator Baghouse (WBH) used in conjunction with the cleaning and finishing operations, at least once per day when the cleaning and finishing operations are in operation. When for any one reading, the pressure drop across the WBH is outside the normal range of 1.0 and 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 or Exceedances. A pressure reading that is outside the above mentioned ranges is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

(d) The Permittee shall record the pressure drop across the Mold/Dump Baghouse (MDBH) used in conjunction with the south castings cooling operation, at least once per day when the process is in operation. When for any one reading, the pressure drop across the MDBH is outside the normal range of 1.0 and 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 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.

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.2.12 Broken or Failed Bag Detection

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

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

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

Record Keeping and Reporting Requirement [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.2.13 Record Keeping Requirements

(a) To document compliance with Condition D.2.5, the Permittee shall maintain records of the following:

(1) tons of metal throughput to each of the pouring/casting cooling operation for each month;

(2) Organic HAP stack test results for the pouring/casting cooling operations as applicable;

(3) Organic HAP emission calculations performed using the equations in condition D.2.9; and

(4) Organic HAP emissions in tons per year.

(b) To document compliance with Condition D.2.10, the Permittee shall maintain daily records of visible emission notations for the castings cooling operation, the castings shakeout operation, the cleaning and finishing operations, and the sand handling system stack exhausts (Stacks B1, B2, B3 and B4) during normal daylight operations. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation, (e.g. the process did not operate that day).

(c) To document compliance with Condition D.2.11, the Permittee shall maintain records once per day of the pressure drop. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of visible emission notation, (e.g. the process did not operate that day).

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

D.2.14 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.2.9 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 “authorized individual” as defined by 326 IAC 2-1.1-1(1).

SECTION D.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]: Coremaking operations

(i) One (1) natural gas-fired oil core oven, identified as EU10, installed in 1946, exhausted through Stack O1, rated at 0.5 million British thermal units per hour, capacity: 0.75 tons of sand per hour.

(j) One (1) core wash and mold parting, identified as EU12, installed prior to 1987, capacity: 0.85 tons of cores per hour, 0.178 pounds of core wash per hour, 0.226 pounds of thinner per hour, and 2.76 pounds of liquid parting per hour.

(m) One (1) core making operation, consisting of fifteen (15) shell core machines, collectively identified as EU11, capacity: 0.75 tons of sand per hour, total, consisting of the following:

(1) Three (3) U180 Shalco machines, installed in 1998, capacity: 200 pounds per hour, each.

(2) One (1) U150 Shalco machine, installed in 1998, capacity: 100 pounds per hour.

(3) Three (3) Dependable 100 machines, installed between 1960 and 1980, capacity: 100 pounds per hour, each.

(4) Five (5) Dependable 200 machines, installed between 1960 and 1980, capacity: 150 pounds per hour, each.

(5) One (1) Dependable 300 machines, installed between 1960 and 1980, capacity: 200 pounds per hour.

(6) Two (2) Redford HP43 machines, installed between 1960 and 1980, capacity: 200 pounds per hour, each.

(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 2-8-4(1)]

D.3.1 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the oil core oven (EU10), shall not exceed 3.38 pounds per hour when operating at a process weight rate of 0.75 tons per hour.

This pound 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.3.2 Organic HAP Minor Limits [326 IAC 2-8-4] [326 IAC 2-2]

(a) The total emissions of toluene from the core making operation shall not exceed 4.50 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

(b) The total emissions of phenol from the core making operation shall not exceed 4.50 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

(c) The total emissions of benzene from the core making operation shall not exceed 4.50 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

(d) The total emissions of any combination of organic HAPs from the core making operation shall not exceed 4.50 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

Compliance with the toluene, phenol and benzene emission limits above limit source-wide toluene, phenol and benzene emissions to less than 10 tons per year, each. Compliance with the combined organic HAP limits above in conjunction with the other combined HAP limits included in this permit limit source-wide emissions of any combination of HAPs to less than 25 tons per year.

Compliance Determination Requirements

D.3.3 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

Within 180 days after issuance of permit No. F085-14520-00006, in order to demonstrate compliance with Conditions D.3.2, the Permittee shall perform toluene, phenol, benzene, and total organic HAP testing of the core making operation (EU11) utilizing methods as approved by the Commissioner. This testing shall be repeated at least once every five (5) years from the date of this valid compliance demonstration.

D.3.4 Organic HAP Emissions

Compliance with the HAP limits in condition D.3.2 shall be demonstrated using the following equations:

(a) Toluene emissions from the core making operation (EU11) = EF_{CMT} (lb/ton) x M_{CM} (tons per twelve (12) consecutive month period) x (1 ton / 2000 pounds)

Where:
EF_{CMT} = toluene emissions from core making (1.37 pound per ton of metal throughput or an emission factor determined from the most recent compliance stack test)
M_{CM} = total metal throughput to the core making (tons per twelve (12) consecutive month period)

(b) Phenol emissions from the core making operation (EU11) = EF_{CMP} (lb/ton) x M_{CM} (tons per twelve (12) consecutive month period) x (1 ton / 2000 pounds)

Where:
EF_{CMP} = phenol emissions from core making (1.37 pound per ton of metal throughput or an emission factor determined from the most recent compliance stack test)
M_{CM} = total metal throughput to the core making (tons per twelve (12) consecutive month period)

(c) Benzene emissions from the core making operation (EU11) = EF_{CMB} (lb/ton) x M_{CM} (tons per twelve (12) consecutive month period) x (1 ton / 2000 pounds)

Where:
EF_{CMB} = benzene emissions from core making (1.37 pound per ton of metal throughput or an emission factor determined from the most recent compliance stack test)
M_{CM} = total metal throughput to the core making (tons per twelve (12) consecutive month period)

(d) Total organic HAPs emissions the core making operation (EU11) = EF_{CMTO} (lb/ton) x M_{CM} (tons per twelve (12) consecutive month period) x (1 ton / 2000 pounds)

Where:

EF_{CMTO} = total organic HAPs emissions from core making (1.37 pound per ton of metal throughput or an emission factor determined from the most recent compliance stack test)

M_{CM} = total metal throughput to the core making (tons per twelve (12) consecutive month period)

Record Keeping and Reporting Requirement [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.3.5 Record Keeping Requirements

(a) To document compliance with Condition D.3.2, the Permittee shall maintain records of the following:

(1) tons of metal throughput to each of the core making operation for each month;

(2) Organic HAP stack test results for the core making operation as applicable;

(3) Organic HAP emission calculations performed using the equations in condition D.3.4; and

(4) Organic HAP emissions in tons per year.

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

D.3.6 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.3.2 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 “authorized individual” as defined by 326 IAC 2-1.1-1(1).

SECTION D.4 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]: Insignificant Activities

(a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour with a total rating of 1.20 million British thermal units per hour consisting of:

Two (2) ladle heating torches, identified as EU13, installed prior to 1987, capacity: 0.60 million British thermal units per hour, total.

(b) The following VOC and HAP storage containers: vessels storing lubricating oil, hydraulic oils, machining oils, and machining fluids.

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

(d) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment. [326 IAC 6-3-2]

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

(f) Paved and unpaved roads and parking lots with public access.

(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 2-8-4(1)]

D.4.1 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable PM emission rate from the insignificant brazing equipment, cutting torches, soldering equipment and welding equipment shall not exceed the allowable PM emission rate based on the following equation:

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

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

or

if the process weight rate is less than one hundred pounds per hour, then the allowable emission rate shall be 0.551 pounds per hour.

D.4.2 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

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

(a) Equip the cleaner with a cover;

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

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

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

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

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

D.4.3 Volatile Organic Compounds (VOC) [326 IAC 8-3-5]

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

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

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

(B) The solvent is agitated; or

(C) The solvent is heated.

(2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

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

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

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

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

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

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

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

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

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

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

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) CERTIFICATION

Source Name: Warsaw Foundry Company, Inc.
Source Address: 1212 North Detroit Street, Warsaw, Indiana 46580
Mailing Address: P.O. Box 227, Warsaw, Indiana 46581
FESOP No.: F 085-14520-00006

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

Please check what document is being certified:

☐ Annual Compliance Certification Letter

☐ Test Result (specify) _____

☐ Report (specify) _____

☐ Notification (specify) _____

☐ Affidavit (specify) _____

☐ Other (specify) _____

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

Signature:

Printed Name:

Title/Position:

Phone:

Date:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY

COMPLIANCE BRANCH
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
Phone: 317-233-0178
Fax: 317-233-6865

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
EMERGENCY OCCURRENCE REPORT

Source Name: Warsaw Foundry Company, Inc.
Source Address: 1212 North Detroit Street, Warsaw, Indiana 46580
Mailing Address: P.O. Box 227, Warsaw, Indiana 46581
FESOP No.: F 085-14520-00006

This form consists of 2 pages **Page 1 of 2**

☐ This is an emergency as defined in 326 IAC 2-7-1(12)

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

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

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

If any of the following are not applicable, mark N/A **Page 2 of 2**

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N 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

FESOP Quarterly Report

Source Name: Warsaw Foundry Company, Inc.
Source Address: 1212 North Detroit Street, Warsaw, Indiana 46580
Mailing Address: P.O. Box 227, Warsaw, Indiana 46581
FESOP No.: F 085-14520-00006
Facilities: The one (1) cupola and the one (1) electric induction furnace
Parameter: Total amount of metal melted
Limit: Less than 11,300 tons per twelve (12) consecutive month period with compliance determined at the end of each month

YEAR:

Month	Tons of metal melted	Tons of metal melted	Tons of metal melted
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.

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

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

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

FESOP Quarterly Report

Source Name: Warsaw Foundry Company, Inc.
Source Address: 1212 North Detroit Street, Warsaw, Indiana 46580
Mailing Address: P.O. Box 227, Warsaw, Indiana 46581
FESOP No.: F 085-14520-00006
Facility: Cupola
Parameter: Lead, Manganese, and Total Metal HAP emissions
Limit:

(a) Emissions of lead emission from the cupola (EU2) shall not exceed 6.22 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

(b) Emissions of manganese from the cupola (EU2) shall not exceed 2.42 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

(c) Emission of any combination of HAPs from the cupola shall not exceed 8.87 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

Compliance with the above limits shall be determined using the equations in condition D.1.11(a), (c), and (e). Please attach supporting calculations and data used for determining HAP emissions reported.

YEAR:_____

Month	Column 1a	Column 1b	Column 1c	Column 2a	Column 2b	Column 2c
	Lead Emissions This Month (tons)	Manganese Emissions This Month (tons)	Total HAP Emissions This Month (tons)	Lead Emissions Previous 11 Month (tons)	Manganese Emissions Previous 11 Month (tons)	Total HAP Emissions Previous 11 Month (tons)

This Part 70 Operating Permit Quarterly Report consists of 2 pages.

This Part 70 Operating Permit Quarterly Report consists of 2 pages.

Month	Column 1a + Column 2a	Column 1b + Column 2b	Column 1c + Column 2c
	12 Month Total Lead Emissions (tons)	12 Month Total Manganese Emissions (tons)	12 Month Total HAPs Emissions (tons)

☐ 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

FESOP Quarterly Report

Source Name: Warsaw Foundry Company, Inc.
Source Address: 1212 North Detroit Street, Warsaw, Indiana 46580
Mailing Address: P.O. Box 227, Warsaw, Indiana 46581
FESOP No.: F 085-14520-00006
Facility: Electric Induction Furnace
Parameter: Lead, Manganese, and Total Metal HAP emissions
Limit:

(a) Emissions of lead from the electric induction furnace shall not exceed 0.70 ton per twelve (12) consecutive month period, with compliance determined at the end of each month;

(b) Emissions of manganese from the electric induction furnace shall not exceed 0.20 ton per twelve (12) consecutive month period, with compliance determined at the end of each month;

(c) Emissions of any combination of HAPs from the electric induction furnace shall not exceed 0.92 ton per twelve (12) consecutive month period, with compliance determined at the end of each month;

Compliance with the above limits shall be determined using the equations in condition D.1.11(b), (d), and (f). Please attach supporting calculations and data used for determining HAP emissions reported.

YEAR:_____

Month	Column 1a	Column 1b	Column 1c	Column 2a	Column 2b	Column 2c
	Lead Emissions This Month (tons)	Manganese Emissions This Month (tons)	Total HAP Emissions This Month (tons)	Lead Emissions Previous 11 Month (tons)	Manganese Emissions Previous 11 Month (tons)	Total HAP Emissions Previous 11 Month (tons)

This Part 70 Operating Permit Quarterly Report consists of 2 pages.

This Part 70 Operating Permit Quarterly Report consists of 2 pages.

Month	Column 1a + Column 2a	Column 1b + Column 2b	Column 1c + Column 2c
	12 Month Total Lead Emissions (tons)	12 Month Total Manganese Emissions (tons)	12 Month Total HAPs Emissions (tons)

☐ 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

FESOP Quarterly Report

Source Name: Warsaw Foundry Company, Inc.
Source Address: 1212 North Detroit Street, Warsaw, Indiana 46580
Mailing Address: P.O. Box 227, Warsaw, Indiana 46581
FESOP No.: F 085-14520-00006
Facility: Pouring/Casting Cooling
Parameter: Total Organic HAP emissions
Limit: The total emissions of any combination of organic HAPs from the pouring/casting cooling operations shall not exceed 4.50 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

Compliance with the above limit shall be determined using the equation in condition D.2.9. Please attach supporting calculations and data used for determining HAP emissions reported.

YEAR:_____

Month	Column 1	Column 2	Column 1 + Column 2
	Total Organic HAP Emissions This Month (tons)	Total Organic HAP Emissions Previous 11 Month (tons)	12 Month Total Organic HAPs Emissions (tons)

☐ 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

FESOP Quarterly Report

Source Name: Warsaw Foundry Company, Inc.
Source Address: 1212 North Detroit Street, Warsaw, Indiana 46580
Mailing Address: P.O. Box 227, Warsaw, Indiana 46581
FESOP No.: F 085-14520-00006
Facility: Core Making
Parameter: Toluene, Phenol, Benzene and Total Organic HAP emissions
Limit:

(a) The total emissions of toluene from the core making operation shall not exceed 4.50 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

(b) The total emissions of phenol from the core making operation shall not exceed 4.50 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

(c) The total emissions of benzene from the core making operation shall not exceed 4.50 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

(d) The total emissions of any combination of organic HAPs from the core making operation shall not exceed 4.50 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

Compliance with the above limits shall be determined using the equations in condition D.3.4(a), (b), (c), and (d). Please attach supporting calculations and data used for determining HAP emissions reported.

YEAR:_____

Month	Column 1a	Column 1b	Column 1c	Column 1d	Column 2a	Column 2b
	Toluene Emissions This Month (tons)	Phenol Emissions This Month (tons)	Benzene Emissions This Month (tons)	Total Organic HAP Emissions This Month (tons)	Toluene Emissions Previous 11 Month (tons)	Phenol Emissions Previous 11 Month (tons)

This Part 70 Operating Permit Quarterly Report consists of 2 pages.

This Part 70 Operating Permit Quarterly Report consists of 2 pages.

Month	Column 2c	Column 2d	Column 1a + Column 2a	Column 1b + Column 2b	Column 1c + Column 2c	Column 1d + Column 2d
	Benzene Emissions Previous 11 Month (tons)	Total Organic HAP Emissions Previous 11 Month (tons)	12 Month Total Toluene Emissions (tons)	12 Month Total Phenol Emissions (tons)	12 Month Total Benzene Emissions (tons)	12 Month Total Organic HAPs Emissions (tons)

☐ 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

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: Warsaw Foundry Company, Inc.
Source Address: 1212 North Detroit Street, Warsaw, Indiana 46580
Mailing Address: P.O. Box 227, Warsaw, Indiana 46581
FESOP No.: F 085-14520-00006

Months: _____ to _____ Year: _____

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".	
□ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
□ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

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

☐ No deviation occurred in this quarter.

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

Form Completed By: _____

Title/Position: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

Indiana Department of Environmental Management
Office of Air Quality

Addendum to the Technical Support Document
For a Significant Permit Revision to a
Federally Enforceable State Operating Permit (FESOP)

Source Background and Description

Source Name:	Warsaw Foundry Company, Inc.
Source Location:	1212 North Detroit Street, Warsaw, Indiana 46580
County:	Kosciusko
SIC Code:	3321
Operation Permit No.:	F085-14520-00006
Operation Permit Issuance Date:	October 20, 2006
Significant Permit Revision No.:	085-24317-00006
Permit Reviewer:	ERG/BL

On August 15, 2007, the Office of Air Quality (OAQ) had a notice published in The Times Union, Warsaw, Indiana, stating that Warsaw Foundry Company, Inc. had applied for a Significant Permit Revision to their Federally Enforceable State Operating Permit (FESOP). The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On September 14, 2007, comments on the draft permit were submitted by Joe VanCamp of Cornerstone Environmental on behalf of Warsaw Foundry. The summary of the comments is as follows. Changes made as a result of these comments are shown throughout this addendum. New language is in **bold** while deleted language is in ~~strikeout~~. The Table of Contents has been updated as necessary.

Cornerstone Environmental Comments

Comment 1:

Cornerstone commented that the testing requirements in Condition D.1.10 are unclear and overly burdensome. First, it is not clear that testing (CO, PM, PM10, lead, manganese, and total metal HAPs testing) is required only for the cupola and not the electric induction furnace. HAP testing is not justified for the electric induction furnace. Calculated HAP emissions using a U.S. EPA Speciate v3.2 HAP profile for Gray Iron Foundries and particulate emission factors show that HAP emissions from the electric induction furnace are insignificant when compared to HAP emissions from the cupola.

Second, according to the U.S. EPA's Speciate v3.2 HAP profile for Gray Iron Foundries, the major metal HAPs emitted are lead and manganese. The added expense of testing for total metal HAPs is unwarranted. The condition specifies that testing shall be repeated at least once every two and one half (2.5) years. The testing cycle should be relaxed to once every five (5) years.

Response to Comment 1:

IDEM agrees that HAP emissions from the electric induction furnace are insignificant when compared to HAP emissions from the cupola. Condition D.1.10 will be clarified to specify that HAPs testing at the electric induction furnace is not required.

There is a lack of quality data for HAPs emissions from foundries. Foundries are different in important ways that affect HAPs (e.g. type of binder system, size of molds, amount of cores used). Although EPA's Speciate data provides an appropriate approximation of the HAP profile, it is an inappropriate method for determining compliance with an emission limit. Because of the unreliability of EPA's Speciate data, lead, manganese, and total metal HAPs testing remains a permit requirement.

Because of the high potential emissions, IDEM, OAQ has determined that more frequent testing for the cupola is required. IDEM will agree to re-evaluate the testing frequency after the results of the initial testing results have been reviewed. The following changes have been made to the permit as a result of this comment:

D.1.10 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

Within 180 days after the first day of restarting operation of the cupola, in order to demonstrate compliance with Conditions D.1.3, D.1.4(b), D.1.5(b), D.1.6**,** ~~and~~ D.1.7**(a)**, **D.1.7(b), and D.1.7(c)**, the Permittee shall perform CO, PM, PM_{10}, lead, manganese, and total metal HAPs testing utilizing methods as approved by the Commissioner. This testing shall be repeated at least once every two and one-half (2.5) years from the date of this valid compliance demonstration. PM_{10} includes filterable and condensable PM_{10}. Testing shall be conducted in accordance with Section C - Performance Testing.

Comment 2:

Condition D.2.9(a) requires PM and PM10 emission testing on the castings cooling operation, the castings shakeout process, the cleaning and finishing operations, and the sand handling process. We believe that no PM and PM10 testing should be required on any of these emission units.

Visible emission notation and parametric monitoring requirements in the draft permit for all dust collectors used to control the castings cooling operation, the castings shakeout process, the cleaning and finishing operations, and the sand handling process are sufficient to ensure compliance with all application regulations. All potential emissions were calculated using well-defined or universally accepted AP-42 emission factors.

Stack testing requirements for a grinding process such as that used at Warsaw Foundry is an expensive and inappropriate burden that is not reflective of other similar permits issued by IDEM for small foundries. Furthermore, IDEM has made the following unrealistic assumptions in PM and PM10 emissions calculations for the cleaning and finishing operations (grinding area EU4A and shot blast unit EU8B):

1) IDEM has assumed the throughput to the cleaning and finishing operation is equal to source-wide metal melted throughput limit of 11,300 tons per year. Due to the nature of the foundry processes, approximately 50% of the metal melted and poured into sand molds becomes scrap that is remelted on site. Therefore, only 50% of the total scrap metal melted in the furnaces actually reaches the cleaning and finishing operations. If it would help to justify that no emission testing (including PM testing) is required for the finishing operations, then Warsaw Foundry would agree to a limited metal throughput for the finishing operations.

2) The grinding operation at many foundries is considered an insignificant activity because small stand grinders are used to manually smooth the rough edges of finished castings. This is the exact same grinding process used at Warsaw Foundry. The amount of material removed from the surface of the casting during grinding is miniscule, and certainly not on the same scale as the blasting operation for which the 17 pounds per ton PM emission factor is appropriate. This type of stand grinding unit is typically controlled with small, self-contained dust collector units connected directly to the stand grinders.

Response to Comment 2:

Because of the conservative nature of the calculated emissions for the cleaning and finishing operations (EU8A and EU8B), IDEM has removed PM and PM10 testing for those units. IDEM, OAQ has determined that PM and PM10 testing for the castings cooling operation, the castings shakeout process and the sand handling process is necessary to demonstrate compliance with 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes), 326 IAC 2-2 (PSD), and 326 IAC 2-8 (FESOP). No metal throughput limit for the finishing operations has been included in the permit. Therefore, IDEM cannot assume that these processes will operate below their stated capacities. Because of other revisions to Section D.2, the testing requirements in the final permit are in Condition D.2.8.

The following changes have been made to the permit as a result of this comment:

~~D.2.9~~**D.2.8** Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

(a) Within 180 days after issuance of permit No. F085-14520-00006, in order to demonstrate compliance with Conditions D.2.1, D.2.2 and D.2.3, the Permittee shall perform PM and PM_{10} testing of the castings cooling operation (EU5A and EU5B), the castings shakeout process (EU6)~~, the cleaning and finishing operations (EU8A and EU8B)~~, and the sand handling process (EU9), utilizing methods as approved by the Commissioner. This testing shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM_{10} includes filterable and condensable PM_{10}. Testing shall be conducted in accordance with Section C - Performance Testing.

Comment 3:

Condition D.2.9(b) requires lead, manganese, toluene, phenol, benzene, total organic HAP, and total HAP testing be conducted on the pouring/casting operation. The pouring/casting operation has no capture system. To erect a temporary enclosure for emission testing purposes would be an expensive and inappropriate burden.

It is inappropriate to apply the U.S. EPA Speciate data to calculate the inorganic (metal) HAPs from the pouring and casting operation. This data is more appropriate for estimating metal emissions from the initial melting process inside the furnace and not further downstream when the metal is actually being poured. The metal HAPs are likely emitted during the melting operation in the furnace when the scrap metal is subject to intense heat, but Cornerstone finds it difficult to believe that significant quantities of metal HAPs are still actually emitted further downstream during the pouring, cooling, shakeout, and finishing operations.

For example, the shot blast material utilized at Warsaw Foundry contains a maximum of 1.3% manganese, and the HAP emissions from this process are due to the break down of the shot material as it is being consumed in the process. The U.S. EPA Speciate data assumes a generic 3.10% of the total PM emission factor is manganese for all foundry processes, including shot blasting.

IDEM has assumed the throughput to the pouring/casting operation is equal to source-wide metal melted throughput limit of 11,300 tons per year. The American Foundrymen's Society determines pouring, cooling, and shakeout operation emissions on sand and binder system usage. Using the source-wide metal melted throughput limit to calculate emissions overestimates HAPs.

Response to Comment 3:

Based on the evidence provided by Cornerstone, IDEM agrees that the HAPs testing requirements for the pouring/casting operation should be revised at this time. Minor HAP limits in Conditions D.2.5, D.2.6, and D.2.9 have been revised to remove limits on lead, manganese, total metal HAPs, toluene, phenol, and benzene testing. The limit and testing requirement for total organic HAP will remain. If future testing shows that organic HAPs are excessive, limits will be inserted during the FESOP renewal or future permit revisions. Condition numbers have been adjusted where appropriate.

The following changes have been made to the permit as a result of this comment:

~~D.2.5 Metallic HAP Minor Limits [326 IAC 2-8-4] [326 IAC 2-2]~~

~~(a) Total emissions of lead from the pouring/casting cooling operation shall not exceed 0.11 ton per twelve (12) consecutive month period, with compliance determined at the end of each month;~~

~~(b) Total emissions of manganese from the pouring/casting cooling operation shall not exceed 0.91 ton per twelve (12) consecutive month period, with compliance determined at the end of each month;~~

~~(c) Total emissions of any combination of metal HAPs from the pouring/casting cooling operation shall not exceed 1.10 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;~~

~~Compliance with the lead and manganese emission limits above in conjunction with the other lead and manganese limits included in this permit limit source-wide lead emissions and source-wide manganese emissions to less than 10 tons per year, each. Compliance with the combined metal HAP limits above in conjunction with the other combined HAP limits included in this permit limit source-wide emissions of any combination of HAPs to less than 25 tons per year. Therefore, the requirements of 326 IAC 2-7 (Part 70 Program) and 326 IAC 2-2 (Prevention of Significant Deterioration) are not applicable.~~

~~D.2.6~~**D.2.5** Organic HAP Minor Limits [326 IAC 2-8-4] [326 IAC 2-2]

~~(a) The total emissions of toluene from the pouring/casting cooling operations shall not exceed 4.50 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;~~

~~(b) The total emissions of phenol from the pouring/casting cooling operations shall not exceed 4.50 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;~~

~~(c) The total emissions of benzene from the pouring/casting cooling operations shall not exceed 4.50 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;~~

~~(d)~~ The total emissions of any combination of organic HAPs from the pouring/casting cooling operations shall not exceed 4.50 tons per twelve (12) consecutive month period, with compliance determined at the end of each month~~;~~**.**

~~Compliance with the toluene, phenol and benzene emission limits above and the limits in Condition D.3.2 limit source-wide toluene, phenol and benzene emissions to less than 10 tons per year, each.~~ Compliance with the combined organic HAP limits above in conjunction with the other combined HAP limits included in this permit limit source-wide emissions of any combination of HAPs to less than 25 tons per year.

. . .

~~D.2.9~~**D.2.8** Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

(a) Within 180 days after issuance of permit No. F085-14520-00006, in order to demonstrate compliance with Conditions D.2.1, D.2.2 and D.2.3, the Permittee shall perform PM and PM10 testing of the castings cooling operation (EU5A and EU5B), the castings shakeout process (EU6)~~, the cleaning and finishing operations (EU8A and EU8B),~~ and the sand handling process (EU9), utilizing methods as approved by the Commissioner. This testing shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM10 includes filterable and condensable PM10. Testing shall be conducted in accordance with Section C - Performance Testing.

(b) Within 180 days after issuance of permit No. F085-14520-00006, in order to demonstrate compliance with Conditions D.2.5 ~~and D.2.6~~, the Permittee shall perform ~~lead, manganese, toluene, phenol, benzene,~~ total organic HAP~~, and total HAP~~ testing of the pouring and casting operation (EU4) utilizing methods as approved by the Commissioner. This testing shall be repeated at least once every five (5) years from the date of this valid compliance demonstration.

~~D.2.10 Metal HAP Emissions~~

~~Compliance with the HAP limits in condition D.2.5 shall be demonstrated using the following equations:~~

~~(a) Lead Emissions from the Pouring/Casting Cooling operation (tons/yr) = EF_{CSPb} (lb/ton) x M_{PCC} (tons per twelve (12) consecutive month period)] x (1 ton / 2000 pounds)~~

~~Where:~~
~~EF_{CSPb} = 0.0162 pound lead per ton of metal throughput (or an emission factor determined from the most recent compliance stack test)~~
~~M_{PCC} = total metal throughput to the Pouring/Casting Cooling operation (tons per twelve (12) consecutive month period)~~

~~(b) Manganese Emissions from the Pouring/Casting Cooling operation (tons/yr) = EF_{PCCMn} (lb/ton) x M_{PCC} (tons per twelve (12) consecutive month period)] x (1 ton / 2000 pounds)~~

~~Where:~~
~~EF_{PCCMn} = 0.1302 pound manganese per ton of metal throughput (or an emission factor determined from the most recent compliance stack test)~~
~~M_{PCC} = total metal throughput to the Pouring/Casting Cooling operation (tons per twelve (12) consecutive month period)~~

~~(c) Total Metal HAP Emissions from the Pouring/Casting Cooling operation (tons/yr) = EFCSTM (lb/ton) x MCS (tons per twelve (12) consecutive month period)] x (1 ton / 2000 pounds)~~

~~Where:~~
~~EF_{PCCTM} = 0.16 pound combined metal HAP per ton of metal throughput (or an emission factor determined from the most recent compliance stack test)~~
~~M_{PCC} = total metal throughput to the Pouring/Casting Cooling operation (tons per twelve (12) consecutive month period)~~

~~(d) Upon IDEM approval of total metal HAP compliance stack test results on the Pouring/Casting Cooling, the following shall apply:~~

~~(1) The lead and manganese emission factors in pound per ton obtained from the IDEM approved stack test results shall be used for the variables identified above as EF_{PCCPb} and EF_{PCCMn}.~~

~~(2) The total metal HAP emission factor in pound per ton that shall be used for the variable EF_{PCCTM} shall be the total metal HAP emission factor obtained from the stack test.~~

~~D.2.11~~**D.2.9** Organic HAP Emissions

Compliance with the HAP limits in condition ~~D.2.6~~ **D.2.5** shall be demonstrated using the following equations:

~~(a) Toluene emissions from the Pouring/Casting Cooling operations (EU4) = EF_{PCCT} (lb/ton) x M_{PCC} (tons per twelve (12) consecutive month period) x (1 ton / 2000 pounds)~~

~~Where:~~

~~EF_{PCCT} = toluene emissions from Pouring/Casting Cooling operations (0.64 pound per ton of metal throughput or an emission factor determined from the most recent compliance stack test)~~
~~M_{PCC} = total metal throughput to the Pouring/Casting Cooling operations (tons per twelve (12) consecutive month period)~~

~~(b) Phenol emissions from the Pouring/Casting Cooling operations (EU4) = EF_{PCCP} (lb/ton) x M_{PCC} (tons per twelve (12) consecutive month period) x (1 ton / 2000 pounds)~~

~~Where:~~
~~EF_{PCCP} = phenol emissions from Pouring/Casting Cooling operations (0.64 pound per ton of metal throughput or an emission factor determined from the most recent compliance stack test)~~
~~M_{PCC} = total metal throughput to the Pouring/Casting Cooling operations (tons per twelve (12) consecutive month period)~~

~~(c) Benzene emissions from the Pouring/Casting Cooling operations (EU4) = EF_{PCCB} (lb/ton) x M_{PCC} (tons per twelve (12) consecutive month period) x (1 ton / 2000 pounds)~~

~~Where:~~
~~EF_{PCCB} = benzene emissions from Pouring/Casting Cooling operations (0.64 pound per ton of metal throughput or an emission factor determined from the most recent compliance stack test)~~
~~M_{PCC} = total metal throughput to the Pouring/Casting Cooling operations (tons per twelve (12) consecutive month period)~~

~~(d)~~ Total organic HAPs emissions from the Pouring/Casting Cooling operations (EU4) = EF_{PCCTO} (lb/ton) x M_{PCC} (tons per twelve (12) consecutive month period) x (1 ton / 2000 pounds)

Where:
EF_{PCCTO} = total organic HAPs emissions from Pouring/Casting Cooling operations (0.64 pound per ton of metal throughput or an emission factor determined from the most recent compliance stack test)
M_{PCC} = total metal throughput to the Pouring/Casting Cooling operations (tons per twelve (12) consecutive month period)

. . .

~~D.2.15~~**D.2.13** Record Keeping Requirements

(a) ~~To document compliance with Condition D.2.5, the Permittee shall maintain records of the following:~~

~~(1) tons of metal throughput to each of the pouring/casting cooling operation for each month;~~

~~(2) Metallic HAP stack test results for the pouring/casting cooling operations as applicable;~~

~~(3) Metallic HAP emission calculations performed using the equations in condition D.2.10; and~~

~~(4) Metallic HAP emissions in tons per year.~~

~~(b)~~ To document compliance with Condition ~~D.2.6~~**D.2.5**, the Permittee shall maintain records of the following:

(1) tons of metal throughput to each of the pouring/casting cooling operation for each month;

(2) Organic HAP stack test results for the pouring/casting cooling operations as applicable;

(3) Organic HAP emission calculations performed using the equations in condition ~~D.2.11~~**D.2.9**; and

(4) ~~Metallic~~ **Organic** HAP emissions in tons per year.

~~(c)~~**(b)** To document compliance with Condition ~~D.2.12~~**D.2.10**, the Permittee shall maintain daily records of visible emission notations for the castings cooling operation, the castings shakeout operation, the cleaning and finishing operations, and the sand handling system stack exhausts (Stacks B1, B2, B3 and B4) during normal daylight operations. 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).

~~(d)~~**(c)** To document compliance with Condition ~~D.2.13~~**D.2.11**, the Permittee shall maintain records once per day of the pressure drop. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of visible emission notation, (e.g. the process did not operate that day).

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

. . .

D.3.2 Organic HAP Minor Limits [326 IAC 2-8-4] [326 IAC 2-2]

…

Compliance with the toluene, phenol and benzene emission limits above ~~and the limits in Condition D.2.6~~ limit source-wide toluene, phenol and benzene emissions to less than 10 tons per year, each. Compliance with the combined organic HAP limits above in conjunction with the other combined HAP limits included in this permit limit source-wide emissions of any combination of HAPs to less than 25 tons per year.

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

~~FESOP Quarterly Report~~

~~Source Name: Warsaw Foundry Company, Inc.~~
~~Source Address: 1212 North Detroit Street, Warsaw, Indiana 46580~~
~~Mailing Address: P.O. Box 227, Warsaw, Indiana 46581~~
~~FESOP No.: F 085-14520-00006~~
~~Facility: Pouring/Casting Cooling~~
~~Parameter: Lead, Manganese, and Total Metal HAP emissions~~
~~Limit: (a) Total emissions of lead from the pouring/casting cooling operation shall not exceed 0.11 ton per twelve (12) consecutive month period, with compliance determined at the end of each month;~~

~~(b) Total emissions of manganese from the pouring/casting cooling operation shall not exceed 0.91 ton per twelve (12) consecutive month period, with compliance determined at the end of each month;~~

~~(c) Total emissions of any combination of metal HAPs from the pouring/casting cooling operation shall not exceed 1.10 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;~~

Compliance with the above limits shall be determined using the equations in condition D.2.10(a), (b), and (c). Please attach supporting calculations and data used for determining HAP emissions reported.

YEAR:_____

Month	Column 1a	Column 1b	Column 1c	Column 2a	Column 2b	Column 2c
	Lead Emissions This Month (tons)	Manganese Emissions This Month (tons)	Total HAP Emissions This Month (tons)	Lead Emissions Previous 11 Month (tons)	Manganese Emissions Previous 11 Month (tons)	Total HAP Emissions Previous 11 Month (tons)

This Part 70 Operating Permit Quarterly Report consists of 2 pages.

Month	Column 1a + Column 2a	Column 1b + Column 2b	Column 1c + Column 2c
	12 Month Total Lead Emissions (tons)	12 Month Total Manganese Emissions (tons)	12 Month Total HAPs Emissions (tons)

☐ 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

FESOP Quarterly Report

Source Name: Warsaw Foundry Company, Inc.
Source Address: 1212 North Detroit Street, Warsaw, Indiana 46580
Mailing Address: P.O. Box 227, Warsaw, Indiana 46581
FESOP No.: F 085-14520-00006
Facility: Pouring/Casting Cooling
Parameter: ~~Toluene, Phenol, Benzene and~~ Total Organic HAP emissions
Limit: ~~(a) The total emissions of toluene from the pouring/casting cooling operations shall not exceed 4.50 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;~~

~~(b) The total emissions of phenol from the pouring/casting cooling operations shall not exceed 4.50 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;~~

~~(c) The total emissions of benzene from the pouring/casting cooling operations shall not exceed 4.50 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;~~

~~(d)~~ The total emissions of any combination of organic HAPs from the pouring/casting cooling operations shall not exceed 4.50 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

Compliance with the above limit~~s~~ shall be determined using the equation~~s~~ in condition ~~D.2.11(a), (b), (c), and (d)~~**D.2.9**. Please attach supporting calculations and data used for determining HAP emissions reported.

YEAR:_____

Month	~~Column 1a~~	~~Column 1b~~	~~Column 1c~~	Column 1~~d~~	~~Column 2a~~	~~Column 2b~~
	~~Toluene Emissions This Month (tons)~~	~~Phenol Emissions This Month (tons)~~	~~Benzene Emissions This Month (tons)~~	Total Organic HAP Emissions This Month (tons)	~~Toluene Emissions Previous 11 Month (tons)~~	~~Phenol Emissions Previous 11 Month (tons)~~

~~This Part 70 Operating Permit Quarterly Report consists of 2 pages.~~

Month	~~Column 2c~~	Column 2~~d~~	~~Column 1a + Column 2a~~	~~Column 1b + Column 2b~~	~~Column 1c + Column 2c~~	Column 1~~d~~ + Column 2~~d~~
	~~Benzene Emissions Previous 11 Month (tons)~~	Total Organic HAP Emissions Previous 11 Month (tons)	~~12 Month Total Toluene Emissions (tons)~~	~~12 Month Total Phenol Emissions (tons)~~	~~12 Month Total Benzene Emissions (tons)~~	12 Month Total Organic HAPs Emissions (tons)

☐ 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.

Comment 4:

Condition D.3.3 requires toluene, phenol, benzene, and total organic HAP testing be conducted on the core making operation. IDEM has assumed the throughput to the pouring/casting operation is equal to source-wide metal melted throughput limit of 11,300 tons per year.

Historically, Warsaw Foundry used three (3) core and mold making process: isocure phenolic urethane core making process (which is a Phenolic Urethane Coldbox binder system), green sand system for mold making, and shell sand system for core making. Today, the isocure binder system is no longer used. A document published by the American Foundry Society and the Casting Industry Suppliers Association, "Form R Reporting of Binder Chemicals Used in Foundries," indicates that Isocure yields higher emissions than the Green Sand binder system.

Therefore, potential organic HAP emissions have decreased significantly.

In addition, HAP emission testing on the type of core making operation used at Warsaw Foundry is an expensive and inappropriate burden that is not reflective of other similar permits issued by IDEM for small foundries.

Response to Comment 4:

The evidence provided by Cornerstone is insufficient evidence to remove testing for the core making operation. If future testing shows that organic HAPs are insignificant, testing requirements and limits will be removed during the FESOP renewal or future permit revisions.

Due to the limited amount of IDEM OAQ approved HAP emission data from foundries and the variability in HAP emissions that occur due to operational variability among foundries (e.g. type of binder system, amount of binders used, size of molds, amount of cores used, and casting cooling

time), IDEM OAQ will require site-specific HAP testing. No change to the permit was made based on this comment:

Comment 5:

Conditions D.2.13(a), (b), (c), and (d) identify the pressure drop ranges allowed on the individual dust collector units. The current allowed ranges of 4 to 8 inches of water pressure for the Main Baghouse, Wheelabrator Baghouse, and Mold/Dump Baghouse and 1 to 5 inches of water pressure for the Grinding Baghouse are too restrictive. We believe that a more appropriate range for each baghouse of 1 to 8 inches of water pressure is more reflective of all operating scenarios (e.g., when brand new bags have been installed and have not had time to build up the appropriate dust layer). This broader range is appropriate according to the baghouse manufacturer and is reflective of other similar permits issued by IDEM for a multitude of industries.

Response to Comment 5:

IDEM agrees that a wider pressure drop range is reasonable for these baghouses. Therefore, the following changes have been made to the permit as a result of this comment:

~~D.2.13~~**D.2.11** Parametric Monitoring

(a) The Permittee shall record the pressure drop across the Main Baghouse (MBH) used in conjunction with the east castings cooling operation, the castings shakeout process and the sand handling process, at least once per day when any of the processes are in operation. When for any one reading, the pressure drop across the MBH is outside the normal range of ~~4.0~~ **1.0** and 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 or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

(b) The Permittee shall record the pressure drop across the Grinding Baghouse (GBH) used in conjunction with the cleaning and finishing operations, at least once per day when the cleaning and finishing operations are in operation. When for any one reading, the pressure drop across the GBH is outside the normal range of 1.0 and ~~5.0~~ **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 or Exceedances. A pressure reading that is outside the above mentioned ranges is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

(c) The Permittee shall record the pressure drop across the Wheelabrator Baghouse (WBH) used in conjunction with the cleaning and finishing operations, at least once per day when the cleaning and finishing operations are in operation. When for any one reading, the pressure drop across the WBH is outside the normal range of ~~4.0~~ **1.0** and 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 or Exceedances. A pressure reading that is outside the above mentioned ranges is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

(d) The Permittee shall record the pressure drop across the Mold/Dump Baghouse (MDBH) used in conjunction with the south castings cooling operation, at least once per day when the process is in operation. When for any one reading, the pressure drop across the MDBH is outside the normal range of ~~4.0~~ **1.0** and 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 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.

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.

Upon Further review, IDEM, OAQ has made the following minor revisions to the permit:

1. IDEM has added reporting requirements and forms throughout the permit. These requirements are necessary for the Permittee to document compliance with permit limits.

D.1.17 Reporting Requirements

A quarterly summary of the information to document compliance with Condition**s** D.1.1 **and D.1.7** 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 "authorized individual" as defined by 326 IAC 2-1.1-1(1).

. . .

D.2.14 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.2.9 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 "authorized individual" as defined by 326 IAC 2-1.1-1(1).

. . .

D.3.6 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.3.2 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 "authorized individual" as defined by 326 IAC 2-1.1-1(1).

2. IDEM has corrected a Condition reference in the record keeping requirements in Condition D.3.5.

D.3.5 Record Keeping Requirements

(a) To document compliance with Condition D.3.2, the Permittee shall maintain records of the following:

(1) tons of metal throughput to each of the core making operation for each month;

(2) Organic HAP stack test results for the core making operation as applicable;

(3) Organic HAP emission calculations performed using the equations in condition ~~D.3.3~~**D.3.4**; and

(4) Organic HAP emissions in tons per year.

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

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Significant Permit Revision to a Federally Enforceable State Operating Permit

Source Background and Description

Source Name:	Warsaw Foundry Company, Inc.
Source Location:	1212 North Detroit Street, Warsaw, Indiana 46580
County:	Kosciusko
SIC Code:	3321
Operation Permit No.:	F085-14520-00006
Operation Permit Issuance Date:	October 20, 2006
Permit Revision No.:	085-24317-00006
Permit Reviewer:	ERG/BL

The Office of Air Quality (OAQ) has reviewed a revision application from Warsaw Foundry Company, Inc. relating to the operation of a stationary gray and ductile in foundry.

Description of Proposed Modification

On February 12, 2007, Warsaw Foundry Company, Inc., submitted an application to IDEM, OAQ requesting approval to modify the existing stationary gray and ductile iron foundry as follows:

1. To revise the stack testing schedule for the existing cupola;

2. To revise and amend the permit to reflect that emissions from pouring/casting operations are uncontrolled;

3. To revise the metal throughput rate for the existing electric induction furnace to reflect the melt rate;

4. To revise the throughput capacity for the existing emission/process units (charge handling operation, pouring/casting operation, castings cooling operation, castings shakeout operation, wheelbrator shot blast unit, sand handling operation, and inoculation/magnesium treatment processes). Throughput capacities of these existing emission/process units are bottlenecked by the melt operations of the induction furnace.

5. To delete emission statement requirement from Section C of the permit; and

6. Adjust the emission cap limitations under 326 IAC 2-2 (PSD) and 326 IAC 2-8 (FESOP).

IDEM, OAQ has determined to revise the current FESOP for Warsaw Foundry Company, Inc. permit No.: 085-14520-00006, issued October 20, 2006 pursuant to 326 IAC 2-8-11.1 (Significant Permit Revision).

Existing Approvals

The source was issued a FESOP F085-14520-00006 on October 20, 2006. There are no other approvals issued to the source.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the Significant Permit Revision be approved. This recommendation is based on the following facts and conditions:

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

An application for the purposes of this review was received on February 12, 2007.

Emission Calculations

See Appendix A of this document for detailed emission calculations.

Potential To Emit of the Revision

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source 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."

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	191
PM10	60
SO_2	0.00
VOC	9.39
CO	0.00
NO_x	0.00

Note: For the purpose of determining Title V applicability for particulates, PM10, not PM, is the regulated pollutant in consideration.

The potential HAP emissions after this permit revision is equal to 1.12 tons per year for a single HAP (Pb) and 13.0 tons per year of for a combination of HAPs.

Justification for Revision

This FESOP is being modified through a FESOP Significant Permit Revision pursuant to 326 IAC 2-8-11.1 (g)(2) because the revision involves adjustment to the emission cap limitations.

Potential to Emit after Revision

The table below summarizes the total potential to emit, reflecting all limits, of the significant emission units. The control equipment is considered federally enforceable only after issuance of this Permit Revision.

		Limited Potential to Emit (tons/year)							
Process/Emission unit		PM	PM10	SO_2	NOx	VOC	CO	Lead	Total HAPs
EU1	Charge Handling	3.39	2.04	0.00	0.00	0.00	0.00	~~0.013~~ **0.016**	~~0.004~~ **0.16**
EU2 Cupola EU3 Electric Induction Furnace	Worst case Melting	~~23.04~~ **10.5**	~~53.59~~ **9.46**	6.78	0.565	1.02	~~99.0~~ **61.4**	~~9.12~~ **0.93**	~~0.915~~ **1.33**
Inoculation **or** Magnesium Treatment		~~10.17~~ **22.6**	~~10.17~~ **22.6**	0.00	0.00	~~0.00~~ **0.03**	0.00	0.00	0.00
Stack B1 EU8A	Cleaning and Finishing (grinding only)	~~0.420~~ **2.88**	~~0.109~~ **0.29**	0.00	0.00	0.00	0.00	~~0.001~~ **0.014**	~~0.006~~ **0.14**
Stack B2 EU8B	Cleaning and Finishing (shotblast only)	~~7.99~~ **2.88**	~~2.07~~ **0.29**	0.00	0.00	0.00	0.00	~~0.024~~ **0.014**	~~0.117~~ **0.14**
Stack B3 (Castings Shakeout EU6, Sand Handling EU9*, East Castings Cooling EU5B)		~~43.34~~ **18.9**	~~19.84~~ **5.43**	0.00	0.00	6.78	**33.9**	~~0.068~~ **0.003**	~~0.023~~ **0.03**
Stack B4 (South Castings Cooling EU5**AB** ~~and Pouring/Casting EU4~~)		~~2.424~~ **5.43**	~~3.534~~ **2.58**	~~0.113~~ **0.00**	~~0.057~~ **0.00**	~~0.791~~ **0.00**		~~0.090~~ **0.00**	~~0.030~~ **0.00**
EU4	**Pouring/Casting**	**23.7**	**11.6**	**0.11**	**0.06**	**0.79**		**0.113**	**3.64**
EU10	Oil core oven	7.29	7.29	0.125	1.64	0.00	0.00	0.00	0.00
EU11	Shell core machines	0.00	0.00	1.05	1.64	0.00	0.00	0.00	5.32
EU12	Core wash/ mold part	0.00	0.00	0.00	0.00	13.25	0.00	0.00	0.980
Insignificant combustion		0.017	0.070	0.005	0.920	0.051	0.773	0.00	0.017
Unpaved roads		0.91	0.28	0.00	0.00	0.00	0.00	0.00	0.00
Other insignificant		1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00
Total PTE After Issuance		~~99.9~~ **99.6**	~~99.9~~ **63.0**	8.07	4.83	~~22.8~~ **16.1**	~~99.7~~ **96.1**	~~9.32~~ **1.08**	~~7.41~~ **11.6**

*There are no CO emission limitations for sand handling EU9. EU9 exhausts to stack B3. Hence, it is listed under row stack B3.

After the revisions as described under Description of Proposed Modification**,** the potential to emit of the criteria pollutants from the entire source will continue to be limited to less than the Title V major source thresholds. Therefore, the requirements of 326 IAC 2-7 do not apply to this source.

County Attainment Status

The source is located in Kosciusko County.

Pollutant	Status
PM10	Attainment
PM2.5	Attainment
SO_2	Attainment
NO_2	Attainment
8-hour Ozone	Attainment
CO	Attainment
Lead	Attainment

(a) Kosciusko County has been classified as unclassifiable or attainment for PM2.5. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM 2.5 emissions. Therefore, until the U.S.EPA adopts specific provisions for PSD review for PM2.5 emissions, it has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions. See the State Rule Applicability-Entire Source section.

(b) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) emissions 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. Kosciusko 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. See the State Rule Applicability-Entire Source section.

(c) Kosciusko 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. See the State Rule Applicability-Entire Source section.

(d) Fugitive Emissions
Since this type of operation is in one of the 28 listed source categories under 326 IAC 2-2 or 2-3, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are counted toward determination of PSD and Emission Offset applicability.

Federal Rule Applicability

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

(b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) included in this revision for the source.

State Rule Applicability - Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration)

Warsaw Foundry Company, Inc. was originally constructed in 1923 and is in one (1) of the twenty-eight (28) major PSD source categories (secondary metal production). Therefore, the potential to emit of PM, PM10, and CO are each limited to less than one hundred (100) tons per year, in order for the source to remain a minor PSD source (326 IAC 2-2). The potential to emit of lead (Pb) is also limited to less than ten (10) tons per year in order to remain a FESOP.

On February 12, 2007, the Permittee submitted an application to IDEM, OAQ requesting approval to modify the existing permit for this stationary gray and ductile iron foundry as follows:

(a) To revise the stack testing schedule for the existing cupola;
(b) To revise and amend the permit to reflect that emissions from pouring/casting operations are uncontrolled;
(c) To revise the metal throughput rate for the existing electric induction furnace to reflect the melt rate; and
(d) To revise the throughput capacity for the existing emission/process units such as charge handling operation, pouring/casting operation, castings cooling operation, castings

shakeout operation, wheelbrator shot blast unit, sand handling operation, and inoculation/magnesium treatment processes.

These revisions required an adjustment to the emission cap limitations under 326 IAC 2-2 (PSD). The total amount of metal melted shall continue to be limited to less than 11,300 tons per twelve (12) consecutive month period, with compliance determined at the end of each month. This melt throughput limit, combined with the following after control emission limits, will render the requirements of 326 IAC 2-2 not applicable:

Process / Unit ID	PM Emission Limit (lbs/ton)	PM10 Emission Limit (lbs/ton)	CO Emission Limit (lbs/ton)
Charge Handling (EU1)	0.60	0.36	-
Cupola (EU2)	~~4.077~~ **13.8**	~~5.154~~ **12.4**	~~11.52~~ **10.87**
Electric Induction Furnace (EU3)	0.90	0.86	-
Pouring/Casting (EU4)	**4.20**	**2.06**	**6.0 ***
Inoculation	~~1.80~~ **4.00**	~~1.80~~ **4.00**	-
Magnesium Treatment	1.80	1.80	-
Cleaning and Finishing (grinding only) (EU8A)	~~0.0515~~ **0.51**	~~0.0131~~ **0.05**	-
Cleaning and Finishing (shotblast only) (EU8B)	~~0.98~~ **0.51**	~~0.2485~~ **0.05**	-

* This emission limit accounts for pouring, cooling, and shakeout operations that occur at emission units (EU5A, EU5B, and EU6).

Stack ID	Process / Unit ID	Pb Limit (tons/yr)	Mn Limit (tons/yr)	Total HAP (tons/yr)
EU2	cupola	~~9.21~~ **6.22**	**2.42**	**8.87**
EU3	**electric induction furnace**	**0.70**	**0.20**	**0.92**
EU4, EU5A and EU5B	**pouring/casting cooling**	**0.11**	**0.91**	**1.11**

The following limitations were revised for existing Stacks B3 and B4 as shown in the table given below:

Stack ID	Process / Unit ID	PM Limit (lbs/hour)	PM10 Limit (lbs/hour)
Stack B3	Castings Shakeout EU6 Sand Handling EU9 East Castings Cooling EU5B	~~7.90~~ **4.32**	~~5.72~~ **1.24**
Stack B4	South Castings Cooling EU5B ~~and Pouring/Casting EU4~~	~~5.479~~ **1.24**	~~5.36~~ **0.59**

326 IAC 2-6 (Emission Reporting)

This source is located in Kosciusko County and is not required to operate under a Part 70 permit, and has a limited potential to emit of lead (Pb) less than five (5) tons per year. Therefore, this source is not subject to the annual or triennial reporting. However, pursuant to 326 IAC 2-6-1(b), this source is subject to additional information requests as provided in 326 IAC 2-6-5.

326 IAC 2-8-4 (FESOP)

Warsaw Foundry Company, Inc. is currently operating its existing stationary gray and ductile iron foundry under the provisions of 326 IAC 2-8 (FESOP) and was issued a FESOP No.: 085-14520-00006 on October 20, 2006, which limited the potential to emit of PM10 and CO to less than one hundred (100) tons per year. On February 12, 2007, the Permittee submitted an application to IDEM, OAQ requesting approval to modify the existing stationary gray and ductile iron foundry as follows:

(a) To revise the stack testing schedule for the existing cupola;

(b) To revise and amend the permit to reflect that emissions from pouring/casting operations are uncontrolled;

(c) To revise the metal throughput rate for the existing electric induction furnace to reflect the melt rate; and

(d) To revise the throughput capacity for the existing emission/process units such as charge handling operation, pouring/casting operation, castings cooling operation, castings shakeout operation, wheelbrator shot blast unit, sand handling operation, and inoculation/magnesium treatment processes. These revisions required an adjustment to the emission cap limitations under 326 IAC 2-8 (FESOP).

The total amount of metal melted at the source shall continue to be limited to less than 11,300 tons per twelve (12) consecutive month period, with compliance determined at the end of each month. This melt throughput limit, combined with the following after control emission limits, will ensure PM10 and CO emissions are limited to less than one hundred (100) tons per year, and Pb (lead) emissions are limited to less than ten (10) tons per year, in order to satisfy the requirements of 326 IAC 2-8-4:

Process / Unit ID	PM10 Emission Limit (lbs/ton)	CO Emission Limit (lbs/ton)
Charge Handling (EU1)	0.361	-
Cupola (EU2)	~~5.154~~ **12.4**	~~11.52~~ **10.87**
Electric Induction Furnace (EU3)	0.86	-
Pouring/Casting (EU4)	**2.06**	**6.0 ***
Inoculation	~~1.80~~ **4.00**	-
Magnesium Treatment	1.80	-
Cleaning and Finishing (grinding only) (EU8A)	~~0.0131~~ **0.05**	-
Cleaning and Finishing (shotblast only) (EU8B)	~~0.2485~~ **0.05**	-

* This emission limit accounts for pouring, cooling, and shakeout operations that occur at emission units (EU5A, EU5B, and EU6).

Stack ID	Process / Unit ID	Pb Limit (tons/yr)	Mn Limit (tons/yr)	Total HAP (tons/yr)
EU2	cupola *	~~9.21~~ **6.22**	**2.42**	**8.87**
EU3	**electric induction furnace**	**0.70**	**0.20**	**0.92**
EU4, EU5A and EU5B	**pouring/casting cooling**	**0.11**	**0.91**	**1.11**

* The cupola is equipped with a venturi scrubber; the control device is not necessary to maintain source-wide individual HAP emissions less than ten (10) tons per year and the combination of HAPs less than twenty-five (25) tons per year.

The following limitations were revised for existing Stacks B3 and B4 as shown in the table given below:

Stack ID	Process / Unit ID	PM10 Limit (lbs/hour)
Stack B3	Castings Shakeout EU6 Sand Handling EU9 East Castings Cooling EU5B	~~4.53~~ **1.24**
Stack B4	South Castings Cooling EU5B ~~and Pouring/Casting EU4~~	~~5.36~~ **0.59**

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

The modification to this stationary gray and ductile iron foundry does not result in potential HAP emissions. Therefore, the provisions of 326 IAC 2-4.1 do not apply to this modification.

326 IAC 5-1 (Opacity Limitations)

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

(a) Opacity shall not exceed an average of forty percent (40%) 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.

State Rule Applicability - Individual Facilities

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

The particulate emission rate from each of the facilities listed in the following table shall not exceed the pound per hour value when operating at the specified process weight rate:

Process Description/Unit ID	Process Weight Rate (tons/hour)	Allowable PM Emission Rate (lbs/hour)
Charge Handling (EU1)	~~5.0~~ **1.6**	~~12.1~~ **5.61**
Electric Induction Furnace (EU3)	~~2.5~~ **1.6**	~~7.58~~ **5.61**
Inoculation	~~5.0~~ **1.6**	~~12.1~~ **5.61**
Magnesium Treatment	1.5	5.38
Cleaning and Finishing (grinding only) (EU8A) (Stack B1)	~~4.5~~ **1.6**	~~11.2~~ **5.61**
Cleaning and Finishing (shotblast only) (EU8B) (Stack B2)	~~4.5~~ **1.6**	~~11.2~~ **5.61**
Pouring/Casting (EU4)	**1.6**	**5.61**
Oil Core Oven (EU10) (Stack O1)	0.75	3.38
Stack B3 Castings Shakeout (EU6) Sand Handling (EU9) East Castings Cooling (EU5B)	~~35.0~~ **11.2**	~~41.3~~ **20.6**
Stack B4 South Castings Cooling (EU5**A**~~B~~) ~~and Pouring/Casting EU4)~~	~~35.0~~ **1.6**	~~41.3~~ **5.61**

These limitations are based on the following equations:

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

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

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

Based on the calculations in Appendix A of this document, all of the above emission units will comply with the requirements of 326 IAC 6-3. The baghouses shall be in operation at all times the main castings shakeout (EU6), the cleaning and finishing (EU8A and EU8B), and the sand handling (EU9) processes are in operation, in order to comply with these limits.

Note: The cupola (EU2) is subject to the requirements of 326 IAC 11-1, and therefore is not subject to the requirements of 326 IAC 6-3.

326 IAC 11-1 (Existing Foundries)

Pursuant to FESOP No.: 085-14520-00006, issued October 20, 2006, the existing foundry is subject to the requirements of 326 IAC 11-1 because it was constructed prior to December 6, 1968. Pursuant to 326 IAC 11-1-2, the particulate matter emissions from the existing cupola (EU2) shall continue to be limited to less than 16.65 pounds per hour when operating at a process weight rate of 5.0 tons per hour.

The venturi scrubber shall be in operation and control emissions from the cupola (EU2) at all times, when the cupola (EU2) is in operation in order to comply with this limit.

326 IAC 8-1-6 (New facilities; general reduction requirements)

The potential to emit of VOC after the modifications as described in this permit continue to be less than twenty-five (25) tons per year. Therefore, the provisions of 326 IAC 8-1-6 are not included in this permit for this modification.

326 IAC 9-1 (Carbon Monoxide Emission Limits)

The cupola (EU2) is not subject to the provisions of 326 IAC 9-1 because it was constructed prior to the March 21, 1972 applicability date of this rule.

Compliance Requirements

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-8-4. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

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

The compliance monitoring requirements applicable to this source are as described in the revised permit.

Proposed Changes

The following revisions have been made to FESOP No. F085-14520-00006, issued October 20, 2006 due to the proposed modification. New language is shown in bold and deleted language in shown in strikeout. The Table of Contents has been updated as necessary.

1. Sections A.2, D.1, D.2 and D.3 were updated to incorporate the new modifications as shown below. New conditions were also added to limit source-wide HAP emissions.

   Production limits combined with after control emission limits ensure the source does not exceed the major source threshold for metal or inorganic HAPs. HAP calculations included in Appendix A show that uncontrolled inorganic HAP emissions are each less than ten (10) tons per year. Therefore, the permit does not include inorganic HAP limits.

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

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

(a) One (1) charge handling operation, identified as EU1, installed prior to 1960, capacity: ~~5.0~~ **1.6** tons of metal per hour.

(b) One (1) cupola, identified as EU2, installed prior to 1960, equipped with a natural gas-fired afterburner rated at 1.0 million British thermal units per hour, and a venturi scrubber, exhausted through Stack C1, capacity: 5.0 tons of metal per hour.

(c) One (1) electric induction furnace, identified as EU3, installed in November 2000, capacity: ~~2.5~~ **1.6** tons of metal per hour.

(d) One (1) magnesium treatment process, ~~identified as magnesium treatment process,~~ installed in 2000, capacity: 1.5 tons of metal per hour.

(e) One (1) inoculation process, identified as inoculation process, installed in 1960, capacity: ~~5.0~~ **1.6** tons of metal per hour.

(f) One (1) pouring/casting operation, identified as EU4, installed prior to 1979, **with emissions uncontrolled,** ~~exhausted through Stack B4,~~ capacity: ~~5.0~~ **1.6** tons of metal per hour and ~~30~~ **9.6** tons of sand per hour.

(g) One (1) castings cooling operation, identified as EU5A and EU5B, installed prior to 1979, with south area EU5A controlled by Mold/Dump Baghouse (MDBH) and exhausted through Stack B4, and east area EU5B controlled by Main Baghouse (MBH) and exhausted through Stack B3, capacity: ~~5.0~~ **1.6** tons of metal per hour and ~~30~~ **9.6** tons of sand per hour.

(h) One (1) castings shakeout operation, identified as EU6, installed prior to 1979, equipped with a baghouse, identified as Main Baghouse (MBH), installed in 1991, exhausted through Stack B3, capacity: ~~5.0~~ **1.6** tons of metal per hour and ~~30~~ **9.6** tons of sand per hour.

(i) One (1) cleaning and finishing operation, identified as EU8A and EU8B, installed prior to 1979, consisting of the following:

(1) One (1) grinding area (EU8A), consisting of two (2) single station and two (2) double station grinding machines, equipped with a baghouse, identified as Grinding Baghouse (GBH), exhausted through Stack B1, capacity: ~~4.5~~ **1.6** tons of metal per hour.

(2) One (1) Wheelabrator shot blast unit (EU8B), equipped with a baghouse, identified as Wheelabrator Baghouse (WBH), exhausted through Stack B2, capacity: ~~4.5~~ **1.6** tons of metal per hour.

(j) One (1) sand handling operation, identified as EU9, installed prior to 1979, equipped with a baghouse, identified as Main Baghouse (MBH), installed in 1991, exhausted through Stack B3, capacity: ~~30.0~~ **9.6** tons of sand per hour.

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]: Melting, pouring operations

(a) One (1) charge handling operation, identified as EU1, installed prior to 1960, capacity: ~~5.0~~ **1.6** tons of metal per hour.

(b) One (1) cupola, identified as EU2, installed prior to 1960, equipped with a natural gas-fired afterburner rated at 1.0 million British thermal units per hour, and a venturi scrubber, exhausted through Stack C1, capacity: 5.0 tons of metal per hour.

(c) One (1) electric induction furnace, identified as EU3, installed in November 2000, capacity: ~~2.5~~ **1.6** tons of metal per hour.

(d) One (1) magnesium treatment process, ~~identified as magnesium treatment process,~~ installed in 2000, capacity: 1.5 tons of metal per hour.

(e) One (1) inoculation process, identified as inoculation process, installed in 1960, capacity: ~~5.0~~ **1.6** 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 2-8-4(1)]

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

(a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the charge handling operation (EU1), shall not exceed ~~12.1~~ **5.61** pounds per hour when operating at a process weight rate of ~~5.0~~ 1.6 tons per hour.

(b) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the one (1) electric induction furnace (EU3) shall not exceed ~~7.58~~ **5.61** pounds per hour when operating at a process weight rate of ~~2.5~~ **1.6** tons per hour.

. . .

(d) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the inoculation process shall not exceed ~~12.1~~ **5.61** pounds per hour when operating at a process weight rate of ~~5.0~~ **1.6** tons per hour.

. . .

D.1.4 Particulate Matter (PM_{10}) [326 IAC 2-8-4] [326 IAC 2-2]

(a) The PM_{10} emission rate from the one (1) charge handling operation (EU1) shall not exceed ~~7.69~~ **0.36** pounds per ton of metal melted. ~~Therefore, the requirements of 326 IAC 2-7 and 326 IAC 2-2 are not applicable.~~

(b) The PM_{10} emission rate from the one (1) cupola (EU2) after controls shall not exceed ~~5.154~~ **12.4** pounds per ton of metal melted. ~~Therefore, the requirements of 326 IAC 2-7 and 326 IAC 2-2 are not applicable.~~

(c) The PM_{10} emission rate from the one (1) electric induction furnace (EU3) shall not exceed 0.86 pounds per ton of metal melted. ~~Therefore, the requirements of 326 IAC 2-7 and 326 IAC 2-2 are not applicable.~~

(d) The PM_{10} emission rate from the one (1) magnesium treatment process shall not exceed 1.80 pounds per ton of metal melted. ~~Therefore, the requirements of 326 IAC 2-7 and 326~~

~~IAC 2-2 are not applicable.~~

(e) The PM_{10} emission rate from the one (1) inoculation process shall not exceed ~~1.80~~ **4.00** pounds per ton of metal melted. ~~Therefore, the requirements of 326 IAC 2-7 and 326 IAC 2-2 are not applicable.~~

Compliance with these limits, in conjunction with the other PM10 limits included in this permit, limit the source-wide emissions to less than 100 tons per year and render 326 IAC 2-2 (Prevention of Significant Deterioration) and 326 IAC 2-7 (Part 70 Program) not applicable.

D.1.5 Particulate Matter (PM) [326 IAC 2-2]

(a) The PM emission rate from the one (1) charge handling operation (EU1) shall not exceed 0.60 pounds per ton of metal melted. ~~Therefore, the requirements of 326 IAC 2-2 are not applicable.~~

(b) The PM emission rate from the one (1) cupola (EU2) after controls shall not exceed ~~2.26~~ **13.8** pounds per ton of metal melted. ~~Therefore, the requirements of 326 IAC 2-2 are not applicable.~~

(c) The PM emission rate from the one (1) electric induction furnace (EU3) shall not exceed 0.90 pounds per ton of metal melted. ~~Therefore, the requirements of 326 IAC 2-2 are not applicable.~~

(d) The PM emission rate from the one (1) magnesium treatment process shall not exceed 1.80 pounds per ton of metal melted. ~~Therefore, the requirements of 326 IAC 2-2 are not applicable.~~

(e) The PM emission rate from the one (1) inoculation process shall not exceed ~~1.80~~ **4.00** pounds per ton of metal melted. ~~Therefore, the requirements of 326 IAC 2-2 are not applicable.~~

Compliance with these limits, in conjunction with the other PM limits included in this permit, limit the source-wide emissions to less than 100 tons per year and render 326 IAC 2-2 (Prevention of Significant Deterioration) and 326 IAC 2-7 (Part 70 Program) not applicable.

D.1.6 Carbon Monoxide (CO) [326 IAC 2-8-4] [326 IAC 2-2]

The CO emission rate from the one (1) cupola (EU2) after controls shall not exceed ~~11.52~~ **10.87** pounds per ton of metal melted. ~~Therefore, the requirements of 326 IAC 2-7 and 326 IAC 2-2 are not applicable.~~ **Compliance with this limit, in conjunction with the other CO limits included in this permit, limit source-wide emissions to less than 100 tons per year and render 326 IAC 2-2 (Prevention of Significant Deterioration) and 326 IAC 2-7 (Part 70 Program) not applicable.**

D.1.7 ~~Lead~~ **Metallic HAP Minor Limits** [326 IAC 2-8-4] [326 IAC 2-2]

~~The lead emission rate from the one (1) cupola (EU2) after controls shall not exceed 1.614 pounds per ton of metal melted. Therefore, the requirements of 326 IAC 2-7 and 326 IAC 2-2 are not applicable.~~

(a) Emissions of lead emission from the cupola (EU2) shall not exceed 6.22 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

(b) Emissions of manganese from the cupola (EU2) shall not exceed 2.42 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

(c) Emission of any combination of HAPs from the cupola shall not exceed 8.87 tons per twelve (12) consecutive month period, with compliance determined at the end

of each month;

(d) Emissions of lead from the electric induction furnace shall not exceed 0.70 ton per twelve (12) consecutive month period, with compliance determined at the end of each month;

(e) Emissions of manganese from the electric induction furnace shall not exceed 0.20 ton per twelve (12) consecutive month period, with compliance determined at the end of each month;

(f) Emissions of any combination of HAPs from the electric induction furnace shall not exceed 0.92 ton per twelve (12) consecutive month period, with compliance determined at the end of each month;

Compliance with the lead and manganese emission limits above in conjunction with the other lead and manganese limits included in this permit limit source-wide lead emissions and source-wide manganese emissions to less than 10 tons per year, each. Compliance with the combined metal HAP limits above in conjunction with the other combined HAP limits included in this permit limit source-wide emissions of any combination of HAPs to less than 25 tons per year. Therefore, the requirements of 326 IAC 2-7 (Part 70 Program) and 326 IAC 2-2 (Prevention of Significant Deterioration) are not applicable.

(g) The Permittee shall operate the cupola afterburner such that the 15-minute average combustion zone temperature does not fall below 1,400 degrees Fahrenheit (°F). Periods when the cupola is off blast and for 15 minutes after going on blast from an off blast condition are not included in the 15-minute average.

Compliance Determination Requirements

D.1.10 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

Within 180 days after **the first day of restarting operation of the cupola** ~~issuance of this FESOP permit~~, in order to demonstrate compliance with Conditions D.1.3, D.1.4(b), D.1.5(b), D.1.6 and D.1.7, the Permittee shall perform CO, PM, ~~and~~ PM_{10} **, lead, manganese, and total metal HAPs** testing utilizing methods as approved by the Commissioner. This testing shall be repeated at least once every two and one-half (2.5) years from the date of this valid compliance demonstration. PM_{10} includes filterable and condensi~~a~~ble PM_{10}. Testing shall be conducted in accordance with Section C - Performance Testing.

D.1.11 Metal HAP Emissions

Compliance with the HAP limits in condition D.1.7 shall be demonstrated using the following equations:

(a) Lead Emissions from the cupola (tons/yr) = EF_{CPb} (lb/ton) x M_C (tons per twelve (12) consecutive month period) x (1 ton / 2000 pounds)

Where:
EF_{CPb} = 1.10 pound lead per ton of metal throughput (or an emission factor determined from the most recent compliance stack test)
M_C = total metal throughput to the cupola (tons per twelve (12) consecutive month period)

(b) Lead Emissions from the electric induction furnace (tons/yr) = EF_{FPb} (lb/ton) x M_F (tons per twelve (12) consecutive month period) x (1 ton / 2000 pounds)

Where:
EF_{FPb} = 0.10 pound lead per ton of metal throughput (or an emission factor determined from the most recent compliance stack test)
M_F = total metal throughput to the electric induction furnace and (tons per twelve (12) consecutive month period)

(c) Manganese Emissions from the cupola (tons/yr) = EF_{CMn} (lb/ton) x M_C (tons per twelve (12) consecutive month period) x (1 ton / 2000 pounds)

Where:
EF_{CMn} = 0.4278 pound manganese per ton of metal throughput (or an emission factor determined from the most recent compliance stack test)
M_C = total metal throughput to the cupola (tons per twelve (12) consecutive month period)

(d) Manganese Emissions from the electric induction furnace (tons/yr) = EF_{FMn} (lb/ton) x M_F (tons per twelve (12) consecutive month period) x (1 ton / 2000 pounds)

Where:
EF_{FMn} = 0.0279 pound manganese per ton of metal throughput (or an emission factor determined from the most recent compliance stack test)
M_F = total metal throughput to the electric induction furnace (tons per twelve (12) consecutive month period)

(e) Total Metal HAP Emissions from the cupola (tons/yr) = EF_{CTM} (lb/ton) x M_C (tons per twelve (12) consecutive month period) x (1 ton / 2000 pounds)

Where:
EF_{CTM} = 1.57 pound combined metal HAP per ton of metal throughput (or an emission factor determined from the most recent compliance stack test)
M_C = total metal throughput to the cupola (tons per twelve (12) consecutive month period)

(f) Total Metal HAP Emissions from the electric induction furnace (tons/yr) = EF_{FTM} (lb/ton) x M_F (tons per twelve (12) consecutive month period) x (1 ton / 2000 pounds)

Where:
EF_{FTM} = 0.13 pound combined metal HAP per ton of metal throughput (or an emission factor determined from the most recent compliance stack test)
M_F = total metal throughput to the electric induction furnace (tons per twelve (12) consecutive month period)

(g) Upon IDEM approval of lead and manganese compliance stack test results on the cupola and electric induction furnace, the following shall apply:

(1) The lead and manganese emission factors in pound per ton obtained from the IDEM approved stack test results shall be used for the variables identified above as EF_{CPb}, EF_{CMn}, EF_{FPb}, and EF_{FMn}.

(2) The total metal HAP emission factor in pound per ton that shall be used for the variables EF_{CTM} and EF_{FTM} shall be the sum of the lead emission factor obtained from the stack test, the manganese emission factor obtained from the stack test and the remaining non-lead and non-manganese metal HAP emission factors used to calculate emissions.

D.1.~~11~~**12** Visible Emissions Notations

. . .

D.1.~~12~~**13** Parametric Monitoring

. . .

D.1.~~13~~**14** Failure Detection

. . .

D.1.~~14~~**15** Afterburner Temperature

. . .

D.1.~~15~~**16** Record Keeping Requirements

...

(b) To document compliance with Condition D.1.7, the Permittee shall maintain records of the following:

(1) tons of metal throughput to the cupola and electric induction furnace for each month;

(2) Metallic HAP stack test results for the cupola and electric induction furnace as applicable;

(3) Metallic HAP emission calculations performed using the equations in condition D.1.11; and

(4) Metallic HAP emissions in tons per year.

~~(b)~~**(c)** To document compliance with Condition D.1.~~11~~**12**, the Permittee shall maintain records of once per day visible emission notations of the cupola stack exhaust (Stack C1) and the cupola charge door. **The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation, (e.g. the process did not operate that day).**

~~(c)~~**(d)** To document compliance with Condition D.1.~~12~~**13**, the Permittee shall maintain once per day records of the pressure drop and flow rate. **The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of visible emission notation, (e.g. the process did not operate that day).**

~~(d)~~**(e)** To document compliance with Condition D.1.~~14~~**15**, the Permittee shall maintain the continuous temperature records (reduced to an hourly average basis) for the afterburner and the hourly average temperature used to demonstrate compliance during the most recent compliant stack test.

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

...

SECTION D.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]: Casting, cooling, sand and finishing

(f) One (1) pouring/casting operation, identified as EU4, installed prior to 1979, ~~exhausted through Stack B4,~~ capacity: ~~5.0~~ **1.6** tons of metal per hour and ~~30~~ **9.6** tons of sand per hour.

(g) One (1) castings cooling operation, identified as EU5A and EU5B, installed prior to 1979, with south area EU5A controlled by Mold/Dump Baghouse (MDBH) and exhausted through Stack B4, and east area EU5B controlled by Main Baghouse (MBH) and exhausted through Stack B3, capacity: ~~5.0~~ **1.6** tons of metal per hour and ~~30~~ **9.6** tons of sand per hour.

(h) One (1) castings shakeout operation, identified as EU6, installed prior to 1979, equipped with a baghouse, identified as Main Baghouse (MBH), installed in 1991, exhausted through Stack B3, capacity: ~~5.0~~ **1.6** tons of metal per hour and ~~30~~ **9.6** tons of sand per hour.

(i) One (1) cleaning and finishing operation, identified as EU8A and EU8B, installed prior to 1979, consisting of the following:

(1) One (1) grinding area (EU8A), consisting of two (2) single station and two (2) double station grinding machines, equipped with a baghouse, identified as Grinding Baghouse (GBH), exhausted through Stack B1, capacity: ~~4.5~~ **1.6** tons of metal per hour.

(2) One (1) Wheelabrator shot blast unit (EU8B), equipped with a baghouse, identified as Wheelabrator Baghouse (WBH), exhausted through Stack B2, capacity: ~~4.5~~ **1.6** tons of metal per hour.

(j) One (1) sand handling operation, identified as EU9, installed prior to 1979, equipped with a baghouse, identified as Main Baghouse (MBH), installed in 1991, exhausted through Stack B3, capacity: ~~30.0~~ **9.6** tons of sand 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 2-8-4(1)]

D.2.1 Particulate [326 IAC 6-3-2]

(a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the grinding area (EU8A), exhausting to Stack B1, shall not exceed ~~11.2~~ **5.61** pounds per hour when operating at a process weight rate of ~~4.5~~ **1.6** tons per hour.

(b) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the Wheelabrator shot blast (EU8B), exhausting to Stack B2, shall not exceed ~~11.2~~ **5.61** pounds per hour when operating at a process weight rate of ~~4.5~~ **1.6** tons per hour.

(c) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the east casting cooling operation (EU5B), **and** the castings shakeout process (EU6) **when operating at a process weight rate of 1.6 tons per hour,** and the sand handling system (EU9), **when operating at a process weight rate of 9.6 tons per hour, all** exhausting to Stack B3, shall not exceed a total of ~~41.3~~ **20.6** pounds per hour when operating at a process weight rate of ~~35.0~~ **11.2** tons per hour.

(d) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the south casting cooling operation

(EU5A) ~~and the pouring and casting operation (EU4)~~, exhausting to Stack B4, shall not exceed a total of ~~41.3~~ **5.61** pounds per hour when operating at a process weight rate of ~~35.0~~ **1.6** tons per hour.

(e) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the pouring and casting operation (EU4) shall not exceed 5.61 pounds per hour when operating at a process weight rate of 1.6 tons per hour.

The above pounds per hour limitations were calculated with the following equations:

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

~~and~~

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

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

D.2.2 Particulate Matter (PM_{10}) [326 IAC 2-8-4] [326 IAC 2-2]

(a) The PM_{10} emission rate from the grinding area (EU8A), exhausting to Stack B1, after controls shall not exceed ~~0.0131~~ **0.05** pounds per ton of metal melted.

(b) The PM_{10} emission rate from the Wheelabrator shot blast (EU8B), exhausting to Stack B2, after controls shall not exceed ~~0.2485~~ **0.05** pounds per ton of metal melted.

(c) The PM_{10} emission rate from Stack B3 after controls shall not exceed ~~5.72~~ **1.24** pounds per hour.

(d) The PM_{10} emission rate from Stack B4 after controls shall not exceed ~~5.36~~ **0.59** pounds per hour.

(e) The PM10 emission rate from pouring/casting operation shall not exceed 2.06 pounds per hour.

~~Therefore, the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-7 (Part 70) are not applicable.~~ **Compliance with these limits, in conjunction with the other PM10 limits included in this permit, limit the source-wide emissions to less than 100 tons per year and render 326 IAC 2-2 (Prevention of Significant Deterioration) and 326 IAC 2-7 (Part 70 Program) not applicable.**

D.2.3 Particulate Matter (PM) [326 IAC 2-2]

(a) The PM emission rate from the grinding area (EU8A), exhausting to Stack B1, after controls shall not exceed ~~0.0515~~ **0.51** pounds per ton of metal melted. ~~Therefore, the requirements of 326 IAC 2-2 are not applicable.~~

(b) The PM emission rate from the Wheelabrator shot blast (EU8B), exhausting to Stack B2, after controls shall not exceed ~~0.98~~ **0.51** pounds per ton of metal melted. ~~Therefore, the requirements of 326 IAC 2-2 are not applicable.~~

(c) The PM emission rate from Stack B3 after controls shall not exceed ~~7.90~~ **4.32** pounds per hour. ~~Therefore, the requirements of 326 IAC 2-2 are not applicable.~~

(d) The PM emission rate from Stack B4 after controls shall not exceed ~~5.479~~ **1.24** pounds per hour. ~~Therefore, the requirements of 326 IAC 2-2 are not applicable.~~

(e) The PM emission rate from pouring/casting operation shall not exceed 4.20 pounds per hour.

Compliance with these limits, in conjunction with the other PM limits included in this permit, limit the source-wide emissions to less than 100 tons per year and render 326 IAC 2-2 (Prevention of Significant Deterioration) and 326 IAC 2-7 (Part 70 Program) not applicable.

D.2.4 Carbon Monoxide (CO) [326 IAC 2-8-4] [326 IAC 2-2]

The CO emission rate from the one (1) pouring/casting operation (EU4), the one (1) castings cooling operation (EU5A and EU5B) and the one (1) castings shakeout operation (EU6), exhausting to Stacks B3 and B4, shall not exceed a total of 6.0 pounds per ton of metal melted. ~~Therefore, the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-7 (Part 70) are not applicable.~~ **Compliance with this limit, in conjunction with the other CO limits included in this permit, limit source-wide emissions to less than 100 tons per year and render 326 IAC 2-2 (Prevention of Significant Deterioration) and 326 IAC 2-7 (Part 70 Program) not applicable.**

D.2.5 Metallic HAP Minor Limits [326 IAC 2-8-4] [326 IAC 2-2]

(a) Total emissions of lead from the pouring/casting cooling operation shall not exceed 0.11 ton per twelve (12) consecutive month period, with compliance determined at the end of each month;

(b) Total emissions of manganese from the pouring/casting cooling operation shall not exceed 0.91 ton per twelve (12) consecutive month period, with compliance determined at the end of each month;

(c) Total emissions of any combination of metal HAPs from the pouring/casting cooling operation shall not exceed 1.10 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

Compliance with the lead and manganese emission limits above in conjunction with the other lead and manganese limits included in this permit limit source-wide lead emissions and source-wide manganese emissions to less than 10 tons per year, each. Compliance with the combined metal HAP limits above in conjunction with the other combined HAP limits included in this permit limit source-wide emissions of any combination of HAPs to less than 25 tons per year. Therefore, the requirements of 326 IAC 2-7 (Part 70 Program) and 326 IAC 2-2 (Prevention of Significant Deterioration) are not applicable.

D.2.6 Organic HAP Minor Limits [326 IAC 2-8-4] [326 IAC 2-2]

(a) The total emissions of toluene from the pouring/casting cooling operations shall not exceed 4.50 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

(b) The total emissions of phenol from the pouring/casting cooling operations shall not exceed 4.50 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

(c) The total emissions of benzene from the pouring/casting cooling operations shall not exceed 4.50 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

(d) The total emissions of any combination of organic HAPs from the pouring/casting cooling operations shall not exceed 4.50 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

Compliance with the toluene, phenol and benzene emission limits above and the limits in Condition D.3.2 limit source-wide toluene, phenol and benzene emissions to less than 10 tons per year, each. Compliance with the combined organic HAP limits above in conjunction with the other combined HAP limits included in this permit limit source-wide emissions of any combination of HAPs to less than 25 tons per year.

. . .

D.2.~~5~~**7** Preventive Maintenance Plan [326 IAC 2-8-4(9)]

. . .

Compliance Determination Requirements

D.2.~~6~~**8** Particulate Matter (PM)

In order to comply with Conditions D.2.1, D.2.2 and D.2.3:

(a) The Main Baghouse (MBH) **exhausting to stack B3,** for PM and PM_{10} control shall be in operation and control emissions from the east castings cooling (EU5B), the casting shakeout (EU6) and the sand handling operation (EU9) at all times that **any of** the facilities **is** ~~are~~ in operation.

(b) The Mold/Dump Baghouse (MDBH) **exhausting to stack B4,** for PM and PM_{10} control shall be in operation and control emissions from the south castings cooling operation (EU5A) at all times that the facility is in operation.

(c) The Grinding Baghouse (GBH) **exhausting to stack B1,** for PM and PM_{10} control shall be in operation and control emissions from the grinding area (EU8A) at all times that the facility is in operation.

(d) The Wheelabrator Baghouse (WBH) **exhausting to stack B2,** for PM and PM_{10} control shall be in operation and control emissions from the Wheelabrator shot blast (EU8B) at all times that the facility is in operation.

. . .

D.2.~~7~~**9** Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

(a) Within 180 days after issuance of ~~this~~ permit **No. F085-14520-00006**, in order to demonstrate compliance with Conditions D.2.1, D.2.2 and D.2.3, the Permittee shall perform PM and PM_{10} testing of ~~the pouring and casting operation (EU4),~~ the castings cooling operation (EU5A and **EU5**B), the castings shakeout process (EU6), the cleaning and finishing operations (EU8A and **EU8**B), and the sand handling process (EU9), utilizing methods as approved by the Commissioner. This testing shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM_{10} includes filterable and condensable PM_{10}. Testing shall be conducted in accordance with Section C - Performance Testing.

(b) Within 180 days after issuance of permit No. F085-14520-00006, in order to demonstrate compliance with Conditions D.2.5 and D.2.6, the Permittee shall perform lead, manganese, toluene, phenol, benzene, total organic HAP, and total HAP testing of the pouring and casting operation (EU4) utilizing methods as approved by the Commissioner. This testing shall be repeated at least once every five (5) years from the date of this valid compliance demonstration.

D.2.10 Metal HAP Emissions

Compliance with the HAP limits in condition D.2.5 shall be demonstrated using the following equations:

(a) Lead Emissions from the Pouring/Casting Cooling operation (tons/yr) = EF_{PCCPb} (lb/ton) x M_{PCC} (tons per twelve (12) consecutive month period)] x (1 ton / 2000 pounds)

Where:

EF_{PPCPb} = 0.0162 pound lead per ton of metal throughput (or an emission factor determined from the most recent compliance stack test)

M_{PCC} = total metal throughput to the Pouring/Casting Cooling operation (tons per twelve (12) consecutive month period)

(b) Manganese Emissions from the Pouring/Casting Cooling operation (tons/yr) = EF_{PCCMn} (lb/ton) x M_{PCC} (tons per twelve (12) consecutive month period)] x (1 ton / 2000 pounds)

Where:

EF_{PCCMn} = 0.1302 pound manganese per ton of metal throughput (or an emission factor determined from the most recent compliance stack test)

M_{PCC} = total metal throughput to the Pouring/Casting Cooling operation (tons per twelve (12) consecutive month period)

(c) Total Metal HAP Emissions from the Pouring/Casting Cooling operation (tons/yr) = EF_{PCCTM} (lb/ton) x MCS (tons per twelve (12) consecutive month period)] x (1 ton / 2000 pounds)

Where:

EF_{PCCTM} = 0.16 pound combined metal HAP per ton of metal throughput (or an emission factor determined from the most recent compliance stack test)

M_{PCC} = total metal throughput to the Pouring/Casting Cooling operation (tons per twelve (12) consecutive month period)

(d) Upon IDEM approval of total metal HAP compliance stack test results on the Pouring/Casting Cooling, the following shall apply:

(1) The lead and manganese emission factors in pound per ton obtained from the IDEM approved stack test results shall be used for the variables identified above as EF_{PCCPb} and EF_{PCCMn}.

(2) The total metal HAP emission factor in pound per ton that shall be used for the variable EF_{PCCTM} shall be the total metal HAP emission factor obtained from the stack test.

D.2.11 Organic HAP Emissions

Compliance with the HAP limits in condition D.2.6 shall be demonstrated using the following equations:

(a) Toluene emissions from the Pouring/Casting Cooling operations (EU4) = EF_{PCCT} (lb/ton) x M_{PCC} (tons per twelve (12) consecutive month period) x (1 ton / 2000 pounds)

Where:

EF_{PCCT} = toluene emissions from Pouring/Casting Cooling operations (0.64 pound per ton of metal throughput or an emission factor determined from the most recent compliance stack test)

M_{PCC} = total metal throughput to the Pouring/Casting Cooling operations (tons per twelve (12) consecutive month period)

(b) Phenol emissions from the Pouring/Casting Cooling operations (EU4) = EF_{PCCP} (lb/ton) x M_{PCC} (tons per twelve (12) consecutive month period) x (1 ton / 2000 pounds)

Where:

EF_{PCCP} = phenol emissions from Pouring/Casting Cooling operations (0.64 pound per ton of metal throughput or an emission factor determined from the most recent compliance stack test)

M_{PCC} = total metal throughput to the Pouring/Casting Cooling operations (tons per twelve (12) consecutive month period)

(c) Benzene emissions from the Pouring/Casting Cooling operations (EU4) = EF_{PCCB} (lb/ton) x M_{PCC} (tons per twelve (12) consecutive month period) x (1 ton / 2000 pounds)

Where:

EF_{PCCB} = benzene emissions from Pouring/Casting Cooling operations (0.64 pound per ton of metal throughput or an emission factor determined from the most recent compliance stack test)

M_{PCC} = total metal throughput to the Pouring/Casting Cooling operations (tons per twelve (12) consecutive month period)

(d) Total organic HAPs emissions from the Pouring/Casting Cooling operations (EU4) = EF_{PCCTO} (lb/ton) x M_{PCC} (tons per twelve (12) consecutive month period) x (1 ton / 2000 pounds)

Where:

EF_{PCCTO} = total organic HAPs emissions from Pouring/Casting Cooling operations (0.64 pound per ton of metal throughput or an emission factor determined from the most recent compliance stack test)

M_{PCC} = total metal throughput to the Pouring/Casting Cooling operations (tons per twelve (12) consecutive month period)

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

D.2.~~8~~**12** Visible Emissions Notations

(a) Visible emission notations of ~~the pouring/casting operation,~~ the castings cooling operation, the castings shakeout operation, the cleaning and finishing operations, and the sand handling system stack exhausts (Stacks B1, B2, B3 and B4) shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

. . .

D.2.~~9~~**13** Parametric Monitoring

. . .

D.2.~~10~~**14** Broken or Failed Bag Detection

. . .

Record Keeping and Reporting Requirement [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.2.~~11~~**15** Record Keeping Requirements

(a) To document compliance with Condition D.2.5, the Permittee shall maintain records of the following:

(1) tons of metal throughput to each of the Pouring/Casting Cooling operation for each month;

(2) Metallic HAP stack test results for the Pouring/Casting Cooling operations as applicable;

(3) Metallic HAP emission calculations performed using the equations in condition D.2.10; and

(4) Metallic HAP emissions in tons per year.

(b) To document compliance with Condition D.2.6, the Permittee shall maintain records of the following:

(1) tons of metal throughput to each of the Pouring/Casting Cooling operation for each month;

(2) Organic HAP stack test results for the Pouring/Casting Cooling operations as applicable;

(3) Organic HAP emission calculations performed using the equations in condition D.2.11; and

(4) Metallic HAP emissions in tons per year.

~~(a)~~**(c)** To document compliance with Condition D.2.~~8~~**12**, the Permittee shall maintain **daily** records of **visible emissions for** ~~the pouring/casting operation,~~ the castings cooling operation, the castings shakeout operation, the cleaning and finishing operations, and the sand handling system stack exhausts (Stacks B1, B2, B3 and B4) ~~once per day~~ during normal daylight operations. **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)~~**(d)** To document compliance with Condition D.2.~~9~~**13**, the Permittee shall maintain records once per day of the pressure drop. **The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of visible emission notation, (e.g. the process did not operate that day).**

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

. . .

D.3.2 Organic HAP Minor Limits [326 IAC 2-8-4] [326 IAC 2-2]

(a) The total emissions of toluene from the core making operation shall not exceed 4.50 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

(b) The total emissions of phenol from the core making operation shall not exceed 4.50 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

(c) The total emissions of benzene from the core making operation shall not exceed 4.50 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

(d) The total emissions of any combination of organic HAPs from the core making operation shall not exceed 4.50 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

Compliance with the toluene, phenol and benzene emission limits above and the limits in Condition D.2.6 limit source-wide toluene, phenol and benzene emissions to less than 10 tons per year, each. Compliance with the combined organic HAP limits above in conjunction with the other combined HAP limits included in this permit limit source-wide emissions of any combination of HAPs to less than 25 tons per year.

Compliance Determination Requirements

D.3.3 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

Within 180 days after issuance of permit No. F085-14520-00006, in order to demonstrate compliance with Conditions D.3.2, the Permittee shall perform toluene, phenol, benzene, and total organic HAP testing of the core making operation (EU11) utilizing methods as approved by the Commissioner. This testing shall be repeated at least once every five (5) years from the date of this valid compliance demonstration.

D.3.4 Organic HAP Emissions

Compliance with the HAP limits in condition D.3.2 shall be demonstrated using the following equations:

(a) Toluene emissions from the core making operation (EU11) = EF_{CMT} (lb/ton) x M_{CM} (tons per twelve (12) consecutive month period) x (1 ton / 2000 pounds)

Where:
EF_{CMT} = toluene emissions from core making (1.37 pound per ton of metal throughput or an emission factor determined from the most recent compliance stack test)
M_{CM} = total metal throughput to the core making (tons per twelve (12) consecutive month period)

(b) Phenol emissions from the core making operation (EU11) = EF_{CMP} (lb/ton) x M_{CM} (tons per twelve (12) consecutive month period) x (1 ton / 2000 pounds)

Where:
EF_{CMP} = phenol emissions from core making (1.37 pound per ton of metal throughput or an emission factor determined from the most recent compliance stack test)
M_{CM} = total metal throughput to the core making (tons per twelve (12) consecutive month period)

(c) Benzene emissions from the core making operation (EU11) = EF_{CMB} (lb/ton) x M_{CM} (tons per twelve (12) consecutive month period) x (1 ton / 2000 pounds)

Where:
EF_{CMB} = benzene emissions from core making (1.37 pound per ton of metal throughput or an emission factor determined from the most recent compliance stack test)
M_{CM} = total metal throughput to the core making (tons per twelve (12) consecutive month period)

(d) Total organic HAPs emissions the core making operation (EU11) = EF_{CMTO} (lb/ton) x M_{CM} (tons per twelve (12) consecutive month period) x (1 ton / 2000 pounds)

Where:
EF_{CMTO} = total organic HAPs emissions from core making (1.37 pound per ton of metal throughput or an emission factor determined from the most recent compliance stack test)
M_{CM} = total metal throughput to the core making (tons per twelve (12) consecutive month period)

Record Keeping and Reporting Requirement [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.3.4 Record Keeping Requirements

(a) To document compliance with Condition D.3.2, the Permittee shall maintain records of the following:

(1) tons of metal throughput to each of the core making operation operation for each month;

(2) Organic HAP stack test results for the core making operation as applicable;

(3) Organic HAP emission calculations performed using the equations in condition D.3.3; and

(4) Organic HAP emissions in tons per year.

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

2. Various reporting forms have been added.

3. The potential to emit of lead is less than five (5) tons per year. Therefore, Condition C.18 (Emission Statement) was deleted.

~~C.18 Emission Statement [326 IAC 2-6] [326 IAC 2-8-4(3)]~~

~~(a) In accordance with the compliance schedule specified in 326 IAC 2-6-3(b)(1), starting in 2007 and every three (3) years thereafter, the Permittee shall submit by July 1 an emission statement covering the previous calendar year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:~~

~~(1) Indicate estimated actual emissions of all pollutants listed in 326 IAC 2-6-4(a);~~

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

~~The statement must be submitted to:~~

~~Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251~~

~~The emission statement does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).~~

~~(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.~~

Upon further review, IDEM, OAQ has decided to make the following changes to the permit.

1. IDEM, OAQ has decided to remove the information regarding the Authorized Individual from Section A.1 of the permit. Listing the name and/or title in the permit has resulted in unnecessary administrative amendments in the past. Therefore, IDEM, OAQ does not consider it beneficial to maintain or update this information in the permits. IDEM, OAQ will continue to retain this information up-to-date in their permit tracking system.

A.1 General Information [326 IAC 2-8-3(b)]

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

~~Authorized Individual:~~	~~President~~
Source Address:	1212 North Detroit Street, Warsaw, Indiana 46580
Mailing Address:	P.O. Box 227, Warsaw, Indiana 46581
General Source Phone Number:	574-267-8772
SIC Code:	3321
County Location	Kosciusko
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit (FESOP) Minor Source, under PSD Rules; Minor Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

2. Typographical errors in the permit have been corrected as shown:

B.2 Permit Term [326 IAC 2-8-4(2)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]

(a) This permit, **F**085-14520-00006, 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.13 Prior Permits Superseded [326 IAC 2-1.1-9.5]

(a) All terms and conditions of permits established prior to **F**085-14520-00006 and issued pursuant to permitting programs approved into the state implementation plan have been either:

. . .

B.19 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]

. . .

(~~c~~ **b**) Emission Trades [326 IAC 2-8-15(c)]
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(c).

(~~d~~ **c**) Alternative Operating Scenarios [326 IAC 2-8-15(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 2-8-4(7). No prior notification of IDEM, OAQ, or U.S. EPA is required.

(~~e~~ **d**) 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.

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

Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) **and** 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.12 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.17 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4][326 IAC 2-8-5]

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.

(b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in ~~one-hundred and~~ **one hundred** twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.

. . .

3. The overall source limit condition C.2 has been clarified.

C.2 Overall Source Limit [326 IAC 2-8] **[326 IAC 2-2]**

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

(a) Pursuant to 326 IAC 2-8:

(1) The potential to emit any regulated pollutant, except particulate matter (PM), from the entire source shall be limited to less than one-hundred (100) tons per twelve (12) consecutive month period. This limitation shall also make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable;

(2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and

(3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.

(b) Pursuant to 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), potential to emit particulate matter (PM) from the entire source shall be limited to less than one-hundred (100) tons per twelve (12) consecutive month period. **This limitation shall also make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.**

. . .

4. IDEM, OAQ has decided to add the specific mail codes (MC) for each of the IDEM branches to improve mail delivery, as follows:

Permits Branch: **MC 61-53 IGCN 1003**
Compliance Branch: **MC 61-53 IGCN 1003**
Asbestos Section: **MC 61-52 IGCN 1003**
Technical Support and Modeling: **MC 61-50 IGCN 1003**

Compliance Data Section: **MC 61-53 IGCN 1003**
Permits Branch: **MC 61-53 IGCN 1003**

Conclusion

The construction and operation of this proposed revision shall be subject to the conditions of the attached proposed Significant Permit Revision to a Federally Enforceable State Operating Permit No. 085-24317-00006.

Appendix A: Potential Emission Calculations
Grey Iron Foundry Operations

Company Name: Warsaw Foundry Company, Inc.
Address: 1212 North Detroit Street, Warsaw, Indiana 46580
SPR to FESOP: 085-24317
Plt ID: 085-00006
Reviewer: ERG/BL
Date: March 7, 2007

Emission Factors (lbs/ton)

Emission Unit	Unit ID	SCC	PM	PM10	SO2	NOx	VOC	CO	Lead
Charge Handling	EU1	30400315	0.60	0.36	0	0	0	0	0
Cupola	EU2	30400301	13.8	12.4	1.20	0.10	0.18	145	1.10
Electric Induction Furnace	EU3	30400303	0.90	0.86	0	0	0	0	0.10
Pouring/Casting *	EU4	30400320	4.20	2.06	0.02	0.01	0.14		0
Castings Cooling	EU5	30400325	1.40	1.40	0	0	0	6.00	0
Main Castings Shakeout	EU6	30400331	3.20	2.24	0	0	1.20		0
Grinding and Wheelabrator Shot Blast	EU8	30400340	17.0	1.70	0	0	0	0	0
Main Sand Handling	EU9	30400350	3.60	0.54	0	0	0	0	0
Oil Core Oven	EU10	30400351	2.22	2.22	0.04	0.5	0	0	0
Shell Core Machines	EU11	30400370	0	0	0.32	0.5	0	0	0
Inoculation	-	30400310	4.00	4.00	0	0	0.005	0	0
Magnesium Treatment	-	30400321	1.80	1.80	0	0	0	0	0

PTE calculations were determined using emission factors from FESOP No.: 085-14520-00006, October 20, 2006.
* The August 11, 2006 Indiana Cast Metals Association memo contained the CO emission factor of 6.0 lbs/ton of metal poured for the combined pouring, cooling, and shakeout processes.

Emission factors from EPA's FIRE version 6.25.

Control Efficiencies

Emission Unit	Control Device	PM Efficiency	Lead Efficiency	CO Efficiency
Cupola	Venturi Scrubber	86.5%	85%	92.5%
Castings Cooling	Baghouses (MDBH and MBH)	97.0%	0%	0%
Main Castings Shakeout	Main Baghouse (MBH)	97.0%	0%	0%
Grinding and Wheelabrator Shot Blast	Baghouses (GBH and WBH)	97.0%	0%	0%
Main Sand Handling	Main Baghouse (MBH)	97.0%	0%	0%

326 IAC 2-2 Avoidance Limits (lbs/ton)

Emission Unit	Unit ID	SCC	PM	PM10	SO2	NOx	VOC	CO	Lead
Charge Handling	EU1	30400315	0.60	0.36	-	-	-	-	-
Cupola	EU2	30400301	13.8	12.4	-	-	-	10.88	-
Electric Induction Furnace	EU3	30400303	0.90	0.86	-	-	-	-	-
Pouring/Casting *	EU4	30400320	4.20	2.06	-	-	-		-
Castings Cooling	EU5	30400325	-	-	-	-	-	6.0	-
Main Castings Shakeout	EU6	30400331	-	-	-	-	-		-
Grinding	EU8A	30400340	0.51	0.05	-	-	-	-	-
Wheelabrator Shot Blast	EU8B	30400340	0.51	0.05	-	-	-	-	-
Main Sand Handling	EU9	30400350	-	-	-	-	-	-	-
Oil Core Oven	EU10	30400351	-	-	-	-	-	-	-
Shell Core Machines	EU11	30400370	-	-	-	-	-	-	-
Inoculation	-	30400310	4.00	4.00	-	-	-	-	-
Magnesium Treatment	-	30400321	1.80	1.80	-	-	-	-	-
Stack B3 (Castings Shakeout EU6, Sand Handling EU9, East Castings Cooling EU5B)	-	-	(see below)	(see below)	-	-	-	-	-
Stack B4 (South Castings Cooling EU5A)	-	-	(see below)	(see below)	-	-	-	-	-

326 IAC 2-2 Avoidance Limits (lbs/hr)

Stack B3 (Castings Shakeout EU6, Sand Handling EU9, East Castings Cooling EU5B)	-	-	4.32	1.24	-	-	(see above)	-	-
Stack B4 (South Castings Cooling EU5A)	-	-	1.24	0.59	-	-	-	-	-

Appendix A: Potential Emission Calculations
Grey Iron Foundry Operations

Company Name: Warsaw Foundry Company, Inc.
Address: 1212 North Detroit Street, Warsaw, Indiana 46580
SPR to FESOP: 085-24317
Plt ID: 085-00006
Reviewer: ERG/BL
Date: March 7, 2007

Uncontrolled Potential Emissions (tons/yr)

Emission Unit	Unit ID	Stack	Rate (tons/hr)	PM	PM10	SO2	NOx	VOC	CO	Lead
Charge Handling	EU1	-	1.60	4.20	2.52	0	0	0	0	0
Cupola	EU2	Stack C1	5.00	302	272	26.3	2.19	3.94	3,176	24.1
Electric Induction Furnace	EU3	-	1.60	6.31	6.03	0	0	0	0	0.70
Pouring/Casting	EU4	-	1.60	29.4	14.4	0.14	0.07	0.98		0
Castings Cooling	EU5	Stacks B3, B4	1.60	9.81	9.81	0	0	0	42.0	0
Main Castings Shakeout	EU6	Stack B3	1.60	22.4	15.7	0	0	8.41		0
Grinding and Wheelabrator Shot Blast	EU8	Stacks B1, B2	1.60	119	11.9	0	0	0	0	0
Main Sand Handling	EU9	Stack B3	9.60	151	22.7	0	0	0	0	0
Oil Core Oven	EU10	Stack O1	0.75	7.29	7.29	0.12	1.64	0	0	0
Shell Core Machines	EU11	-	0.75	0	0	1.05	1.64	0	0	0
Inoculation	-	-	5.00	87.6	87.6	0	0	0.11	0	0
Magnesium Treatment	-	-	1.50	11.8	11.8	0	0	0	0	0
Total				**733**	**444**	**27.6**	**5.55**	**13.4**	**3,218**	**24.1**

* Worst case emissions include only one method of charging (cupola not the electric induction furnace) and either magnesium treatment or inoculation.

Controlled / Limited Emissions (tons/yr) Total Melt Limit 11,300 tons/yr

Emission Unit	Unit ID	Stack	Rate (tons/hr)	PM	PM10	SO2	NOx	VOC	CO	Lead
Charge Handling	EU1	-	1.29	3.39	2.03	0	0	0	0	0
Cupola *	EU2	Stack C1	1.29	10.5	9.46	6.78	0.57	1.02	61.4	0
Pouring/Casting	EU4	-	1.29	23.7	11.6	0.11	0.06	0.79	33.9	0
Grinding and Wheelabrator Shot Blast	EU8A	Stack B1	1.29	2.88	0.29	0	0	0	0	0
Grinding and Wheelabrator Shot Blast	EU8B	Stack B2	1.29	2.88	0.29	0	0	0	0	0
Oil Core Oven	EU10	Stack O1	0.75	7.29	7.29	0.12	1.64	0	0	0
Shell Core Machines	EU11	-	0.75	0	0	1.05	1.64	0	0	0
Magnesium Treatment or Inoculation *	-	-	1.29	22.6	22.6	0	0	0.03	0	0
Core wash/mold part	EU12	-	1.29	0	0	0	0	13.3	0	0
Insignificant combustion	-	-	-	0.017	0.07	0.005	0.92	0.051	0.77	0
Unpaved roads	-	-	-	0.91	0.28	0	0	0	0	0
Other insignificant	-	-	-	1.00	1.00	0	0	1.00	0	0

Stack B3 (Castings Shakeout EU6, Sand Handling EU9, East Castings Cooling EU5B)	-	Stack B3	1.29	18.9	5.43	0	0	6.78	see EU4	0
Stack B4 (South Castings Cooling EU5A)	-	Stack B4	1.29	5.43	2.58	0	0	0	see EU4	0
Total				**99.6**	**63.0**	**8.07**	**4.83**	**16.1**	**96.1**	**0**

* Worst case emissions include only one method of charging (cupola not the electric induction furnace) and either magnesium treatment or inoculation.

Methodology:
Uncontrolled Potential Emissions (tons/yr) = Maximum Rate (tons/hr) * Emission Factors (lbs/ton) * 1 ton/ 2000 lbs * 8760 hrs/ 1 yr
Limited Emissions (tons/yr) = 326 IAC 2-2 Avoidance Limits (lbs/ton) * 1 ton/ 2000 lbs * 8760 hrs/ 1 yr

Appendix A: Potential Emission Calculations
Grey Iron Foundry Operations

Company Name: Warsaw Foundry Company, Inc.
Address: 1212 North Detroit Street, Warsaw, Indiana 46580
SPR to FESOP: 085-24317
Plt ID: 085-00006
Reviewer: ERG/BL
Date: March 7, 2007

Process	Maximum Rate (tons iron/hr)	PM emission factor (lb/ton) *	Pollutant	Emission Factor (lb/ton produced)	Emissions, Before Controls (ton/yr)	Emissions, After Controls (ton/yr)	Control Device	Control Efficiency (%)
Charge Handling	1.60	0.60	chromium	0.0002	0.002	0.002	N/A	
SCC# 3-04-003-15			nickel	0.0004	0.003	0.003		
AP-42 Ch. 12.10			arsenic	0.0001	0.001	0.001		
			lead	0.0023	0.016	0.016		
			manganese	0.0186	0.130	0.130		
			antimony	0.0011	0.008	0.008		
			TOTAL	**0.02**	**0.16**	**0.16**		
Melting - Cupola	1.29	13.80	chromium	0.0052	0.030	0.004	Wet scrubber	85.0%
EPA SCC# 3-04-003-01			nickel	0.0092	0.052	0.008		
AP-42 Ch. 12.10			arsenic	0.0018	0.010	0.002		
			lead **	1.1000	6.22	0.932		
			manganese	0.4278	2.417	0.363		
			antimony	0.0255	0.144	0.022		
			TOTAL	**1.57**	**8.87**	**1.33**		
Melting - Electric	1.60	0.90	chromium	0.0003	0.002	0.002	N/A	
Induction Furnace			nickel	0.0006	0.004	0.004		
EPA SCC# 3-04-003-03			arsenic	0.0001	0.001	0.001		
AP-42 Ch. 12.10			lead **	0.1000	0.701	0.701		
			manganese	0.0279	0.196	0.196		
			antimony	0.0017	0.012	0.012		
			TOTAL	**0.13**	**0.92**	**0.92**		
Pouring/Casting Cooling	1.60	4.20	chromium	0.0016	0.011	0.011	N/A	
EPA SCC#3-04-003-20			nickel	0.0028	0.020	0.020		
AP-42 Ch. 12.10			arsenic	0.0005	0.004	0.004		
			lead	0.0162	0.113	0.113		
			manganese	0.1302	0.912	0.912		
			antimony	0.0078	0.054	0.054		
			TOTAL	**0.16**	**1.11**	**1.11**		
Casting Shakeout	1.60	3.20	chromium	0.0012	0.009	0.000	Main Baghouse	97.0%
EPA SCC#3-04-003-31			nickel	0.0021	0.015	0.000	MBH	
AP-42 Ch. 12.10			arsenic	0.0004	0.003	0.000		
			lead	0.0123	0.086	0.003		
			manganese	0.0992	0.695	0.021		
			antimony	0.0059	0.041	0.001		
			TOTAL	**0.12**	**0.85**	**0.03**		
Shotblast #1 - #3	1.60	17.00	chromium	0.0065	0.045	0.001	Baghouse	97.0%
SCC# 3-04-003-40			nickel	0.0114	0.080	0.002	WBH	
AP-42 Ch. 12.10			arsenic	0.0022	0.015	0.000		
			lead	0.0655	0.459	0.014		
			manganese	0.5270	3.693	0.111		
			antimony	0.0315	0.220	0.007		
			TOTAL	**0.64**	**4.51**	**0.14**		
Grinding/Finishing	1.60	17.00	chromium	0.0065	0.045	0.001	Baghouse	97.0%
SCC# 3-04-003-40			nickel	0.0114	0.080	0.002	GBH	
AP-42 Ch. 12.10			arsenic	0.0022	0.015	0.000		
			lead	0.0655	0.459	0.014		
			manganese	0.5270	3.693	0.111		
			antimony	0.0315	0.220	0.007		
			TOTAL	**0.64**	**4.51**	**0.14**		
Core making operation (EU11)***	0.75	-	Organic HAPs	-	5.32	5.32		
Core wash & mold parting (EU12)	0.75	-	Organic HAPs	-	0.98	0.98		
Insignificant Combustion ***	0.75	-	Total HAPs	-	0.017	0.017		

* PM emission factors from EPA's FIRE version 6.25.
** An emission factors for this pollutant was available in EPA's FIRE version 6.25.
*** Total HAP PTE calculations were reported in FESOP No.: 085-14520-00006, issued October 20, 2006.

All HAP emission factors are based on the AP-42 emission factors for PM and the percent of PM that is HAP based on information from SPECIATE, v 3.1.

USEPA Speciate v 3.1 Data	
Metal	Gen. Foundry
Manganese	3.100%
Chromium	0.038%
Nickel	0.067%
Arsenic	0.013%
Antimony	0.185%
Lead	0.385%

Total Potential Emissions before controls

chromium	0.14	tons/year
nickel	0.25	tons/year
arsenic	0.05	tons/year
lead	8.0	tons/year
manganese	11.6	tons/year
antimony	0.69	tons/year
Total Metal HAPs	**20.8**	**tons/year**
Total HAPs ****	**30.2**	**tons/year**

Total Limited Emissions After Controls

chromium	0.02	tons/year
nickel	0.03	tons/year
arsenic	0.01	tons/year
lead	1.08	tons/year
manganese	1.52	tons/year
antimony	0.09	tons/year
Total Metal HAPs	**2.7**	**tons/year**
Total HAPs ******	**11.6**	**tons/year**

Worst case emissions include only one method of charging (cupola not the electric induction furnace).
**** Also includes organic HAPs from the Pouring/Cooling/Shakeout show on page 4. Worst case emissions include only one method of charging (cupola not the electric induction furnace).

Methodology:
Emission Facor = FIRE PM emission factor (lb/ton) x Gen. Foundry HAP %
Emissions, Before Controls (tons/yr) = Potential to Emit, before controls (ton/yr) = Maximum Rate (units/hr) x Ef (lbs/unit) x 8760 hrs/yr / 2000 lbs/hr
Emissions, After Controls (tons/yr) = Potential to Emit, after controls (ton/yr) = Maximum Rate (units/hr) x Ef (lbs/unit) x 8760 hrs/yr / 2000 lbs/hr x (1-Effiency/100)
1 lb = 2000 tons

Appendix A: Secondary Metal Production
Grey Iron Foundry
Pouring, Cooling and Shakeout HAP Emissions

Company Name: Warsaw Foundry Company, Inc.
Address: 1212 North Detroit Street, Warsaw, Indiana 46580
SPR to FESOP: 085-24317
Plt ID: 085-00006
Reviewer: ERG/BL
Date: March 7, 2007

Organic Hazardous Air Pollution Emission Estimates

Maximum Rate for Pouring/Cooling/Shakeout	**1.60**	**tons/hr**	
Limited Rate for Pouring/Cooling/Shakeout*	**11,300**	**tons/yr**	
Analyte	Combined PCS Ef (lbs/ton)	Emission Before Limitations (tons/yr)	Emissions After Limitations (tons/yr)
Phenol	0.07	0.50	0.41
Benzene	0.16	1.15	0.93
Analine	0.04	0.26	0.21
o-Cresol	0.02	0.13	0.10
Naphthalene	0.00	0.03	0.03
N,N-Dimethylaniline	0.01	0.06	0.05
Toluene	0.06	0.45	0.37
m, p-Cresol	0.01	0.04	0.03
m, p-Xylene	0.00	0.03	0.02
Xylene (Total)	0.04	0.27	0.22
Acetaldehyde	0.01	0.07	0.06
Ethylbenzene	0.01	0.05	0.04
Formaldehyde	0.00	0.01	0.01
Hexane	0.00	0.03	0.03
Other HAPs	0.01	0.05	0.04
Total HAPs	**0.45**	**3.14**	**2.53**

METHODOLOGY

HAP Emissions = Usage Rate (tons/hr) * 8760 hrs/yr * EF (lb/ton) * 1 tons/2000 lbs
Emission factors from Reference Tests Recommended in "Organic Hazardous Air Pollutant Emission Factors for Iron Foundries", Prepared by the Air Quality Committee (10-E) of the American Foundry Society August 16, 2005 for Calculating Emission Factors for Pouring, Cooling and Shakeout.
*The metal melted 11,300 tons per year limit does not allow the organic HAP emissions to exceed the major source threshold. Warsaw Foundry does not use the Isocure core making process in their operations.