

**FEDERALLY ENFORCEABLE STATE
OPERATING PERMIT (FESOP)
OFFICE OF AIR MANAGEMENT
and
INDIANAPOLIS ENVIRONMENTAL RESOURCES MANAGEMENT DIVISION
AIR QUALITY MANAGEMENT SECTION**

**Interstate Castings, Inc.
3823 Massachusetts Ave.
Indianapolis, Indiana 46218**

(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.

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 and 326 IAC 2-1-3.2, 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.: F097-10170-00063	
Issued by: Robert Holm, Administrator Environmental Resources Management Division	Issuance Date:

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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 Management (OAM) and the Indianapolis Environmental Resources Management Division (ERMD). 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 Gray Iron Foundry.

Responsible Official: Mr. Leo Meyer
Source Address: 3823 Massachusetts Ave. Indianapolis, Indiana 46218
Mailing Address: 3823 Massachusetts Ave. Indianapolis, Indiana 46218
Phone Number: 317-546-2427
SIC Code: 3321
County Location: Marion
County Status: Attainment for all criteria pollutants
Source Status: Federally Enforceable State Operating Permit (FESOP)
Major Source, under PSD Rule;

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) Melt Operations which consists of one charge handling system, one(1) preheater, two (2) electric induction furnace and one (1) holding ladle. The maximum capacity of the charge handling system is limited by the source's ability to melt metal. The preheater has a maximum heat input capacity of 25 million Btu per hour and is fired with natural gas. The melt operation has a maximum melt rate of 5 tons of metal per hour. Only one furnace can be operated at a time because there is only one transformer to supply electrical energy. Ductile iron can be produced by adding inoculants to the molten metals in the reaction ladle. The emissions from the induction furnaces are collected by a canopy hood located directly over the furnaces. The emissions collected by the furnace hood system are controlled by settling tank followed by a cyclone which exhausts out one stack identified as stack B. A portion of the building fugitive emissions from charge handling, preheater, furnace, and inoculation processes are collected by the general furnace area ventilation system which exhausts out two stacks identified as stacks V11 and V12. The preheater, two (2) induction furnaces and holding ladle were installed in 1972.
- (b) Pouring and cooling operations is where the molten metal from the melting operation are poured from ladels into molds and allowed to cool. The maximum operating capacity is limited by the source's ability to melt metal. The emissions generated from pouring and cooling are uncontrolled and are emitted into the building. A portion of these emissions are collected by hoods located on the ceiling above the pouring deck and exhausted out stacks V17, V18, V25, V26, and V27. These operations have been conducted since the 1930s.
- (c) Shakeout is where the molding sand is separated from the casting by mechanical

shaking. The maximum operating capacity is limited by the source's ability to melt metal. Emissions are collected by hoods located over the shakeout area. The emissions collected by the hoods are controlled by a cyclone, identified as control device C, and dust collector, identified as control device A, in series. The emissions from the dust collector are exhausted out one stack identified as stack A. The emissions not collected by the hood collection system are emitted in the building and are exhausted out the general building ventilation system. This facility was installed in 1972.

- (d) Casting Cleaning Operation consists of one (1) table blast, one (1) shot blast machine, three (3) grinders and one (1) cutoff saw . The maximum operating capacity is limited by the source's ability to melt metal. The emissions are collected by various hoods located throughout the casting cleaning operation and are controlled by dust collector, identified as control device A, which exhausted out one stack identified as stack A. The emissions not collected by the hood collection system are emitted in the building and are exhausted out the general building ventilation system. The casting cleaning processes were installed prior to 1982.
- (e) Sand Handling Operation consists of one (1) sand muller, thirteen (13) hopper stations, one (1) sand elevator, one (1) sand tank, one (1) sand cooler, three belts (3), and one (1) molding line. The maximum capacity of the sand handling system is 20.63 tons of sand per hour. The emissions are collected by various hoods located throughout the sand handling process line and are controlled by dust collector, identified as control device A, which exhausted out one stack identified as stack A. The emissions not collected by the hood collection system are emitted in the building and are exhausted out the general building ventilation system. The sand handling processes were installed prior to 1967.
- (f) Core Making Operation consists of the following two (2) heat cure processes; air set core making process, and oil sand core making process. In the air set core making process, sand, catalyst, and resin are blended together in a sand mixer. Following blending, the blended sand is placed in the core boxes which are in turn placed in a core machine. Cores are then formed into the desired shape in the core machine. If required the cores are placed in the core oven in order to harden the cores. The air set core oven is fired with natural gas and has a maximum heat input capacity of 0.115 million Btu per hour. The maximum operating capacity of the air set core making process is 0.5 tons of cores per hour. In the oil core making process, sand and core oil are blended together in a sand mixer and placed in core molds to produce the desired shape. If required, the oil cores are then baked in a core oven in order to harden and strengthen the cores. The oil sand core oven is fired with natural gas and has a maximum heat input capacity of 1.6 million Btu per hour. The maximum operating capacity of the oil core making process is 0.05 tons of cores per hour. Emissions from the air set core making process, and a oil sand core making process are uncontrolled and are emitted in to the building. A portion of these emissions are collected by building ventilation hoods located in the core making area and are exhausted out stacks V38, V5 and V4.

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) Space heaters, process heaters, or boilers using the following fuels.
 - 1) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour.
 - (A) Core Oven, with a heat input capacity of 1.6 MMBtu/hr.

- (B) Maintenance West Space Heater, with a heat input capacity of 0.225 MMBtu/hr.
- (C) Maintenance East Space Heater, with a heat input capacity of 0.225 MMBtu/hr.
- (D) Chipping Booth Space Heater, with a heat input capacity of 0.2 MMBtu/hr.
- (E) Old Dock Space Heater, with a heat input capacity of 0.4 MMBtu/hr.
- (F) Maintenance Shower Room Furnace, with a heat input capacity of 0.125 MMBtu/hr.
- (G) Old Conference Room Boiler, with a heat input capacity of 0.106 MMBtu/hr.
- (H) Airset Oven, with a heat input capacity of 0.115 MMBtu/hr.
- (I) Airset Torpedo, with a heat input capacity of 0.4 MMBtu/hr.
- (J) Airset Torpedo, with a heat input capacity of 0.4 MMBtu/hr.
- (K) Bull Ladle Torch -2", with a heat input capacity of 0.279 MMBtu/hr.
- (L) Control Room Furnace, with a heat input capacity of 0.125 MMBtu/hr.
- (M) Core Dip Drying Table Infra-red, with a heat input capacity of 0.048 MMBtu/hr.
- (N) Ladle Torch 2" Floor Molding, with a heat input capacity of 0.279 MMBtu/hr.
- (O) Ladle Torch 2" Floor Molding, with a heat input capacity of 0.279 MMBtu/hr.
- (P) Ladle Torch 2" Floor Molding, with a heat input capacity of 0.279 MMBtu/hr.
- (Q) Bull Ladle Torch -2", with a heat input capacity of 0.279 MMBtu/hr.
Heavy Chip Torpedo, with a heat input capacity of 0.4 MMBtu/hr.
- (R) Shipping Office North Infra-red, with a heat input capacity of 0.014 MMBtu/hr.
- (S) Shipping Office South Infra-red, with a heat input capacity of 0.014 MMBtu/hr.
- (T) Core Assembly Table Heater, with a heat input capacity of 0.014 MMBtu/hr.
- (U) Muller Trash Chute Torch, with a heat input capacity of 0.005 MMBtu/hr.
- (V) Muller Gearbox Infra-red, with a heat input capacity of 0.024 MMBtu/hr.
- (W) Muller Manifold Infra-red, with a heat input capacity of 0.024 MMBtu/hr.
- (X) Compressor Water Manifold Infra-red, with a heat input capacity of 0.024 MMBtu/hr.
- (Y) Air-set room space heater, with a heat input capacity of 0.15 MMBtu/hr.
- (Z) Air-set room Infra-red, with a heat input capacity of 0.024 MMBtu/hr.
- (AA) Air-set room Infra-red, with a heat input capacity of 0.024 MMBtu/hr.
- (BB) Air-set conveyor Infra-red, with a heat input capacity of 0.024 MMBtu/hr.
- (CC) Air-set conveyor Infra-red, with a heat input capacity of 0.024 MMBtu/hr.
- (DD) Air-set conveyor Infra-red, with a heat input capacity of 0.024 MMBtu/hr.
- (EE) Core Room Core Prep Infra-red, with a heat input capacity of 0.024 MMBtu/hr.
- (FF) Bench Core Table Infra-red, with a heat input capacity of 0.024 MMBtu/hr.
- (GG) Bench Core Table Infra-red, with a heat input capacity of 0.024 MMBtu/hr.
- (HH) Core Assembly Table Infra-red, with a heat input capacity of 0.024 MMBtu/hr.
- (II) Air-set Core & Mold assembly Table Infrared, with a heat input capacity of 0.024 MMBtu/hr.

- (JJ) Air-set Core & Mold assembly Table Infrared, with a heat input capacity of 0.024 MMBtu/hr.
- (KK) Air-set Mold Assembly Infrared, with a heat input capacity of 0.024 MMBtu/hr.
- (LL) Air-set Mold Assembly Infrared, with a heat input capacity of 0.024 MMBtu/hr.
- (MM) Sinto Infrared (basement), with a heat input capacity of 0.024 MMBtu/hr.
- (NN) Sinto Infrared (basement), with a heat input capacity of 0.024 MMBtu/hr.
- (OO) #9 Molding Machine Infrared (overhead), with a heat input capacity of 0.024 MMBtu/hr.
- (PP) #9 Molding Machine Infrared (basement), with a heat input capacity of 0.024 MMBtu/hr.
- (QQ) Molding Line Setup Table Infrared (basement), with a heat input capacity of 0.024 MMBtu/hr.
- (RR) #8 Molding Machine Infrared (basement), with a heat input capacity of 0.024 MMBtu/hr.
- (SS) #8 Molding Machine Infrared (overhead), with a heat input capacity of 0.024 MMBtu/hr.
- (TT) #7 Molding Machine Infrared (basement), with a heat input capacity of 0.024 MMBtu/hr.
- (UU) #7 Molding Machine Infrared (overhead), with a heat input capacity of 0.024 MMBtu/hr.
- (VV) #6 Molding Machine Infrared (basement), with a heat input capacity of 0.024 MMBtu/hr.
- (WW) #6 Molding Machine Infrared (overhead), with a heat input capacity of 0.024 MMBtu/hr.
- (XX) #5 Molding Machine Infrared (basement), with a heat input capacity of 0.024 MMBtu/hr.
- (YY) #5 Molding Machine Infrared (overhead), with a heat input capacity of 0.024 MMBtu/hr.
- (ZZ) #4 Molding Machine Infrared (basement), with a heat input capacity of 0.024 MMBtu/hr.
- (AAA) #4 Molding Machine Infrared (overhead), with a heat input capacity of 0.024 MMBtu/hr.
- (BBB) #3 Molding Machine Infrared (basement), with a heat input capacity of 0.024 MMBtu/hr.
- (CCC) #3 Molding Machine Infrared (overhead), with a heat input capacity of 0.024 MMBtu/hr.
- (DDD) #1 Molding Machine Infrared (basement), with a heat input capacity of 0.024 MMBtu/hr.
- (EEE) #1 Molding Machine Infrared (overhead), with a heat input capacity of 0.024 MMBtu/hr.
- (FFF) Ladle Prep Area Sink Infrared, with a heat input capacity of 0.024 MMBtu/hr.
- (GGG) #2 Stand Grinder Infrared, with a heat input capacity of 0.024 MMBtu/hr.
- (HHH) #1 Stand Grinder Infrared, with a heat input capacity of 0.024 MMBtu/hr.
- (III) Brinell Tester Infrared, with a heat input capacity of 0.024 MMBtu/hr.
- (JJJ) Single Pedestal Dual Wheel Grinder Infrared, with a heat input capacity of 0.024 MMBtu/hr.

- (KKK) Floor Molding Rollaround Triple Unit Infra-red, with a heat input capacity of 0.024 MMBtu/hr.
 - (LLL) Floor Molding North Station Infra-red, with a heat input capacity of 0.024 MMBtu/hr.
 - (MMM) Floor Molding South Station Infra-red, with a heat input capacity of 0.024 MMBtu/hr.
 - (NNN) Floor Molding Water Barell Infra-red, with a heat input capacity of 0.024 MMBtu/hr.
 - (OOO) Floor Molding Simpson Muller Infra-red, with a heat input capacity of 0.024 MMBtu/hr.
- 2) Propane or liquified petroleum gas, or butane-fired combustion sources with heat input equal to or less than six million (6,000,000) Btu per hour.
- (A) Payloader, 61 HP
 - (B) Hand Torch unit for mold drying, 0.3 MMBtu/hr
- 3) Fuel oil-fired combustion sources with heat input equal to or less than two million (2,000,000) Btu per hour and firing fuel containing less than five-tenths (0.5) percent sulfur by weight.
- (A) Dayton Salamader, 0.6 MMBtu/hr
 - (B) Dayton Salamader, 0.055 MMBtu/hr
- (b) Equipment powered by internal combustion engines of capacity equal to or less than 500,000 Btu/hour, except where total capacity of equipment operated by one stationary source exceeds 2,000,000 Btu/hour.
- (c) Combustion source flame safety purging on startup.
- (d) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons.
- (e) The following VOC and HAP storage containers:
- 1) Storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.
 - 2) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.
- (f) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.
- (g) Closed loop heating and cooling systems.
- (h) Infrared cure equipment.
- (i) Noncontact cooling tower systems with forced and induced draft cooling tower system not regulated under a NESHAP.
- (j) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.

- (k) Paved and unpaved roads and parking lots with public access.
- (l) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.
- (m) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations.
 - (1) Wood working operation consisting of one (1) bandsaw and (1) oscillating vertical sand. The emissions from this operation are controlled by a dust collector with a design flow rate of 55 cubic feet per minute.
- (n) A laboratory as defined in 326 IAC 2-7-1(20)(C).

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 Management (OAM) and the Indianapolis Environmental Resources Management Division (ERMD) for a Federally Enforceable State Operating Permit (FESOP).

SECTION B GENERAL CONDITIONS

B.1 Permit No Defense [IC 13]

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.

B.2 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, any applicable definitions found in IC 13-11, 326 IAC 1-2, and 326 IAC 2-7 shall prevail.

B.3 Permit Term [326 IAC 2-8-4(2)]

This permit is issued for a fixed term of five (5) years from the effective date, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3.

B.4 Enforceability [326 IAC 2-8-6]

- (a) All terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM and ERMD.
- (b) Unless otherwise stated, terms and conditions of this permit, including any provisions to limit the source's potential to emit, are enforceable by the United States Environmental Protection Agency (U.S. EPA) and citizens under the Clean Air Act.
- (c) All terms and conditions in this permit that are local requirements, including any provisions designed to limit the source's potential to emit, are enforceable by ERMD.

B.5 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) months prior 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.6 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.7 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.8 Duty to Supplement and Provide Information [326 IAC 2-8-3(f)] [326 IAC 2-8-4(5)(E)]

- (a) The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to:

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

and
Environmental Resources Management Division
Air Quality Management Section, Permits

2700 South Belmont Avenue
Indianapolis, Indiana 46221

- (b) The Permittee shall furnish to IDEM, OAM, and ERMD within a reasonable time, any information that IDEM, OAM, and ERMD 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.
- (c) Upon request, the Permittee shall also furnish to IDEM, OAM, and ERMD copies of records required to be kept by this permit. If the Permittee wishes to assert a claim of confidentiality over any of the furnished records, the Permittee must furnish such records to IDEM, OAM, and ERMD along with a claim of confidentiality under 326 IAC 17. If requested by IDEM, OAM, or the U.S. EPA, to furnish copies of requested records directly to U. S. EPA, and if the Permittee is making a claim of confidentiality regarding the furnished records, the Permittee must furnish such confidential records directly to the U.S. EPA along with a claim of confidentiality under 40 CFR 2, Subpart B.

B.9 Compliance Order Issuance [326 IAC 2-8-5(b)]

IDEM, OAM and ERMD 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.10 Compliance with Permit Conditions [326 IAC 2-8-4(5)(A)] [326 IAC 2-8-4(5)(B)]

- (a) The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit, except those specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act and is grounds for:
 - (1) Enforcement action;
 - (2) Permit termination, revocation and reissuance, or modification; and
 - (3) Denial of a permit renewal application.
- (b) 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.

B.11 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 under this permit shall contain certification by a 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, on the attached Certification Form, with each submittal.
- (c) An authorized individual is defined at 326 IAC 2-1.1-1(1).

B.12 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 certification shall cover the time period from January 1 to December 31 of the previous year, and shall be

submitted in letter form no later than April 15 of each year to:

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

and

Environmental Resources Management Division
Air Quality Management Section, Compliance Data
2700 South Belmont Avenue
Indianapolis, Indiana 46221

- (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, OAM, and ERMD on or before the date it is due.
- (c) The annual compliance certification report shall include the following:
- (1) The identification of each term or condition of this permit that is the basis of the certification;
 - (2) The compliance status;
 - (3) Whether compliance was based on continuous or intermittent data;
 - (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, IDEM, OAM, and ERMD may require to determine the compliance status of the source.

The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by in 326 IAC2-1.1-1(2).

B.13 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 (PMP) within ninety (90) days (this time frame is determined on a case by case basis but no more than 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;
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If due to circumstances beyond its control, the PMP 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 Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

Environmental Resources Management Division
Air Quality Management Section, Compliance Data
2700 South Belmont Avenue
Indianapolis, Indiana 46221

- (b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that failure to implement the Preventive Maintenance Plan does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) PMP's shall be submitted to IDEM, OAM, and ERMD upon request and shall be subject to review and approval by IDEM, OAM, and ERMD. IDEM, OAM, and ERMD may require the Permittee to revise its Preventive Maintenance Plan whenever lack of proper maintenance causes or contributes to any violation.

B.14 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 describes the following:
 - (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
 - (2) The permitted facility was at the time being properly operated;
 - (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
 - (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAM and ERMD, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

IDEM, OAM

Telephone No.: 1-800-451-6027 (ask for Office of Air Management, Compliance Section) or,

Telephone No.: 317-233-5674 (ask for Compliance Section)

Facsimile No.: 317-233-5967

ERMD

Telephone No.: 317-327-2234

Facsimile No.: 317-327-2274

Failure to notify IDEM, OAM and ERMD, by telephone or facsimile within four (4) daytime business hours after the beginning of the emergency, or after the emergency is discovered or reasonably should have been discovered, shall constitute a violation of 326 IAC 2-8 and any other applicable rules. [326 IAC 2-8-12(f)]

- (5) For each emergency lasting one (1) hour or more, the Permittee submitted notice either in writing or facsimile, of the emergency to:

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

and

Environmental Resources Management Division
Air Quality Management Section, Compliance Data
2700 South Belmont Avenue
Indianapolis, Indiana 46221

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 require the certification by the "authorized individual" as defined in 326 IAC 2-1.1-1(2).

- (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) for sources subject to this rule after the effective date of this rule. This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
 - (e) IDEM, OAM and ERMD, 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, OAM and ERMD, by telephone or facsimile of an emergency lasting more than one (1) hour in compliance 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.

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 Provision), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

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

and

Environmental Resources Management Division
Air Quality Management Section, Compliance Data
2700 South Belmont Avenue
Indianapolis, Indiana 46221

within ten (10) calendar days from the date of the discovery of the deviation.

- (b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit or a rule. It does not include:
- (1) An excursion from compliance monitoring parameters as identified in Section D of this permit unless tied to an applicable rule or limit; or
 - (2) An emergency as defined in 326 IAC 2-7-1(12); or
 - (3) Failure to implement elements of the Preventive Maintenance Plan unless such failure has caused or contributed to a deviation.
 - (4) Failure to make or record information required by the compliance monitoring

provisions of Section D unless such failure exceeds 5% of the required data in any calendar quarter.

A Permittee's failure to take the appropriate response step when an excursion of a compliance monitoring parameter has occurred is a deviation.

- (c) Written notification shall be submitted on the attached Emergency/Deviation Occurrence Reporting Form or its substantial equivalent. The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined in 326 IAC 2-1.1-1(2).
- (d) Proper notice submittal under 326 IAC 2-7-16 satisfies the requirement of this subsection.

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 FESOP 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)]
- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAM and ERMD 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, OAM and ERMD, 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, OAM and ERMD, at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAM and ERMD, 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, OAM and ERMD 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).

Request for renewal shall be submitted to:

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

Indianapolis, IN 46206-6015

and

Environmental Resources Management Division
Air Quality Management Section, Permits
2700 South Belmont Avenue
Indianapolis, Indiana 46221

- (b) Timely Submittal of Permit Renewal [326 IAC 2-8-3]
- (1) A timely renewal application is one that is:
- (A) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
- (B) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, and ERMD on or before the date it is due.
- (2) If IDEM, OAM and ERMD upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect until the renewal permit has been issued or denied.
- (c) Right to Operate After Application for Renewal [326 IAC 2-8-9]
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, OAM and ERMD 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, OAM and ERMD, any additional information identified as needed to process the application.

B.18 Permit Amendment or Modification [326 IAC 2-8-10][326 IAC 2-8-11.1]

- (a) The Permittee must comply with the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11 326 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 Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015
(and local agency when applicable)
- Any such application should be certified by the "authorized individual" as defined by 326 IAC 2-1.1(1) only if a certification is required by the terms of the applicable rule.
- (c) The Permittee may implement the 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]

- (a) The Permittee may make any change or changes at this source that are described in 326 IAC 2-8-15(b) through (d), without 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 2-1.1 has been obtained;
 - (3) The changes do not result in emissions which exceed the emissions allowable under this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
 - (4) The Permittee notifies the:

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

and

Environmental Resources Management Division
Air Quality Management Section, Permits
2700 South Belmont Avenue
Indianapolis, Indiana 46221

and

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

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and
 - (5) The Permittee maintains records on-site which document, on a rolling five (5) year basis, all such changes and emissions trading that are subject to 326 IAC 2-8-15(b) through (d) and makes such records available, upon reasonable request, to public review.

Such records shall consist of all information required to be submitted to IDEM, OAM and ERMD, in the notices specified in 326 IAC 2-8-15(b), (c)(1), and (d).
- (b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-8-15(a) and the following additional conditions:
- (1) A brief description of the change within the source;

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

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(33).

- (c) **Emission Trades [326 IAC 2-8-15(c)]**
The Permittee may trade increases and decreases in emissions in the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(c).
- (d) **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, OAM or U.S. EPA is required.
- (e) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.20 Construction Permit Requirement [326 IAC 2]

A modification, construction, or reconstruction shall be approved if required by and in accordance with the applicable provisions of 326 IAC 2.

B.21 Inspection and Entry [326 IAC 2-8-5(a)(2)]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAM and ERMD, 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) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.
[326 IAC 2-8-5(a)(4)]

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 Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

Environmental Resources Management Division
Air Quality Management Section, Permits
2700 South Belmont Avenue
Indianapolis, Indiana 46221

The application which shall be submitted by the Permittee does not require the certification by the "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 2-8-11(b)(3)]

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

-
- (a) The Permittee shall pay annual fees to IDEM, OAM, and ERMD, within thirty (30) calendar days of receipt of a billing. If the Permittee does not receive a bill from IDEM, OAM the applicable fee is due April 1 of each year.
 - (b) 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 317-233-0425 (ask for OAM, Technical Support and Modeling Section), to determine the appropriate permit fee.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

C.1 Overall Source Limit [326 IAC 2-8]

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 from the entire source shall be limited to less than one-hundred (100) tons per twelve (12) consecutive month period
- (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) 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 that the source's potential to emit does not exceed the above specified limits.

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

C.2 Opacity [326 IAC 5-1]

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

- (a) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

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

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1. 326 IAC 4-1-3 (a)(2)(A) and (B) are not federally enforceable.

C.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2(3)]

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

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

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

C.6 Operation of Equipment [326 IAC 2-8-5(a)(4)]

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

C.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61.140]

- (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 Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

Environmental Resources Management Division
Air Quality Management Section, Asbestos
2700 South Belmont Avenue
Indianapolis, Indiana 46221

The notifications do not require a certification by the “authorized individual” as defined in 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 14-10-4 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) **Indiana Accredited Asbestos Inspector**
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement that the inspector be accredited is federally enforceable.

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

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

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

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 Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

Environmental Resources Management Division
Air Quality Management Section, Compliance Data
2700 South Belmont Avenue
Indianapolis, Indiana 46221

no later than thirty-five (35) days prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above address so that it is received at least two weeks prior to the test date.

- (b) All test reports must be received by IDEM, OAM and ERMD within forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAM and ERMD, if the source submits to IDEM, OAM and ERMD, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the “authorized individual” as defined in 326 IAC 2-1.1-1(1).

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

C.9 Compliance Monitoring [326 IAC 2-8-4(3)] [326 IAC 2-8-5(a)(1)]

Compliance with applicable requirements shall be documented as required by this permit. All

monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment no more than ninety (90) days after receipt of this permit. 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 notify:

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

and

Environmental Resources Management Division
Air Quality Management Section, Compliance Data
2700 South Belmont Avenue
Indianapolis, Indiana 46221

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

The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined in 326 IAC 2-1.1-1(1).

C.10 Maintenance of Monitoring Equipment [326 IAC 2-8-4(3)(A)(iii)]

- (a) In the event that a breakdown of the monitoring equipment occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem. To the extent practicable, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less frequent than required in Section D of this permit until such time as the monitoring equipment is back in operation. In the case of continuous monitoring, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less than one (1) hour until such time as the continuous monitor is back in operation.
- (b) The Permittee shall install, calibrate, quality assure, maintain, and operate all necessary monitors and related equipment. In addition, prompt corrective action shall be initiated whenever indicated.

C.11 Monitoring Methods [326 IAC 3]

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

C.12 Pressure Gauge Specifications

Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ($\pm 2\%$) of full scale reading.

Corrective Actions and Response Steps [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

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

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

- (a) The Permittee prepared and submitted written emergency reduction plans (ERPs) consistent with safe operating procedures on September 7, 1988.
- (b) If the ERP is disapproved by IDEM, OAM and ERMD, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.
- (c) 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.
- (d) 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.
- (e) Upon direct notification by IDEM, OAM and ERMD, that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

C.14 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68.215]

If a regulated substance, subject to 40 CFR 68, is present at a source in more than a threshold quantity, 40 CFR 68 is an applicable requirement and the Permittee shall:

- (a) Submit:
 - (1) A compliance schedule for meeting the requirements of 40 CFR 68 by the date provided in 40 CFR 68.10(a); or
 - (2) As a part of the compliance certification submitted under 326 IAC 2-7-6(5), a certification statement that the source is in compliance with all the requirements of 40 CFR 68, including the registration and submission of a Risk Management Plan (RMP); and
 - (3) A verification to IDEM, OAM, and ERMD that a RMP or a revised plan was prepared and submitted as required by 40 CFR 68.
- (b) Provide annual certification to IDEM, OAM, and ERMD that the Risk Management Plan is being properly implemented.

All documents submitted pursuant to this condition shall include the certification by the "authorized individual" as defined in 326 IAC 2-1.1-1(1).

C.15 Compliance Monitoring Plan - Failure to Response Steps [326 IAC 2-8-4][326 IAC 2-8-5][326 IAC 1-6] [326 IAC 2-8-4(3)]

- (a) The Permittee is required to implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. This compliance monitoring plan is comprised of:
 - (1) This condition;
 - (2) The Compliance Determination Requirements in Section D of this permit;
 - (3) The Compliance Monitoring Requirements in Section D of this permit;

- (4) The Record Keeping and Reporting Requirements in Section C (Monitoring Data Availability, General Record Keeping Requirements, and General Reporting Requirements) and in Section D of this permit; and
- (5) A Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. CRP's shall be submitted to IDEM, OAM and ERMD upon request and shall be subject to review and approval by IDEM, OAM, and ERMD. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee and maintained on site, and is comprised of :
 - (A) Response steps that will be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this permit; and
 - (B) A time schedule for taking such response steps including a schedule for devising additional response steps for situations that may not have been predicted.
- (b) For each compliance monitoring condition of this permit, appropriate response steps shall be taken when indicated by the provisions of that compliance monitoring condition. Failure to perform the actions detailed in the compliance monitoring conditions or failure to take the response steps within the time prescribed in the Compliance Response Plan, shall constitute a violation of the permit unless taking the response steps set forth in the Compliance Response Plan would be unreasonable.
- (c) After investigating the reason for the excursion, the Permittee is excused from taking further response steps for any of the following reasons:
 - (1) The monitoring equipment malfunctioned, giving a false reading. This shall be an excuse from taking further response steps providing that prompt action was taken to correct the monitoring equipment.
 - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied or;
 - (3) An automatic measurement was taken when the process was not operating; or
 - (4) The process has already returned to operating within "normal" parameters and no response steps are required.
- (d) Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.

C.16 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 corrective actions. The Permittee shall submit a description of these corrective actions to IDEM, OAM, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize

emissions from the affected facility while the corrective actions are being implemented. IDEM, OAM shall notify the Permittee within thirty (30) days, if the corrective actions taken are deficient. The Permittee shall submit a description of additional corrective actions taken to IDEM, OAM within thirty (30) days of receipt of the notice of deficiency. IDEM, OAM reserves the authority to use enforcement activities to resolve noncompliant stack tests.

- (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, OAM that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAM may extend the retesting deadline. Failure of the second test to demonstrate compliance with the appropriate permit conditions may be grounds for immediate revocation of the permit to operate the affected facility.

The documents submitted pursuant to this condition do not require the certification by the "authorized individual" as defined in 326 IAC 2-1.1-1(1).

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

C.17 Emission Statement [326 IAC 2-6] [326 IAC 2-8-4(3)]

- (a) The Permittee shall submit an annual emission statement certified pursuant to the requirements of 326 IAC 2-6. This annual statement must be received by April 15 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8) (Emission Statement Operating Year). The annual statement must be submitted to:

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

and

Environmental Resources Management Division
Air Quality Management Section, Compliance Data
2700 South Belmont Avenue
Indianapolis, Indiana 46221

- (b) The annual emission statement required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, and ERMD on or before the date it is due.

C.18 Monitoring Data Availability

- (a) With the exception of performance tests conducted in accordance with Section C-Performance Testing all observations, sampling, maintenance procedures, and record keeping, required as a condition of this permit shall be performed at all times the equipment is operating at normal representative conditions.
- (b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this permit is not operating, the Permittee shall either record the fact that the equipment is shut down

or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this permit.

- (c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.
- (d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.
- (e) At its discretion, IDEM and ERMD may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.
- (f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements in (a) above.

C.19 General Record Keeping Requirements [326 IAC 2-8-4(3)][326 IAC 2-8-5]

- (a) Records of all required monitoring data and support information 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 kept at the source location for a minimum of three (3) years and available upon the request of an IDEM, OAM and ERMD representative. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner or ERMD makes a written request for records to the Permittee, the Permittee shall furnish the records to the Commissioner or ERMD within a reasonable time.
- (b) Records of required monitoring information shall include, where applicable:
 - (1) The date, place, and time of sampling or measurements;
 - (2) The dates analyses were performed;
 - (3) The company or entity performing the analyses;
 - (4) The analytic techniques or methods used;
 - (5) The results of such analyses; and
 - (6) The operating conditions existing at the time of sampling or measurement.
- (c) Support information shall include, where applicable:
 - (1) Copies of all reports required by this permit;
 - (2) All original strip chart recordings for continuous monitoring instrumentation;
 - (3) All calibration and maintenance records;
 - (4) Records of preventive maintenance shall be sufficient to demonstrate that failure to implement the Preventive Maintenance Plan did not cause or

contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. Records of response steps taken shall indicate whether the response steps were performed in accordance with the Compliance Response Plan required by Section C - Compliance Monitoring Plan - Failure to take Response Steps, of this permit, and whether a deviation from a permit condition was reported. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks.

- (d) All record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.20 General Reporting Requirements [326 IAC 2-8-4(3)(C)]

- (a) To affirm that the source has met all the compliance monitoring requirements stated in this permit the source shall submit a Quarterly Compliance Monitoring Report. Any deviation from the requirements and the date(s) of each deviation must be reported. The Compliance Monitoring Report shall include certification by the "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 Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

Environmental Resources Management Division
Air Quality Management Section, Compliance Data
2700 South Belmont Avenue
Indianapolis, Indiana 46221

- (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, OAM, and ERMD on or before the date it is due.
- (d) Unless otherwise specified in this permit, any quarterly report shall be submitted within thirty (30) days of the end of the reporting period. The reports do not require the certification by the authorized individual as defined by 326 IAC 2-1.1-1(1).
- (e) All instances of deviations as described in Section B- Deviations from Permit Requirements Conditions must be clearly identified in such reports. The Emergency/Deviation Occurrence Report does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (f) Any corrective actions or response steps taken as a result of each deviation must be clearly identified in such reports.
- (g) 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.

Stratospheric Ozone Protection

C.21 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)]

- (a) Melt Operations which consists of one charge handling system, one(1) preheater, two (2) electric induction furnace and one (1) holding ladle. The maximum capacity of the charge handling system is limited by the source's ability to melt metal. The preheater has a maximum heat input capacity of 25 million Btu per hour and is fired with natural gas. The melt operation has a maximum melt rate of 5 tons of metal per hour. Only one furnace can be operated at a time because there is only one transformer to supply electrical energy. Ductile iron can be produced by adding inoculants to the molten metals in the reaction ladle. The emissions from the induction furnaces are collected by a canopy hood located directly over the furnaces. The emissions collected by the furnace hood system are controlled by settling tank followed by a cyclone which exhausts out one stack identified as stack B. A portion of the building fugitive emissions from charge handling, preheater, furnace, and inoculation processes are collected by the general furnace area ventilation system which exhausts out two stacks identified as stacks V11 and V12. The preheater, two (2) induction furnaces and holding ladle were installed in 1972.

(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 Particulate Matter (PM) [326 IAC 6-1-2(e)(2)]

Pursuant to 326 IAC 6-1-2(e)(2) the PM emissions from the two induction furnaces shall not exceed 0.07 grains per dry standard cubic foot of exhaust gas. For the purposes of demonstrating compliance with 326 IAC 6-1-2(e)(2) the only the filterable fraction of PM shall be counted.

D.1.2 Particulate Matter (PM) [326 IAC 6-1-2(a)]

Pursuant to 326 IAC 6-1-2(a) the PM emissions from the two general furnace area ventilation stacks identified as stacks V11 and V12 shall not exceed 0.03 grains per dry standard cubic foot of exhaust gas. For the purposes of demonstrating compliance with 326 IAC 6-1-2(a) the only the filterable fraction of PM shall be counted.

D.1.3 Particulate Matter Less Than 10 Microns in Aerodynamic Diameter (PM-10) [326 IAC 2-8-4]

Pursuant to 326 IAC 2-8-4(1), Particulate Matter Less than 10 Microns in Aerodynamic Diameter (PM-10) emissions from the two induction furnaces are limited as follows:

- (a) The PM-10 emissions from the two induction furnaces shall not exceed 5.14 pounds per hour. For the purposes of demonstrating compliance with this condition the filterable and condensable fractions of PM-10 shall be counted.
- (b) The amount of metal melted per twelve consecutive month period shall not exceed 20,000 tons. This throughput limit is equivalent to:
- (1) Ten and two tenths (10.2) tons of PM-10 from the furnace emissions exhausted out stack B.
 - (2) Twenty two (22) tons of PM-10 from building fugitive emissions associated with the charge handling, preheater, induction furnace, and inoculation operations

Compliance with this Condition and Condition C.1 of this permit shall make the Part 70 Operating Permit regulation 326 IAC 2-7 not applicable.

D.1.4 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 this Settling Chamber and Cyclone, identified as CE-B.

Compliance Determination Requirements

D.1.5 Testing Requirements [326 IAC 2-8-5(1)]

- (a) The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing when necessary to determine if the facility is in compliance. If testing is required by IDEM or ERMD, compliance with the PM limit specified in Condition D.1.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.
- (b) The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing when necessary to determine if the facility is in compliance. If testing is required by IDEM or ERMD, compliance with the PM limit specified in Condition D.1.2 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.
- (c) The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing when necessary to determine if the facility is in compliance. If testing is required by IDEM or ERMD, compliance with the PM-10 limit specified in Condition D.1.3(a) shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.1.6 Melt Process Limitation

Compliance with Condition D.1.3(b) shall be demonstrated at the end of each month based on the tons of metal melted in the induction furnaces for the most recent twelve consecutive month period.

D.1.7 Particulate Matter (PM)

the Cyclone and settling tank used for PM control shall be in operation and control emissions from the induction furnaces at all times that the induction furnaces are in operation.

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

D.1.8 Visible Emissions Notations

- (a) Visible emission notations of stacks B, V11 and V12 shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions

for that specific process.

- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

D.1.9 Cyclone Inspections

An inspection shall be performed each calendar quarter of the cyclone controlling the melt system operation when venting to the atmosphere. A cyclone inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors.

D.1.10 Cyclone Failure Detection

In the event that cyclone failure has been observed:

Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

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

D.1.11 Record Keeping Requirements

- (a) To document compliance with Condition D.1.3(b) the Permittee shall maintain monthly records of the tons of metal melted in the two induction furnaces.
- (b) To document compliance with Condition D.1.8, the Permittee shall maintain records of daily visible emission notations of stack B, V-11, and V-12 exhausts.
- (c) To document compliance with Condition D.1.10, the Permittee shall maintain records of the results of the inspections required under Condition D.1.10 and the dates the vents are redirected.
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.12 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.1.3(b) shall be submitted to the addresses 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.

SECTION D.2 FACILITY OPERATION CONDITIONS

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

- (b) Pouring and cooling operations is where the molten metal from the melting operation are poured from ladels into molds and allowed to cool. The maximum operating capacity is limited by the source's ability to melt metal. The emissions generated from pouring and cooling are uncontrolled and are emitted into the building. A portion of these emissions are collected by hoods located on the ceiling above the pouring deck and exhausted out stacks V17, V18, V25, V26, and V27. These operations have been conducted since the 1930s.

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

D.2.1 Particulate Matter (PM) [326 IAC 6-1-2(a)]

The Building fugitive PM emissions from casting pouring and cooling operations exhausted out stacks, V17, V18, V25, V26, and V27 are limited to 0.03 grains per dry standard cubic foot of exhaust gas. For the purposes of demonstrating compliance with 326 IAC 6-1-2(a) the only the filterable fraction of PM shall be counted.

D.2.2 Particulate Matter Less Than 10 Microns in Aerodynamic Diameter (PM-10) [326 IAC 2-8-4]

The amount of metal melted per twelve consecutive month period shall be limited to 20,000 tons. This throughput limit is equivalent 42 tons of PM-10 emissions from pouring and cooling operations per twelve consecutive month period. Compliance with this Condition and Condition C.1 of this permit shall make the Part 70 Operating Permit regulation 326 IAC 2-7 not applicable.

Compliance Determination Requirements

D.2.3 Testing Requirements [326 IAC 2-8-5(1)]

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing when necessary to determine if the facility is in compliance. If testing is required by IDEM or ERMD, compliance with the PM limit specified in Condition D.2.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.2.4 Particulate Matter Less Than 10 Microns in Aerodynamic Diameter (PM-10)

Compliance with the PM-10 emission limitation established in Condition D.2.2 shall be demonstrated by complying with requirements established in Condition D.1.6 of this permit.

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

D.2.5 Visible Emissions Notations

- (a) Visible emission notations once per day of stacks V17, V18, V25, V26, and V27 shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month

and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

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

D.2.6 Record Keeping Requirements

- (a) To document compliance with Condition D.2.5, the Permittee shall maintain the following:
 - (1) Records of daily visible emission notations of stacks V17, V18, V25, V26, and V27 exhausts.
 - (2) Documentation of all response steps implemented, per event .
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.3 FACILITY OPERATION CONDITIONS

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

- (c) Shakeout is where the molding sand is separated from the casting by mechanical shaking. The maximum operating capacity is limited by the source's ability to melt metal. Emissions are collected by hoods located over the shakeout area. The emissions collected by the hoods are controlled by a cyclone, identified as control device C, and dust collector, identified as control device A, in series. The emissions from the dust collector are exhausted out one stack identified as stack A. The emissions not collected by the hood collection system are emitted in the building and are exhausted out the general building ventilation system. This facility was installed in 1972.
- (d) Casting Cleaning Operation consists of one (1) table blast, one (1) shot blast machine, three (3) grinders and one (1) cutoff saw . The maximum operating capacity is limited by the source's ability to melt metal. The emissions are collected by various hoods located throughout the casting cleaning operation and are controlled by dust collector, identified as control device A, which exhausted out one stack identified as stack A. The emissions not collected by the hood collection system are emitted in the building and are exhausted out the general building ventilation system. The casting cleaning processes were installed prior to 1982.
- (e) Sand Handling Operation consists of one (1) sand muller, thirteen (13) hopper stations, one (1) sand elevator, one (1) sand tank, one (1) sand cooler, three belts (3), and one (1) molding line. The maximum capacity of the sand handling system is 20.63 tons of sand per hour. The emissions are collected by various hoods located throughout the sand handling process line and are controlled by dust collector, identified as control device A, which exhausted out one stack identified as stack A. The emissions not collected by the hood collection system are emitted in the building and are exhausted out the general building ventilation system. The sand handling processes were installed prior to 1967.

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

D.3.1 Particulate Matter (PM) [326 IAC 6-1-2(a)]

The PM emissions from the sand handling, casting cleaning, and shakeout operations shall be controlled by one baghouse, identified as CE-A, with a design flow rate of 20,000 acfm. The PM emissions from CE-A shall not exceed 0.03 grains per dry standard cubic foot of exhaust gas. For the purposes of demonstrating compliance with 326 IAC 6-1-2(a) the only the filterable fraction of PM shall be counted.

D.3.2 Particulate Matter Less Than 10 Microns in Aerodynamic Diameter (PM-10) [326 IAC 2-8-4]

Pursuant to 326 IAC 2-8-4(1), Particulate Matter Less than 10 Microns in Aerodynamic Diameter (PM-10) emissions from the sand handling, casting cleaning, and shakeout operations are limited as follows:

- (a) The PM-10 emissions from the sand handling, casting cleaning, and shakeout operations shall not exceed 5.14 pounds per hour. For the purposes of demonstrating compliance with this condition the filterable and condensable fractions of PM-10 shall be counted.
- (b) The amount of metal melted per twelve consecutive month period shall be limited to 20,000 tons. This throughput limit is equivalent to:

- (1) Ten and three tenths (10.3) tons of PM-10 from the sand handling, casting cleaning, and shakeout emissions exhausted out stack A.
- (2) Five tenths (0.5) tons of PM-10 from building fugitive emissions associated with the sand handling, casting cleaning, and shakeout operations.

Compliance with this Condition and Condition C.1 of this permit shall make the Part 70 Operating Permit regulation 326 IAC 2-7 not applicable.

D.3.3 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 baghouse identified as control equipment ID CE-A.

Compliance Determination Requirements

D.3.4 Testing Requirements [326 IAC 2-8-5(1)]

- (a) The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing when necessary to determine if the facility is in compliance. If testing is required by IDEM or ERMD, compliance with the PM limit specified in Condition D.3.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.
- (b) The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing when necessary to determine if the facility is in compliance. If testing is required by IDEM or ERMD, compliance with the PM-10 limit specified in Condition D.3.2(a) shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.3.5 Particulate Matter Less Than 10 Microns in Aerodynamic Diameter (PM-10)

Compliance with the PM-10 emission limitation established in Condition D.3.2(b) shall be demonstrated by complying with requirements established in condition D.1.6 of this permit.

D.3.6 Particulate Matter (PM)

The Baghouse identified as control equipment ID CE-A, used for PM control shall be in operation and control emissions from the sand handling, casting cleaning, and shakeout operations at all times that these units are in operation.

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

D.3.7 Visible Emissions Notations

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

- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

D.3.8 Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouse, identified as CE-A, used in conjunction with the Casting Cleaning, Sand Handling and Shakeout processes, at least once per shift when the Casting Cleaning, Sand Handling and Shakeout processes are in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 3.0 and 7.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

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

D.3.9 Baghouse Inspections

An inspection shall be performed each calendar quarter of all bags controlling the Casting Cleaning, Sand Handling and Shakeout processes when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

D.3.10 Broken or Failed Bag Detection

In the event that bag failure has been observed:

- (a) The affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (b) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

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

D.3.11 Record Keeping Requirements

- (a) To document compliance with Condition D.3.7, the Permittee shall maintain the following:
 - (1) Records of daily visible emission notations of stack A exhaust.
 - (2) Documentation of all response steps implemented, per event.

- (b) To document compliance with Condition D.3.8, the Permittee shall maintain the following:
 - (1) Records of the inlet and outlet differential static pressure once per shift during normal operation when venting to the atmosphere.
 - (2) Documentation of all response steps implemented, per event .
 - (3) Operation and preventive maintenance logs, including work purchases orders, shall be maintained.
 - (4) Quality Assurance/Quality Control (QA/QC) procedures.
 - (5) Operator standard operating procedures (SOP).
 - (6) Manufacturer's specifications or its equivalent.
 - (7) Equipment "troubleshooting" contingency plan.
 - (8) Documentation of the dates vents are redirected.
- (c) To document compliance with Condition D.3.9, the Permittee shall maintain records of the results of the inspections required under Condition D.1.9 and the dates the vents are redirected.
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.4 FACILITY OPERATION CONDITIONS

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

- (f) Core Making Operation consists of the following two (2) heat cure processes; air set core making process, and oil sand core making process. In the air set core making process, sand, catalyst, and resin are blended together in a sand mixer. Following blending, the blended sand is placed in the core boxes which are in turn placed in a core machine. Cores are then formed into the desired shape in the core machine. If required the cores are placed in the core oven in order to harden the cores. The air set core oven is fired with natural gas and has a maximum heat input capacity of 0.115 million Btu per hour. The maximum operating capacity of the air set core making process is 0.5 tons of cores per hour. In the oil core making process, sand and core oil are blended together in a sand mixer and placed in core molds to produce the desired shape. If required, the oil cores are then baked in a core oven in order to harden and strengthen the cores. The oil sand core oven is fired with natural gas and has a maximum heat input capacity of 1.6 million Btu per hour. The maximum operating capacity of the oil core making process is 0.05 tons of cores per hour. Emissions from the air set core making process, and an oil sand core making process are uncontrolled and are emitted in to the building. A portion of these emissions are collected by building ventilation hoods located in the core making area and are exhausted out stacks V38, V5 and V4.

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

D.4.1 Particulate Matter (PM) [326 IAC 6-1-2(a)]

The building fugitive PM emissions from Core making operation exhausted out stacks V4, V5, V13, V14, and V38 shall not exceed 0.03 grains per dry standard cubic foot of exhaust gas. For the purposes of demonstrating compliance with 326 IAC 6-1-2(a) the only the filterable fraction of PM shall be counted.

D.4.2 Particulate Matter Less Than 10 Microns in Aerodynamic Diameter (PM-10) [326 IAC 2-8-4]

The amount of metal melted per twelve consecutive month period shall not exceed 20,000 tons. This throughput limit is equivalent two (2.0) tons of PM-10 emissions from core making operations per twelve consecutive month period. Compliance with this condition and condition C.1 of this permit shall make the Part 70 Operating Permit regulation 326 IAC 2-7 not applicable.

D.4.3 Permit Revision

Any modification or change which results in an increase in the PTE for VOC emissions greater than 25 tons per year, need prior approval.

Compliance Determination Requirements

D.4.4 Testing Requirements [326 IAC 2-8-5(1)]

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing when necessary to determine if the facility is in compliance. If testing is required by IDEM or ERMD, compliance with the PM limit specified in Condition D.4.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.4.5 Particulate Matter Less Than 10 Microns in Aerodynamic Diameter (PM-10)

Compliance with the PM-10 emission limitation established in Condition D.4.2 shall be demonstrated by complying with requirements established in condition D.1.6 of this permit.

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

D.4.6 Visible Emissions Notations

- (a) Visible emission notations once per day of stacks V4, V5, and V38 shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

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

D.4.7 Record Keeping Requirements

- (a) To document compliance with Condition D.4.6, the Permittee shall maintain the following:
 - (1) Records of daily visible emission notations of stacks V4, V5, V13, V14, and V38 exhausts.
 - (2) Documentation of all response steps implemented, per event .
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.5 FACILITY OPERATION CONDITIONS

Insignificant Emitting Activities

- (a) Wood working operation consisting of one (1) bandsaw and (1) oscillating vertical sand. The emissions from this operation are controlled by a dust collector with a design flow rate of 55 cubic feet per minute.

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

D.5.1 Particulate Matter (PM) [326 IAC 6-1-2(a)]

Pursuant to 326 IAC 6-1-2(a), the PM emissions from the Wood Working Operations shall not exceed 0.03 grains per dry standard cubic foot of exhaust gas. For the purposes of demonstrating compliance with 326 IAC 6-1-2(a) only the filterable fraction of PM shall be counted.

Compliance Determination Requirement

D.5.2 Testing Requirements [326 IAC 2-8-5(1)]

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing when necessary to determine if the facility is in compliance. If testing is required by IDEM or ERMD, compliance with the PM limit specified in Condition D.5.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

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

D.5.3 Record Keeping Requirement

These records shall be maintained in accordance with Section C - General Record Keeping Requirements.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION
and
INDIANAPOLIS ENVIRONMENTAL RESOURCES MANAGEMENT DIVISION
AIR QUALITY MANAGEMENT SECTION, COMPLIANCE DATA
FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
CERTIFICATION**

Source Name: Interstate Castings, Inc.
Source Address: 3823 Massachusetts Ave., Indianapolis, Indiana 46218
Mailing Address: 3823 Massachusetts Ave., Indianapolis, Indiana 46218
FESOP No.: F097-10170-00063

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:

- 9 Annual Compliance Certification Letter
- 9 Test Result (specify) _____
- 9 Report (specify) _____
- 9 Notification (specify) _____
- 9 Other (specify) _____

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

Signature:

Printed Name:

Title/Position:

Date:

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

P.O. Box 6015
100 North Senate Avenue
Indianapolis, Indiana 46206-6015
Phone: 317-233-5674
Fax: 317-233-5967

and

**INDIANAPOLIS ENVIRONMENTAL RESOURCES MANAGEMENT DIVISION
AIR QUALITY MANAGEMENT SECTION, COMPLIANCE DATA**

2700 S. Belmont Ave.
Indianapolis Indiana 46221
Phone: 317-327-2234
Fax: 317-327-2274

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
EMERGENCY/DEVIATION OCCURRENCE REPORT**

Source Name: Interstate Castings, Inc.
Source Address: 3823 Massachusetts Ave., Indianapolis, Indiana 46218
Mailing Address: 3823 Massachusetts Ave., Indianapolis, Indiana 46218
FESOP No.: F097-10170-00063

This form consists of 2 pagesPage 1 of 2

Check either No. 1 or No.2
<input checked="" type="radio"/> 1. This is an emergency as defined in 326 IAC 2-7-1(12) CThe Permittee must notify the ERMD and OAM, within four (4) business hours; and CThe Permittee must submit notice in writing or by facsimile to ERMD and OAM within two (2) days, and follow the other requirements of 326 IAC 2-8-12
<input checked="" type="radio"/> 2. This is a deviation, reportable per 326 IAC 2-8-4(3)(C) CThe Permittee must submit notice in writing within ten (10) calendar days

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

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

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

Page 2 of 2

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

Form Completed by: _____
Title / Position: _____
Date: _____
Phone: _____

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF AIR MANAGEMENT
 COMPLIANCE DATA SECTION
 and
 INDIANAPOLIS ENVIRONMENTAL RESOURCES MANAGEMENT DIVISION
 AIR QUALITY MANAGEMENT SECTION, COMPLIANCE DATA**

FESOP Quarterly Report

Source Name: Interstate Castings, Inc.
 Source Address: 3823 Massachusetts Ave., Indianapolis, Indiana 46218
 Mailing Address: 3823 Massachusetts Ave., Indianapolis, Indiana 46218
 FESOP No.: F097-10170-00063
 Facility: Two (2) Induction Furnaces
 Parameter: Metal Melted
 Limit: 20,000 tons of Metal Melted per twelve consecutive month period

YEAR: _____

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

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

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

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF AIR MANAGEMENT
 COMPLIANCE DATA SECTION
 and
 INDIANAPOLIS ENVIRONMENTAL RESOURCES MANAGEMENT DIVISION
 AIR QUALITY MANAGEMENT SECTION, COMPLIANCE DATA**

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

Source Name: Interstate Castings, Inc.
 Source Address: 3823 Massachusetts Ave., Indianapolis, Indiana 46218
 Mailing Address: 3823 Massachusetts Ave., Indianapolis, Indiana 46218
 FESOP No.: F097-10170-00063

Months: _____ **to** _____ **Year:** _____

This report is an affirmation that the source has met all the requirements compliance monitoring stated in this permit. This report shall be submitted quarterly. Any deviation from the compliance monitoring requirements and the date(s) of each deviation must be reported. Additional pages may be attached if necessary. This form can be supplemented by attaching the Emergency/Deviation Occurrence Report. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

9 NO DEVIATIONS OCCURRED THIS REPORTING PERIOD

9 THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD.

Compliance Monitoring Requirement (eg. Permit Condition D.1.3)	Number of Deviations	Date of each Deviations

Form Completed By: _____
 Title/Position: _____
 Date: _____
 Phone: _____

Attach a signed certification to complete this report.

**Indiana Department of Environmental Management
Office of Air Management
and
Indianapolis Environmental Resources Management Division**

Technical Support Document (TSD) for a Federally Enforceable Operating Permit (FESOP)

Source Background and Description

Source Name: Interstate Castings, Inc.
Source Location: 3823 Massachusetts Ave., Indianapolis Indiana 46218
County: Marion
SIC Code: 3321
Operation Permit No.: F097-10170-00063
Permit Reviewer: Patrick Coughlin

The Office of Air Management (OAM) has reviewed a FESOP application from Interstate Castings Inc. relating to the operation of grey iron foundry.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

- (a) Melt Operations which consists of one charge handling system, one(1) preheater, two (2) electric induction furnace and one (1) holding ladle. The maximum capacity of the charge handling system is limited by the source's ability to melt metal. The preheater has a maximum heat input capacity of 25 million Btu per hour and is fired with natural gas. The melt operation has a maximum melt rate of 5 tons of metal per hour. Only one furnace can be operated at a time because there is only one transformer to supply electrical energy. Ductile iron can be produced by adding inoculants to the molten metals in the reaction ladle. The emissions from the induction furnaces are collected by a canopy hood located directly over the furnaces. The emissions collected by the furnace hood system are controlled by settling tank followed by a cyclone which exhausts out one stack identified as stack B. A portion of the building fugitive emissions from charge handling, preheater, furnace, and inoculation processes are collected by the general furnace area ventilation system which exhausts out two stacks identified as stacks V11 and V12. The preheater, two (2) induction furnaces and holding ladle were installed in 1972.
- (b) Pouring and cooling operations is where the molten metal from the melting operation are poured from ladels into molds and allowed to cool. The maximum operating capacity is limited by the source's ability to melt metal. The emissions generated from pouring and cooling are uncontrolled and are emitted into the building. A portion of these emissions are collected by hoods located on the ceiling above the pouring deck and exhausted out stacks V17, V18, V25, V26, and V27. These operations have been conducted since the 1930s.

- (c) Shakeout is where the molding sand is separated from the casting by mechanical shaking. The maximum operating capacity is limited by the source's ability to melt metal. Emissions are collected by hoods located over the shakeout area. The emissions collected by the hoods are controlled by a cyclone, identified as control device C, and dust collector, identified as control device A, in series. The emissions from the dust collector are exhausted out one stack identified as stack A. The emissions not collected by the hood collection system are emitted in the building and are exhausted out the general building ventilation system. This facility was installed in 1972.
- (d) Casting Cleaning Operation consists of one (1) table blast, one (1) shot blast machine, three (3) grinders and one (1) cutoff saw . The maximum operating capacity is limited by the source's ability to melt metal. The emissions are collected by various hoods located throughout the casting cleaning operation and are controlled by dust collector, identified as control device A, which exhausted out one stack identified as stack A. The emissions not collected by the hood collection system are emitted in the building and are exhausted out the general building ventilation system. The casting cleaning processes were installed prior to 1982.
- (e) Sand Handling Operation consists of one (1) sand muller, thirteen (13) hopper stations, one (1) sand elevator, one (1) sand tank, one (1) sand cooler, three belts (3), and one (1) molding line. The maximum capacity of the sand handling system is 20.63 tons of sand per hour. The emissions are collected by various hoods located throughout the sand handling process line and are controlled by dust collector, identified as control device A, which exhausted out one stack identified as stack A. The emissions not collected by the hood collection system are emitted in the building and are exhausted out the general building ventilation system. The sand handling processes were installed prior to 1967.
- (f) Core Making Operation consists of the following two (2) heat cure processes; air set core making process, and oil sand core making process. In the air set core making process, sand, catalyst, and resin are blended together in a sand mixer. Following blending, the blended sand is placed in the core boxes which are in turn placed in a core machine. Cores are then formed into the desired shape in the core machine. If required the cores are placed in the core oven in order to harden the cores. The air set core oven is fired with natural gas and has a maximum heat input capacity of 0.115 million Btu per hour. The maximum operating capacity of the air set core making process is 0.5 tons of cores per hour. In the oil core making process, sand and core oil are blended together in a sand mixer and placed in core molds to produce the desired shape. If required, the oil cores are then baked in a core oven in order to harden and strengthen the cores. The oil sand core oven is fired with natural gas and has a maximum heat input capacity of 1.6 million Btu per hour. The maximum operating capacity of the oil core making process is 0.05 tons of cores per hour. Emissions from the air set core making process, and a oil sand core making process are uncontrolled and are emitted in to the building. A portion of these emissions are collected by building ventilation hoods located in the core making area and are exhausted out stacks V38, V5 and V4.

Unpermitted Emission Units and Pollution Control Equipment

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

Emission Units and Pollution Control Equipment Under Enhanced New Source Review (ENSR)

There are no new facilities to be reviewed under the ENSR process.

Insignificant Activities

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

- (a) Space heaters, process heaters, or boilers using the following fuels.
 - 1) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour.
 - (A) Core Oven, with a heat input capacity of 1.6 MMBtu/hr.
 - (B) Maintenance West Space Heater, with a heat input capacity of 0.225 MMBtu/hr.
 - (C) Maintenance East Space Heater, with a heat input capacity of 0.225 MMBtu/hr.
 - (D) Chipping Booth Space Heater, with a heat input capacity of 0.2 MMBtu/hr.
 - (E) Old Dock Space Heater, with a heat input capacity of 0.4 MMBtu/hr.
 - (F) Maintenance Shower Room Furnace, with a heat input capacity of 0.125 MMBtu/hr.
 - (G) Old Conference Room Boiler, with a heat input capacity of 0.106 MMBtu/hr.
 - (H) Airset Oven, with a heat input capacity of 0.115 MMBtu/hr.
 - (I) Airset Torpedo, with a heat input capacity of 0.4 MMBtu/hr.
 - (J) Airset Torpedo, with a heat input capacity of 0.4 MMBtu/hr.
 - (K) Bull Ladle Torch -2", with a heat input capacity of 0.279 MMBtu/hr.
 - (L) Control Room Furnace, with a heat input capacity of 0.125 MMBtu/hr.
 - (M) Core Dip Drying Table Infra-red, with a heat input capacity of 0.048 MMBtu/hr.
 - (N) Ladle Torch 2" Floor Molding, with a heat input capacity of 0.279 MMBtu/hr.
 - (O) Ladle Torch 2" Floor Molding, with a heat input capacity of 0.279 MMBtu/hr.
 - (P) Ladle Torch 2" Floor Molding, with a heat input capacity of 0.279 MMBtu/hr.
 - (Q) Bull Ladle Torch -2", with a heat input capacity of 0.279 MMBtu/hr.
Heavy Chip Torpedo, with a heat input capacity of 0.4 MMBtu/hr.
 - (R) Shipping Office North Infra-red, with a heat input capacity of 0.014 MMBtu/hr.
 - (S) Shipping Office South Infra-red, with a heat input capacity of 0.014 MMBtu/hr.
 - (T) Core Assembly Table Heater, with a heat input capacity of 0.014 MMBtu/hr.
 - (U) Muller Trash Chute Torch, with a heat input capacity of 0.005 MMBtu/hr.
 - (V) Muller Gearbox Infra-red, with a heat input capacity of 0.024 MMBtu/hr.
 - (W) Muller Manifold Infra-red, with a heat input capacity of 0.024 MMBtu/hr.
 - (X) Compressor Water Manifold Infra-red, with a heat input capacity of 0.024 MMBtu/hr.
 - (Y) Air-set room space heater, with a heat input capacity of 0.15 MMBtu/hr.
 - (Z) Air-set room Infra-red, with a heat input capacity of 0.024 MMBtu/hr.
 - (AA) Air-set room Infra-red, with a heat input capacity of 0.024 MMBtu/hr.
 - (BB) Air-set conveyor Infra-red, with a heat input capacity of 0.024 MMBtu/hr.
 - (CC) Air-set conveyor Infra-red, with a heat input capacity of 0.024 MMBtu/hr.
 - (DD) Air-set conveyor Infra-red, with a heat input capacity of 0.024 MMBtu/hr.
 - (EE) Core Room Core Prep Infra-red, with a heat input capacity of 0.024 MMBtu/hr.
 - (FF) Bench Core Table Infra-red, with a heat input capacity of 0.024 MMBtu/hr.
 - (GG) Bench Core Table Infra-red, with a heat input capacity of 0.024 MMBtu/hr.
 - (HH) Core Assembly Table Infra-red, with a heat input capacity of 0.024 MMBtu/hr.
 - (II) Air-set Core & Mold assembly Table Infrared, with a heat input capacity

- of 0.024 MMBtu/hr.
- (JJ) Air-set Core & Mold assembly Table Infrared, with a heat input capacity of 0.024 MMBtu/hr.
 - (KK) Air-set Mold Assembly Infrared, with a heat input capacity of 0.024 MMBtu/hr.
 - (LL) Air-set Mold Assembly Infrared, with a heat input capacity of 0.024 MMBtu/hr.
 - (MM) Sinto Infrared (basement), with a heat input capacity of 0.024 MMBtu/hr.
 - (NN) Sinto Infrared (basement), with a heat input capacity of 0.024 MMBtu/hr.
 - (OO) #9 Molding Machine Infra-red (overhead), with a heat input capacity of 0.024 MMBtu/hr.
 - (PP) #9 Molding Machine Infra-red (basement), with a heat input capacity of 0.024 MMBtu/hr.
 - (QQ) Molding Line Setup Table Infra-red (basement), with a heat input capacity of 0.024 MMBtu/hr.
 - (RR) #8 Molding Machine Infra-red (basement), with a heat input capacity of 0.024 MMBtu/hr.
 - (SS) #8 Molding Machine Infra-red (overhead), with a heat input capacity of 0.024 MMBtu/hr.
 - (TT) #7 Molding Machine Infra-red (basement), with a heat input capacity of 0.024 MMBtu/hr.
 - (UU) #7 Molding Machine Infra-red (overhead), with a heat input capacity of 0.024 MMBtu/hr.
 - (VV) #6 Molding Machine Infra-red (basement), with a heat input capacity of 0.024 MMBtu/hr.
 - (WW) #6 Molding Machine Infra-red (overhead), with a heat input capacity of 0.024 MMBtu/hr.
 - (XX) #5 Molding Machine Infra-red (basement), with a heat input capacity of 0.024 MMBtu/hr.
 - (YY) #5 Molding Machine Infra-red (overhead), with a heat input capacity of 0.024 MMBtu/hr.
 - (ZZ) #4 Molding Machine Infra-red (basement), with a heat input capacity of 0.024 MMBtu/hr.
 - (AAA) #4 Molding Machine Infra-red (overhead), with a heat input capacity of 0.024 MMBtu/hr.
 - (BBB) #3 Molding Machine Infra-red (basement), with a heat input capacity of 0.024 MMBtu/hr.
 - (CCC) #3 Molding Machine Infra-red (overhead), with a heat input capacity of 0.024 MMBtu/hr.
 - (DDD) #1 Molding Machine Infra-red (basement), with a heat input capacity of 0.024 MMBtu/hr.
 - (EEE) #1 Molding Machine Infra-red (overhead), with a heat input capacity of 0.024 MMBtu/hr.
 - (FFF) Ladle Prep Area Sink Infra-red, with a heat input capacity of 0.024 MMBtu/hr.
 - (GGG) #2 Stand Grinder Infra-red, with a heat input capacity of 0.024 MMBtu/hr.
 - (HHH) #1 Stand Grinder Infra-red, with a heat input capacity of 0.024 MMBtu/hr.
 - (III) Brinell Tester Infrared, with a heat input capacity of 0.024 MMBtu/hr.
 - (JJJ) Single Pedestal Dual Wheel Grinder Infra-red, with a heat input capacity of 0.024 MMBtu/hr.
 - (KKK) Floor Molding Rollaround Triple Unit Infra-red, with a heat input capacity of 0.024 MMBtu/hr.
 - (LLL) Floor Molding North Station Infra-red, with a heat input capacity of 0.024

- MMBtu/hr.
(MMM) Floor Molding South Station Infra-red, with a heat input capacity of 0.024 MMBtu/hr.
(NNN) Floor Molding Water Barell Infra-red, with a heat input capacity of 0.024 MMBtu/hr.
(OOO) Floor Molding Simpson Muller Infra-red, with a heat input capacity of 0.024 MMBtu/hr.
- 2) Propane or liquified petroleum gas, or butane-fired combustion sources with heat input equal to or less than six million (6,000,000) Btu per hour.
- (A) Payloader, 61 HP
(B) Hand Torch unit for mold drying, 0.3 MMBtu/hr
- 3) Fuel oil-fired combustion sources with heat input equal to or less than two million (2,000,000) Btu per hour and firing fuel containing less than five-tenths (0.5) percent sulfur by weight.
- (A) Dayton Salamader, 0.6 MMBtu/hr
(B) Dayton Salamader, 0.055 MMBtu/hr
- (b) Equipment powered by internal combustion engines of capacity equal to or less than 500,000 Btu/hour, except where total capacity of equipment operated by one stationary source exceeds 2,000,000 Btu/hour.
- (c) Combustion source flame safety purging on startup.
- (d) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons.
- (e) The following VOC and HAP storage containers:
- 1) Storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.
2) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.
- (f) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.
- (g) Closed loop heating and cooling systems.
- (h) Infared cure equipment.
- (i) Noncontact cooling tower systems with forced and induced draft cooling tower system not regulated under a NESHAP.
- (j) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.
- (k) Paved and unpaved roads and parking lots with public access.
- (l) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.
- (m) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of

less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations.

- (1) Wood working operation consisting of one (1) bandsaw and (1) oscillating vertical sand. The emissions from this operation are controlled by a dust collector with a design flow rate of 55 cubic feet per minute.
- (n) A laboratory as defined in 326 IAC 2-7-1(21)(C).

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

- (a) Operating Permit, issued on April 10, 1991;

The allowable emissions rate for the two induction furnaces were changed to reflect the appropriate short term emission limit of 0.07 grains per dry standard cubic feet of exhaust gas.

- (a) Operating Permit, issued on April 10, 1991

Condition 3b: Allowable PM emissions have been limited pursuant to IAPCB regulation II-2 to less than 0.03 grains per dry standard cubic foot of exhaust gas

Reason not incorporated: Regulation II-2 is a local regulation which has since been removed from the local rules. The new limit for this emissions unit is 0.07 grains per dry standard cubic foot of exhaust gas. The new emissions limit is required pursuant to 326 IAC 6-1-2(e).

Enforcement Issue

- (a) ERMD and IDEM are aware that the sources FESOP application was received after the application due date of December 13, 1996.
- (b) ERMD and IDEM have reviewing this matter and have taken appropriate action.

Recommendation

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

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

An administratively complete FESOP application for the purposes of this review was received on August 12, 1998. Additional information was received on March 24, 1999.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (Appendix A, pages 1 through 12).

Potential To Emit

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.”

Pollutant	Potential To Emit (tons/year)
PM	Greater than 250
PM-10	Greater than 250
SO ₂	Less than 100
VOC	Less than 100
CO	Less than 100
NO _x	Less than 100

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

HAP's	Potential To Emit (tons/year)
Chromium	Less than 10
Manganese	greater than 10
Cobalt	Less than 10
Nickel	Less than 10
Arsenic	Less than 10
Cadmium	Less than 10
Selenium	Less than 10
Lead	Less than 10
Formaldehyde	Less than 10
TOTAL	Less than 25

- (a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of PM-10 are equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.
- (b) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is equal to or greater than ten (10) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 1997 OAM emission data.

Pollutant	Actual Emissions (tons/year)
PM	18.15
PM-10	18.15
SO ₂	0.05
VOC	4.68
CO	0.12
NO _x	0.53
Chromium	0.09
Manganese	0.62
Cobalt	0.01
Nickel	1
Arsenic	0.03
Cadmium	0.01
Selenium	<0.01
Lead	0.62

Formaldehyde	0.06
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Limited Potential to Emit

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

Limited Potential to Emit (tons/year)							
Process/facility	PM	PM-10	SO ₂	VOC	CO	NO _x	HAPs
Melt Operations							9 tons of Mn (4)
Point Building Fug	10.2(1) 0.2	10.2(3) 0.1	Neg. Neg.	Neg. Neg.	Neg. Neg.	Neg. Neg.	
Shakeout, Casting Cleaning, Sand Handling							
Point Building Fug.	10.3 (2) 0.6	10.3(3) 0.6	Neg. Neg.	Neg. Neg.	Neg. Neg.	Neg. Neg.	
Other Nonpoint Charge Handling	6.0	3.6	Neg.	Neg.	Neg.	Neg.	
Preheater	0.3	0.3	0.1	0.3	3.8	15.3	
Ductile Iron Pouring	18.0	18.0	Neg.	Neg.	Neg.	Neg.	
Cooling	28.0	28.0	0.2	Neg.	Neg.	0.1	
Core Making	14.0	14.0	Neg.	Neg.	Neg.	Neg.	
	36.0	1.0	3.2	54.8	Neg.	5.0	
Insignificant Wood Working	0.6	0.6	Neg.	Neg.	Neg.	Neg.	Neg.
Paved Roads	0.1	0.1					
Combustion	0.1	0.1	0.02	0.2	0.6	3.1	
Total Emissions	124	87	4	55	4	24	< 10 tons of a single HAP <25 tons of a Comb of HAPs

- (1) PTE based on 0.07 gr/dscf, 20,000 tons of metal melted per 12 month period, (20,000 tons of metal melted is equivalent to 4,000 hours of operation at 5 tons per hour).
- (2) PTE based on 99% capture efficiency, AP-42 emissions factors and 20,000 tons of metal melted per 12 month period.
- (3) PTE based on 0.03 gr/dscf, 20,000 tons of metal melted per 12 month period, (20,000 tons of metal melted is equivalent to 4,000 hours of operation at 5 tons per hour).
- (4) PTE for PM-10 was limited the same as for PM.
- (5) PTE for Manganese was based 20,000 tons of metal melted per 12 month period and emissions factors obtained from the Speciate Database.

County Attainment Status

The source is located in Marion County.

Pollutant	Status
PM-10	Attainment
SO ₂	Attainment
NO ₂	Attainment
Ozone	Attainment
CO	Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NOx) are precursors for the

formation of ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to the ozone standards. Marion County has been designated as attainment or unclassifiable for ozone.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source.

State Rule Applicability - Entire Source

326 IAC 2-2 Prevention of Significant Deterioration (PSD) Regulation

This source is included on the list of 28 and has potential to emit Particulate Matter (PM) emissions greater than 100 tons per year. Therefore this source is classified as a major source under the PSD regulation. Since all the emitting units were constructed prior to effective date of the PSD regulation (August 7, 1977), the PSD regulation does not apply to any of the emitting units at this source.

326 IAC 2-3 Emissions Offset Regulation

This source is located in an area which is attainment for all criteria air pollutants, therefore the Emissions Offset Regulation is not applicable.

326 IAC 2-8-4 (Federally Enforceable State Operating Permit)

Source has potential to emit PM-10 and Manganese above the Title V applicability threshold. However, actual emissions are less than the Title V applicability threshold; therefore, the source qualifies as a FESOP source. The source has agreed to accept the following restrictions to avoid the requirements of the Part 70 Operating Permit Program.

- (a) The tons of metal melted in the two induction furnaces shall not exceed 20,000 tons per twelve consecutive month period. This production limitation is equivalent to:

- (1) Three and six tenths (3.6) tons of PM-10 from building fugitive emissions associated with the charge handling operation. The limited PTE for this emission unit were calculated as follows:

$$\frac{0.36 \text{ lbs}}{\text{tons metal charged}} \times \frac{20,000 \text{ ton}}{12 \text{ month period}} \times \frac{\text{ton}}{2,000 \text{ lbs}} \cdot \frac{3.6 \text{ tons of PM\&10}}{12 \text{ month period}}$$

- (2) Three tenths (0.3) of a ton of PM-10 from the building fugitive emissions associated with preheater operation. The limited PTE for this emission unit was calculated as follows:

$$\frac{3 \text{ lbs}}{\text{mmcf}} \times \frac{0.025 \text{ mmcf}}{\text{hour}} \times \frac{\text{ton}}{2,000 \text{ lbs}} \times \frac{8,760 \text{ hours}}{12 \text{ month period}} \cdot \frac{0.3 \text{ tons of PM\&10}}{12 \text{ month period}}$$

- (3) One tenth (0.1) of a ton of PM-10 from building fugitive emissions associated with the furnace operation. The limited PTE from this emission unit was calculated as follows:

$$\frac{0.86 \text{ lbs}}{\text{tons metal charged}} \times \frac{20,000 \text{ ton}}{12 \text{ month period}} \times \frac{\text{ton}}{2,000 \text{ lbs}} \times (100\% \& 99\%) \cdot \frac{0.1 \text{ tons of PM\&10}}{12 \text{ month period}}$$

- (4) Eighteen (18) tons of PM-10 emissions from building fugitive emissions associate with the inoculation operation. The limited PTE from this emission unit was calculated as follows:

$$\frac{1.8 \text{ lbs}}{\text{tons metal charged}} \times \frac{20,000 \text{ ton}}{12 \text{ month period}} \times \frac{\text{ton}}{2,000 \text{ lbs}} \cdot \frac{18 \text{ tons of PM\&10}}{12 \text{ month period}}$$

- (5) Twenty eight (28) tons of PM-10 emissions from building fugitive emissions associated with the casting pouring operation. The limited PTE from this emission unit was calculated as follows:

$$\frac{2.8 \text{ lbs}}{\text{tons metal charged}} \times \frac{20,000 \text{ ton}}{12 \text{ month period}} \times \frac{\text{ton}}{2,000 \text{ lbs}} \cdot \frac{28 \text{ tons of PM\&10}}{12 \text{ month period}}$$

- (6) Fourteen (14) tons of PM-10 emissions from building fugitive emissions associated with casting cooling operation. The limited PTE from this emission unit was calculated as follows:

$$\frac{1.4 \text{ lbs}}{\text{tons metal charged}} \times \frac{20,000 \text{ ton}}{12 \text{ month period}} \times \frac{\text{ton}}{2,000 \text{ lbs}} \cdot \frac{14 \text{ tons of PM\&10}}{12 \text{ month period}}$$

- (7) Five tenths (0.6) of a ton of PM-10 emissions from building fugitive emissions associated with shakeout, casting cleaning, shotblast and sand handling operations. The limited PTE from this emission unit was calculated as follows:

$$\frac{(2.24 \% 0.0045 \% 1.7) \text{ lbs}}{\text{tons metal charged}} \times \frac{20,000 \text{ ton}}{12 \text{ month period}} \times \frac{\text{ton}}{2,000 \text{ lbs}} \times (100\% \& 99\%) \cdot \frac{0.4 \text{ tons of PM\&10}}{12 \text{ month period}}$$

$$\frac{0.54 \text{ lbs}}{\text{tons sand handled}} \times \frac{20.63 \text{ ton}}{\text{hr}} \times \frac{\frac{20,000 \text{ tons metal}}{12 \text{ month period}}}{\frac{5 \text{ tons}}{\text{hr}}} \times \frac{\text{ton}}{2,000 \text{ lbs}} \times (100\% \& 99\%) \cdot \frac{0.2 \text{ tons PM\&10}}{12 \text{ month period}}$$

- (8) One (1) ton of PM-10 emissions from building fugitive emissions associated with the core making operation. The limited PTE from this emission unit was calculated as follows:

$$\frac{0.09 \text{ lbs}}{\text{tons metal charged}} \times \frac{20,000 \text{ ton}}{12 \text{ month period}} \times \frac{\text{ton}}{2,000 \text{ lbs}} \cdot \frac{1 \text{ tons of PM\&10}}{12 \text{ month period}}$$

- (8) One (9) ton of Manganese emissions source wide not accounting for control . The limited PTE from this emission unit was calculated as follows:

$$\frac{(0.0153\% 0.0186 \% 0.124 \% 0.1302 \% 0.0992 \% 0.527) \text{ lbs}}{\text{tons metal charged}} \times \frac{20,000 \text{ ton}}{12 \text{ month}} \times \frac{\text{ton}}{2,000 \text{ lbs}} \cdot \frac{9 \text{ tons of Mn}}{12 \text{ month}}$$

- (b) The PM-10 emissions from the induction furnaces which are exhausted out stack S-A shall not exceed 0.07 grains per dry standard cubic foot of exhaust gas or 5.1 pounds

per hour. The limited PTE from this emission unit was calculated as follows:

$$\frac{\frac{0.07 \text{ grains}}{\text{cubic foot}} \times \frac{8,500 \text{ cubic feet}}{\text{minute}} \times \frac{60 \text{ minutes}}{\text{hour}}}{\frac{7,000 \text{ grain}}{\text{lbs}}} \times \frac{\frac{20,000 \text{ ton metal}}{12 \text{ months}}}{\frac{5 \text{ tons}}{\text{hour}}} = \frac{10.2 \text{ tons of PM\&10}}{12 \text{ month period}}$$

- (c) The PM-10 emissions from shakeout, casting cleaning, and sand handling operations which are exhausted out stack S-B shall not exceed 0.03 grains per dry standard cubic foot of exhaust gas or 5.14 pounds per hour. This emissions limitation in combination with the production limitation specified above is equivalent to:

$$\frac{\frac{0.03 \text{ grains}}{\text{cubic foot}} \times \frac{20,000 \text{ cubic feet}}{\text{minute}} \times \frac{60 \text{ minutes}}{\text{hour}}}{\frac{7,000 \text{ grain}}{\text{lbs}}} \times \frac{\frac{20,000 \text{ ton metal}}{12 \text{ months}}}{\frac{5 \text{ tons}}{\text{hour}}} = \frac{10.3 \text{ tons of PM\&10}}{12 \text{ month period}}$$

The source wide limited PTE including emissions from insignificant emitting activities is limited to less than 100 tons of PM-10 per year and 10 tons of Manganese such that the Part 70 regulation shall not apply.

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

The source is required to have Preventive Maintenance Plans (PMP) for the Melt Furnace operation and associated control devices and the cleaning/shakeout/sand handling operations and associated control devices. The compliance inspector has reviewed these plans and has determined that they are satisfactory.

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

The source has submitted an Emergency Reduction Plan (ERP) on September 7, 1988. The ERP has been verified to fulfill the requirements of 326 IAC 1-5-2 (Emergency Reduction Plans).

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting), because it has the potential to emit more than ten (10) tons per year of VOCs and is located in Marion County. Pursuant to this rule, the owner/operator of the source must annually submit an emission statement for the source. The annual statement must be received by April 15 of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8)(Emission Statement Operating Year).

326 IAC 5-1 (Visible Emissions Limitations)

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

- (a) Opacity shall not exceed an average of thirty percent (30%) 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.

State Rule Applicability - Individual Facilities

326 IAC 6-1-2 Particulate Emission Limitation

Since this source has the potential to emit PM greater than 100 tons per year and is located in Marion county the PM emission limitations established under 326 IAC 6-1-2 apply as follows:

- a) The PM emissions from the induction furnaces which are captured and vented out stack A are limited to 0.07 grains per dry standard cubic foot of exhaust gas or 5.1 pounds per hour. This emissions unit was stack tested for PM emissions on April 19, 1995. The results of this stack test showed an average emissions rate of 0.017 gr/dscf and was well below the applicable PM limit of 0.07 gr/dscf.
- b) The PM emissions from the sand handling, casting cleaning and shakeout which are captured and vented out stack B are limited to 0.03 grains per dry standard cubic foot of exhaust gas or 5.14 pounds per hour. The PM collection system for the shakeout system has been reconfigured since the last stack test in April of 1995, therefore there is no valid stack test date for this emission unit. Based on AP-42 emission factors and the rated control efficiency of the baghouse the emissions unit appears to be in compliance with 0.03 gr/dscf.

326 IAC 8-1-6 General New Source Emissions Reduction Requirement

The rule does not apply since this source does not have any emissions units with potential VOC emissions greater than 25 tons per year constructed after January 1, 1980.

326 IAC 8-6 Organic Solvents

This rule does not apply since this source does not have potential VOC emissions greater than 100 tons per year.

326 IAC 9-1-2 Carbon Monoxide Emission Limits

This rule does not apply since this induction furnaces do not have the capacity to melt 10 tons or more of metal per hour.

326 IAC 11-1-1 Existing Foundries

The requirements of 11-1-2 do not apply since, 326 IAC 6-1 also applies and the requirements of 326 IAC 11-1-2 are not consistent with the requirements established in 326 IAC 6-1.

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, OAM, 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 follows:

1. The Melt Operation has applicable compliance monitoring conditions as specified below:
 - (a) Visible emission notations once per day of stack B, V11 and V12 shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal. For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.
 - (b) An inspection shall be performed each calendar quarter of all cyclones controlling the woodworking operation when venting to the atmosphere. A cyclone inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors.
2. The Pouring and cooling operation has applicable compliance monitoring conditions as specified below:
 - (a) Visible emission notations once per day of stacks V17, V18, V25, V26, and V27 shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal. For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.
3. The Shakeout/Casting Cleaning and Sand Handling operations has applicable compliance monitoring conditions as specified below:
 - (a) Visible emission notations once per day of stacks A shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal. For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.
 - (a) The Permittee shall record the total static pressure drop across the baghouse

controlling PM emissions from shakeout, casting cleaning and sand handling operations, at least once daily when the shakeout, casting cleaning and sand handling system is in operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 3.0 to 7.0 inches of water or a range established during the latest stack test. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when the pressure reading is outside of the above mentioned range for any one reading.

- (b) An inspection shall be performed each calendar quarter of all bags controlling the Casting Cleaning, Sand Handling and Shakeout processes when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

These monitoring conditions are necessary to ensure continuous compliance with the PM emissions limitations established in 326 IAC 6-1-2 and the PM-10 emissions limitations established under 326 IAC 2-8-4.

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 188 hazardous air pollutants (HAPs) set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) FESOP Application Form GSD-08.

- (a) This source will emit levels of air toxics less than those which constitute a major source according to Section 112 of the 1990 Clean Air Act Amendments.
- (b) See attached calculations for detailed air toxic calculations.

Conclusion

The operation of this Gray Iron Foundry shall be subject to the conditions of the attached proposed (FESOP No.: F097-10170-00063).

Appendix A
Emission Calculations Spread Sheets

Emission Unit: EU-01
 Unit Description: Two Electric Induction Furnaces
 Furnace Capacity: 5 tons of metal charged per hour
 Control Device: Settling Tank/Cyclone
 Capture Efficiency: 99.00%
 Collection Efficiency: 25.00%
 Stack ID: B
 Stack Flow Rate (acfm) 8500

Potential Emissions

Pollutants	PM	PM10	VOC	CO	SOx	NOx	Pb
Em. Factor	0.9	0.86	0	0	0	0	0.0425
Source of Em. Factor	30400303	30400303	30400303	30400303	30400303	30400303	30400303
Units of Em. Factor	lbs/ton metal						
Emissions (tons/yr)	19.71	18.83	0.00	0.00	0.00	0.00	0.93
Pollutants	Cr	Mn	Co	Ni	As	Cd	
Em. Factor	Speciate	Speciate	Speciate	Speciate	Speciate	Speciate	
Source of Em. Factor	lbs/ton metal						
Units of Em. Factor	0.00022	0.01530	0.00002	0.00088	0.00011	0.00011	
Emissions (tons/yr)	4.82E-03	3.35E-01	4.38E-04	1.93E-02	2.41E-03	2.41E-03	

Allowable Emissions

Pollutant	Rule Cite	gr/dscf	lbs/hr	tons/yr	Limited throughput (tons of metal/12 months)	Equivalent hours of operations
PM	326 IAC 6-1-2(e)	0.07	5.1	10.2	NA	NA
PM-10	326 IAC 2-8	0.07	5.1	10.2	20000	4000

Limited PTE

Pollutant	PM (2)	PM10(2)	VOC	CO	SOx	NOx	Pb(1)
Point	10.2	10.2	0	0	0	0	0.32
Building Fugitive	0.1971	0.086	0	0	0	0	0.00425
Pollutants	Cr(1)	Mn(1)	Co(1)	Ni(1)	As(1)	Cd(1)	
Point	2.18E-03	1.51E-01	1.98E-04	8.71E-03	1.09E-03	1.09E-03	
Building Fugitive	2.20E-05	1.53E-03	2.00E-06	8.80E-05	1.10E-05	1.10E-05	

(1) Limited PTE for building fugitive was calculated using the following equation.

Point Emissions
 (Emission Factor, lbs/ton x 20,000 tons of Metal per 12month period)/ 2000 lbs/ton x Collection Eff. x Control Eff. =

Building Fugitive Emissions
 (Emission Factor, lbs/ton x 20,000 tons of Metal per twelve month period)/ 2000 lbs/ton x (1- Collection Efficiency)

(2) Limited PTE was calculated using the following equation.

(0.07 gr/cf x 8,000 cfm x 60 min/hr)/7000 gr/lb x(20,000 tons/yr/5 tons/hr) = 22.34 tons/yr

Emission Unit: EU-F02
 Unit Description: Charge Handling
 Furnace Capacity: 5 tons of metal charged per hour
 Stack ID: Emissions not vented

Potential Emissions

Pollutants	PM	PM10	VOC	CO	SOx	NOx	Pb
Em. Factor	0.6	0.36	0	0	0	0	0.00231
Source of Em. Factor	30400315	30400315	30400315	30400315	30400315	30400315	Speciate
Units of Em. Factor	lbs/ton metal						
Emissions (tons/yr)	13.14	7.88	0.00	0.00	0.00	0.00	0.05
Pollutants	Cr	Mn	Co	Ni	As	Se	Cd
Em. Factor	Speciate						
Source of Em. Factor	lbs/ton metal						
Units of Em. Factor	0.00023	0.01860	0.00002	0.00040	0.00008	0.00001	0.00004
Emissions (tons/yr)	5.04E-03	4.07E-01	4.38E-04	8.76E-03	1.75E-03	2.19E-04	8.76E-04

Allowable Emissions

Pollutant	Rule Cite	Throughput
PM-10	326 IAC 2-8	20000

Limited PTE

Pollutant	PM	PM10	VOC	CO	SOx	NOx	Pb
Charge Handling	6	3.6	0	0	0	0	0.0231
Pollutant	Cr	Mn	Co	Ni	As	Se	Cd
Charge Handling	0.0023	0.1860	0.0002	0.0040	0.0008	0.0001	0.0004

(1) Limited PTE was calculated using the following equation.

$$(\text{Emission Factor, lbs/ton} \times 20,000 \text{ tons of Metal per twelve month period}) / 2000 \text{ lbs/ton} =$$

Emission Unit: EU-03
 Unit Description: Preheater
 Charge Capacity: 5 tons per hour
 Fuel: Natural Gas
 Maximum firing rate: 0.025 mmcf/hr
 Stack ID: None

Potential Emissions

Pollutants	PM	PM10	VOC	CO	SOx	NOx	Pb
Em. Factor	3	3	2.8	35	0.6	140	0
Source of Em. Factor	10200602	10200602	10200602	10200602	10200602	10200602	10200602
Units of Em. Factor	lbs/mmcf						
Emissions (tons/yr)	0.33	0.33	0.31	3.83	0.07	15.33	0.00

Limited PTE

Pollutant	PM	PM10	VOC	CO	SOx	NOx	Pb
Preheater	0.33	0.33	0.31	3.83	0.07	15.33	0.00

Emission Unit: EU-F03
 Unit Description: Ductile Iron Production
 Charge Capacity: 5 tons per hour
 Stack ID: None

Potenital Emissions

Pollutants	PM	PM10	VOC	CO	SOx	NOx	Pb
Em. Factor	1.8	1.8	0	0	0	0	0.00152
Source of Em. Factor	30400321	30400321	30400321	30400321	30400321	30400321	30400321
Units of Em. Factor	lbs/ton metal						
Emissions (tons/yr)	39.42	39.42	0.00	0.00	0.00	0.00	0.03
Pollutants	Cr	Mn	Co	Ni	As	Se	Cd
Em. Factor	Speciate						
Source of Em. Factor	lbs/ton metal						
Units of Em. Factor	0.00152	0.12400	0.00012	0.00268	0.00052	0.00004	0.00024
Emissions (tons/yr)	3.33E-02	2.72E+00	2.63E-03	5.87E-02	1.14E-02	8.76E-04	5.26E-03

Allowable Emissions

Pollutant	Rule Cite	Throughput
PM-10	326 IAC 2-8	20000

Limited PTE

Pollutant	PM	PM10	VOC	CO	SOx	NOx	Pb
Ductile Iron Production	18	18	0	0	0	0	0.0152
Pollutant	Cr	Mn	Co	Ni	As	Se	Cd
Ductile Iron Production	0.0152	1.24	0.0012	0.0268	0.0052	0.0004	0.0024

(1) Limited PTE was calculated using the following equation.

$$(\text{Emission Factor, lbs/ton} \times 20,000 \text{ tons of Metal per twelve month period}) / 2000 \text{ lbs/ton} =$$

Emission Unit: EU-F04
 Unit Description: Pouring/Casting
 Charge Capacity: 5 tons per hour
 Stack ID: None

Potential Emissions

Pollutants	PM	PM10	VOC	CO	SOx	NOx	Pb
Em. Factor	2.8	2.8	(1)	0	0.02	0.01	0.01617
Source of Em. Factor	30400320	30400320	30400320	30400320	30400320	30400320	Speciate
Units of Em. Factor	lbs/ton metal						
Emissions (tons/yr)	61.32	61.32	0.00	0.00	0.44	0.22	0.35

Pollutants	Cr	Mn	Co	Ni	As	Se	Cd
Em. Factor	Speciate						
Source of Em. Factor	lbs/ton metal						
Units of Em. Factor	0.00160	0.13020	0.00013	0.00281	0.00055	0.00004	0.00025
Emissions (tons/yr)	3.50E-02	2.85E+00	2.85E-03	6.15E-02	1.20E-02	8.76E-04	5.48E-03

(1) VOC emissions are accounted for in the coremaking spreadsheet.

Allowable Emissions

Pollutant	Rule Cite	Throughput
PM-10	326 IAC 2-8	20000

Limited PTE

Pollutant	PM	PM10	VOC	CO	SOx	NOx	Pb
Pouring/Casting	28	28	0	0	0.2	0.1	0.1617

Pollutant	Cr	Mn	Co	Ni	As	Se	Cd
Pouring/Casting	0.01600	1.30200	0.00130	0.02810	0.00550	0.00040	0.00250

(1) Limited PTE was calculated using the following equation.

$$(\text{Emission Factor, lbs/ton} \times 20,000 \text{ tons of Metal per twelve month period}) / 2000 \text{ lbs/ton} =$$

Emission Unit: EU-F05
 Unit Description: Ductile Iron Production
 Charge Capacity: 5 tons per hour
 Stack ID: None

Potential Emissions

Pollutants	PM	PM10	VOC	CO	SOx	NOx	Pb
Em. Factor	1.4	1.4	0	0	0	0	0
Source of Em. Factor	30400320	30400320	30400320	30400320	30400320	30400320	30400320
Units of Em. Factor	lbs/ton metal						
Emissions (tons/yr)	30.66	30.66	0.00	0.00	0.00	0.00	0.00

Allowable Emissions

Pollutant	Rule Cite	Throughput
PM-10	326 IAC 2-8	20000

Limited PTE

Pollutant	PM	PM10	VOC	CO	SOx	NOx	Pb
Build Fug	14	14	0	0	0	0	0

(1) Limited PTE was calculated using the following equation.

$$(\text{Emission Factor, lbs/ton} \times 20,000 \text{ tons of Metal per twelve month period}) / 2000 \text{ lbs/ton} =$$

Emission Unit:	EU-02A	EU-02B	EU-02C
Unit Description:	Casting Shakeout	Table Blast, Shot Blast, 3 Grinders and Cutoff Saw	Sand Handling
Charge Capacity (tph):	5	5	NA
Sand Handling Cap. (tph):	NA	NA	20.63
Stack ID:	A	A	A
Stack Flow Rate (acfm)	20000	20000	20000
Control Device	Cylone Baghouse	Baghouse	Baghouse
Collection Efficiency	0.99	0.99	0.99
Control Efficiency	0.99	0.99	0.99

Potential Emissions

<i>Shakeout</i>							
Pollutants	PM	PM10	VOC	CO	SOx	NOx	Pb
Em. Factor	3.2	2.24	(1)	0	0	0	0.01
Source of Em. Factor	30400331	30400331	30400331	30400331	30400331	30400331	Speciate
Units of Em. Factor	lbs/ton metal						
Emissions (tons/yr)	70.08	49.06	0.00	0.00	0.00	0.00	0.27
Pollutants	Cr	Mn	Co	Ni	As	Se	Cd
Em. Factor	Speciate						
Source of Em. Factor	lbs/ton metal						
Units of Em. Factor	0.00122	0.09920	0.00010	0.00214	0.00042	0.00003	0.00019
Emissions (tons/yr)	2.67E-02	2.17E+00	2.19E-03	4.69E-02	9.20E-03	6.57E-04	4.16E-03

<i>Grinding/Cleaning</i>							
Pollutant	PM	PM10	VOC	CO	SOx	NOx	Pb
Em. Factor	0.01	0.0045	0	0	0	0	0
Source of Em. Factor	30400360	30400360	30400360	30400360	30400360	30400360	30400360
Units of Em. Factor	lbs/ton metal						
Emissions (tons/yr)	0.22	0.10	0.00	0.00	0.00	0.00	0.00

<i>Sand Handling</i>							
Pollutant	PM	PM10	VOC	CO	SOx	NOx	Pb
Em. Factor	0.65	0.54	0	0	0	0	0
Source of Em. Factor	30400350	30400350	30400350	30400350	30400350	30400350	30400350
Units of Em. Factor	lbs/ton metal						
Emissions (tons/yr)	58.73	48.79	0.00	0.00	0.00	0.00	0.00

<i>Shot Blast</i>							
Pollutant	PM	PM10	VOC	CO	SOx	NOx	Pb
Em. Factor	17	1.7	0	0	0	0	0
Source of Em. Factor	30400340	30400340	30400340	30400340	30400340	30400340	Speciate
Units of Em. Factor	lbs/ton metal						
Emissions (tons/yr)	372.30	37.23	0.00	0.00	0.00	0.00	0.07
Pollutants	Cr	Mn	Co	Ni	As	Se	Cd
Em. Factor	Speciate						
Source of Em. Factor	lbs/ton metal						
Units of Em. Factor	0.00646	0.52700	0.00051	0.01139	0.00221	0.00017	0.00102
Emissions (tons/yr)	1.41E-01	1.15E+01	1.12E-02	2.49E-01	4.84E-02	3.72E-03	2.23E-02

(1) VOC emissions are accounted for in the coremaking spreadsheet.

Allowable Emissions

Pollutant	Rule Cite	gr/dscf	lbs/hr	tons/yr	Limited throughput (tons of metal/12 months)	Equivalent hours of operations
PM-10	326 IAC 2-8	0.03	5.14	10.29	20000	4000
PM	326 IAC 6-1-2(a)	0.03	5.14	10.29	NA	NA

Limited PTE

Pollutant Point	PM	PM10	VOC	CO	SOx	NOx	Pb
	10.29	10.29	0	0	0	0	1.22E-03
Pollutant Point	Cr	Mn	Co	Ni	As	Se	Cd
	7.60E-02	6.20E+00	6.04E-03	1.34E-01	2.60E-02	1.98E-03	1.20E-02
Pollutant Building Fugitive	PM	PM10	VOC	CO	SOx	NOx	Pb
	0.59	0.45	0.00	0.00	0.00	0.00	1.23E-03
Pollutant Building Fugitive	Cr	Mn	Co	Ni	As	Se	Cd
	1.22E-04	9.92E-03	1.00E-05	2.14E-04	4.20E-05	3.00E-06	1.90E-05

Note that the collection efficiency for the shot blast operations was assumed to be 100%

Emission Unit: EU-F05
 Unit Description: Core Making
 Charge Capacity (tph): 5
 Stack ID: None

Air Set Core Making		Core Oil Core Making	
Resin Usage	12.75	Core Oil Usage	3 lbs/hr
Catalyst Usage	1.4	% VOC in Core Oil	50.00% by weight
%VOC in Resin	96.00% by weight		
% VOC in Catalyst	0.00% by weight		
% Formaldehyde	0.50% by weight		
% Evapaorated	90.00% by weight (from Form R Reporting of Binder Chemicals Used in Foundries)		

Potential Emissions

Pollutants	PM	PM10	VOC	CO	SOx	NOx	Pb
Em. Factor	3.6	0.09	NA	0	0.32	0.5	0
Source of Em. Factor	30400353	30400353	(1)	30400353	30400353	30400353	30400353
Units of Em. Factor	lbs/ton metal	lbs/ton metal	NA	lbs/ton metal	lbs/ton metal	lbs/ton metal	lbs/ton metal
Emissions (tons/yr)	78.84	1.97	54.82	0.00	7.01	10.95	0.00

(1) The VOC emissions were calculated based on maximum usage of VOC containing material, % VOC in material and the American Foundrymen's Form R Reporting of Binder Chemicals Used in Foundries. It is not possible to determine % VOC released during pouring, cooling, shakeout and core making.

Pollutants	Formaldehyde
Em. Factor	NA
Source of Em. Factor	(2)
Units of Em. Factor	NA
Emissions (tons/yr)	0.25

(2) The Formaldehyde emissions were calculated based on maximum resin usage, % formaldehyde in resin and the American Foundrymen's Form R Reporting of Binder Chemicals Used in Foundries.

Allowable Emissions

Pollutant	Rule Cite	Throughput
PM-10	326 IAC 2-8	20000

Limited PTE

Pollutant	PM	PM10	VOC	CO	SOx	NOx	Pb
Core Making	36	0.9	54.82	0	3.2	5	0

Pollutant	Formaldehyde
Core Making	0.25

Insignificant Fugitive Emissions from Road Surfaces

		g/VMT	lbs/VMT	VMT/yr	tons/yr
HDV	$E = k \times (sL/2)^{0.65} \times (W/3)^{1.5} =$	106.60	0.24	153.30	0.02
LVD	$E = k \times (sL/2)^{0.65} \times (W/3)^{1.5} =$	350.82	0.77	153.30	0.06

Where

k = 7.3 g/VMT for PM-10 from AP-42 Section 13.2.1
 sL = Low-ADT factor is 2.5 g/m² from AP-42 Section 13.2.1
 sL = High-ADT factor is 0.4 g/m² from AP-42 Section 13.2.1
 W = 36 megagrams (gross weight of vehical fully loaded)

Insignificant Natural Gas Combustion Devices

Process	MMBtu/hr	Process	MMBtu/hr
Core Oven	1.6	Air-set conveyor Infra-red	0.024
Maintenance West Space Heater	0.225	Core Room Core Prep Infra-red	0.024
Maintenance East Space Heater	0.225	Bench Core Table Infra-red	0.024
Chipping Booth Space Heater	0.2	Bench Core Table Infra-red	0.024
Old Dock Space Heater	0.4	Core Assembly Table Infra-red	0.024
Maintenance Shower Room Furnace	0.125	Air-set Core & Mold assembly Table Infrared	0.024
Old Conference Room Boiler	0.106	Air-set Core & Mold assembly Table Infrared	0.024
Airset Oven	0.115	Air-set Mold Assembly Infrared	0.024
Airset Torpedo	0.4	Air-set Mold Assembly Infrared	0.024
Airset Torpedo	0.4	Sinto Infro-red (basement)	0.024
Bull Ladle Torch -2"	0.279	Sinto Infro-red (basement)	0.024
Control Room Furnace	0.125	#9 Molding Machine Infra-red (overhead)	0.024
Core Dip Drying Table Infra-red	0.048	#9 Molding Machine Infra-red (basement)	0.024
Ladle Torch 2" Floor Molding	0.279	Molding Line Setup Table Infra-red (basement)	0.024
Ladle Torch 2" Floor Molding	0.279	#8 Molding Machine Infra-red (basement)	0.024
Ladle Torch 2" Floor Molding	0.279	#8 Molding Machine Infra-red (overhead)	0.024
Bull Ladle Torch -2"	0.279	#7 Molding Machine Infra-red (basement)	0.024
Heavey Chip Torpedo	0.4	#7 Molding Machine Infra-red (overhead)	0.024
Shipping Office North Infra-red	0.014	#6 Molding Machine Infra-red (basement)	0.024
Shipping Office South Infra-red	0.014	#6 Molding Machine Infra-red (overhead)	0.024
Core Assembly Table Heater	0.014	#5 Molding Machine Infra-red (basement)	0.024
Muller Trash Chute Torch	0.005	#5 Molding Machine Infra-red (overhead)	0.024
Muller Gearbox Infra-red	0.024	#4 Molding Machine Infra-red (basement)	0.024
Muller Manifold Infra-red	0.024	#4 Molding Machine Infra-red (overhead)	0.024
Compressor Water Manifold Infra-red	0.024	#3 Molding Machine Infra-red (basement)	0.024
Air-set room space heater	0.15	#3 Molding Machine Infra-red (overhead)	0.024
Air-set room Infra-red	0.024	#1 Molding Machine Infra-red (basement)	0.024
Air-set room Infra-red	0.024	#1 Molding Machine Infra-red (overhead)	0.024
Air-set conveyor Infra-red	0.024	Ladle Prep Area Sink Infra-red	0.024
Air-set conveyor Infra-red	0.024	#2 Stand Grinder Infra-red	0.024
Floor Molding North Station Infra-red	0.024	#1 Stand Grinder Infra-red	0.024
Floor Molding South Station Infra-red	0.024	Brinell Tester Infrared	0.024
Floor Molding Water Barell Infra-red	0.024	Single Pedestal Dual Wheel Grinder Infra-red	0.024
Floor Molding Simpson Muller Infra-red	0.024	Floor Molding Rollaround Triple Unit Infra-red	0.024

Total Heat Input Capacity 6.225 MMBtu/hr
 Total Max Firing Rate 0.006225 MMCF/hr

Pollutants	PM	PM10	VOC	CO	SOx	NOx	Pb
Em. Factor	3	3	5.3	20	0.6	100	0
Source of Em. Factor	10200603	10200603	10200603	10200603	10200603	10200603	10200603
Units of Em. Factor	lbs/mmcf						
Emissions (tons/yr)	0.08	0.08	0.14	0.55	0.02	2.73	0.00

Insignificant Emissions From Wood Working

Description: (1) ban saw and (1) oscillating vertical sander
Control Device: Dust Collector
Air Flowrate: 550 acfm

Potential Emissions

Pollutant	PM	PM-10
Factor	0.03	0.03
Units	gr/dscf	gr/dscf
Tons/yr	0.62	0.62

PM emissions were assumed to be equivalent to 0.03 gr/dscf
PM emissions were assumed to be equivalent to PM-10

Summary of Potential Emissions

Processes	PM	PM10	VOC	CO	SOx	NOx	Pb
Furnaces	19.71	18.83	0.00	0.00	0.00	0.00	0.93
Charging	13.14	7.88	0.00	0.00	0.00	0.00	0.05
Preheater	0.33	0.33	0.31	3.83	0.07	15.33	0.00
Ductable Iron Production	39.42	39.42	0.00	0.00	0.00	0.00	0.03
Purging and Casting	61.32	61.32	0.00	0.00	0.44	0.22	0.35
Casting Cooling	30.66	30.66	0.00	0.00	0.00	0.00	0.00
Shakeout	70.08	49.06	0.00	0.00	0.00	0.00	0.27
Cleaning	0.22	0.10	0.00	0.00	0.00	0.00	0.00
Sand Handling	58.73	48.79	0.00	0.00	0.00	0.00	0.00
Shot Blast	372.30	37.23	0.00	0.00	0.00	0.00	0.07
Core Making	78.84	1.97	54.82	0.00	7.01	10.95	0.00
Insignificant - Paved Roads	0.21	0.08	0.00	0.00	0.00	0.00	0.00
Insignificant - Natural Gas Combustion	0.08	0.08	0.14	0.55	0.02	2.73	0.00
Insignificant - Wood Working	0.62	0.62	0.00	0.00	0.00	0.00	0.00
Total Potential Emissions	745.66	296.37	55.27	4.38	7.53	29.23	1.70

Processes	Cr	Mn	Co	Ni	As	Se	Cd
Furnaces	0.00	0.34	0.00	0.02	0.00	0.00	0.00
Charging	0.01	0.41	0.00	0.01	0.00	0.00	0.00
Preheater	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ductable Iron Production	0.03	2.72	0.00	0.06	0.01	0.00	0.01
Purging and Casting	0.04	2.85	0.00	0.06	0.01	0.00	0.01
Casting Cooling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Shakeout	0.03	2.17	0.00	0.05	0.01	0.00	0.00
Cleaning	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sand Handling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Shot Blast	0.14	11.54	0.01	0.25	0.05	0.00	0.02
Core Making	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Potential Emissions	0.25	20.02	0.02	0.44	0.09	0.01	0.04

Summary of Limited Potential to Emit

Processes	PM	PM10	VOC	CO	SOx	NOx	Pb
Furnaces	10.20	10.20	0.00	0.00	0.00	0.00	0.32
Furnaces - Building Fugitive	0.20	0.09	0.00	0.00	0.00	0.00	0.00
Charging	6.00	3.60	0.00	0.00	0.00	0.00	0.02
Preheater	0.33	0.33	0.31	3.83	0.07	15.33	0.00
Ductable Iron Production	18.00	18.00	0.00	0.00	0.00	0.00	0.02
Purging and Casting	28.00	28.00	0.00	0.00	0.20	0.10	0.16
Casting Cooling	14.00	14.00	0.00	0.00	0.00	0.00	0.00
Point - Shakeout/Cleaning/Sand Handling/Shot Blast	10.29	10.29	0.00	0.00	0.00	0.00	0.00
Building Fugitive - Shakeout/ Cleaning/ Sand Handling/ Shot Blast	0.59	0.45	0.00	0.00	0.00	0.00	0.00
Core Making	36.00	0.90	54.82	0.00	3.20	5.00	0.00
Insignificant - Paved Roads	0.21	0.08	0.00	0.00	0.00	0.00	0.00
Insignificant - Natural Gas Combustion	0.08	0.08	0.14	0.55	0.02	2.73	0.00
Insignificant - Wood Working	0.62	0.62	0.00	0.00	0.00	0.00	0.00
Total Limited PTE	124.51	86.63	55.27	4.38	3.48	23.16	0.52

Processes	Cr	Mn	Co	Ni	As	Se	Cd
Point - Furnaces	2.18E-03	1.51E-01	1.98E-04	8.71E-03	1.09E-03	1.09E-03	0.00E+00
Building Fugitive - Furnaces	2.20E-05	1.53E-03	2.00E-06	8.80E-05	1.10E-05	1.10E-05	0.00E+00
Charging	2.30E-03	1.86E-01	2.00E-04	4.00E-03	8.00E-04	1.00E-04	4.00E-04
Preheater	0.00E+00						
Ductable Iron Production	1.52E-02	1.24E+00	1.20E-03	2.68E-02	5.20E-03	4.00E-04	2.40E-03
Purging and Casting	1.60E-02	1.30E+00	1.30E-03	2.81E-02	5.50E-03	4.00E-04	2.50E-03
Casting Cooling	0.00E+00						
Point - Shakeout/Cleaning/Sand Handling/Shot Blast	7.60E-02	6.20E+00	6.04E-03	1.34E-01	2.60E-02	1.98E-03	1.20E-02
Building Fugitive - Shakeout/ Cleaning/ Sand Handling/ Shot Blast	1.22E-04	9.92E-03	1.00E-05	2.14E-04	4.20E-05	3.00E-06	1.90E-05
Core Making	0.00E+00						
Total Limited PTE	1.12E-01	9.09E+00	8.95E-03	2.02E-01	3.87E-02	3.98E-03	1.73E-02

Total HAP Emissions 9.472924 9.722924