



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant

DATE: May 1, 2009

RE: Atlas Foundry Company, Inc. / 053-27072-00002

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

Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

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

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

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

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

Enclosures
FNPER.dot12/03/07



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Federally Enforceable State Operating Permit Renewal OFFICE OF AIR QUALITY

Atlas Foundry Company, Inc.
Factory and Henderson Avenues,
Marion, Indiana 46952

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

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

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-8 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

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.

Operation Permit No.: F053-27072-00002	
Issued by:  Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Issuance Date: May 1, 2009 Expiration Date: May 1, 2019

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National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries Area Sources (Subpart ZZZZZZ)..... Attachment A

SECTION A SOURCE SUMMARY

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

A.1 General Information [326 IAC 2-8-3(b)]

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

Source Address:	Factory and Henderson Avenues, Marion, Indiana 46952
Mailing Address:	P.O. Box 688, Marion, IN 46952
General Source Phone Number:	765-662-2525
SIC Code:	3321
County Location:	Grant
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

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

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

- (a) Two (2) electric induction furnaces, equipped with a baghouse, known as baghouse E, installed in 1996, exhausted through Stack E, capacity: 4.4 tons of iron per hour, each.

Under NESHAP Subpart ZZZZZZ, the two electric induction furnaces and the fugitive emissions from foundry operations are considered existing affected sources.
- (b) Two (2) charge handling systems, equipped with a baghouse, known as baghouse E, installed in 1996 and 2000, exhausted through Stack E, capacity: 4.4 tons of iron per hour, each.
- (c) One (1) Aisco rotary drum shakeout operation, equipped with a wet multi-wash collector, known as wet collector C, installed in 1982, exhausted through Stack C, capacity: 10 tons of iron and 60 tons of sand per hour.
- (d) One (1) Disa #1 pouring/casting line, 90% of emissions captured by baghouse D, installed in 1982, exhausted through Stack D, capacity: 10 tons of iron per hour.
- (e) One (1) Disa #1 castings cooling process, equipped with a baghouse, known as baghouse D, installed in 1982, exhausted through Stack D, capacity: 10 tons of iron per hour.
- (f) One (1) Disa #1 sand handling process, equipped with a baghouse, known as baghouse D, installed in 1982, exhausted through Stack D, capacity: 65 tons of sand per hour.
- (g) One (1) Disa #2 pouring/casting line, 90% of emissions captured by baghouse D installed in 2000, exhausted through Stack D, capacity: 10 tons of iron per hour.
- (h) One (1) Disa #2 castings cooling process, equipped with a baghouse, known as baghouse D, installed in 2000, exhausted through Stack D, capacity: 10 tons of iron per hour.

- (i) One (1) Disa #2 sand handling process, equipped with a baghouse, known as baghouse D, installed in 2000, exhausted through Stack D, capacity: 65 tons of sand per hour.
- (j) One (1) Didion rotary media shakeout drum, equipped with a baghouse, known as baghouse D, installed in 1999, exhausted through Stack D, capacity: 10 tons of iron and 0.2 tons of sand per hour.
- (k) Two (2) shotblast operations, equipped with a baghouse, known as baghouse D, installed in 1963 (Atlas) and 1982 (Peru), exhausted through Stack D, capacity: 5.0 tons of iron per hour, each.
- (l) One (1) mesh belt shotblast machine, equipped with a baghouse, known as baghouse D installed in 1999, exhausted through Stack D, capacity: 5.0 tons of iron castings and 1.25 tons of steel shot per hour.
- (m) Two (2) belt sanders, equipped with a baghouse, known as baghouse D, installed in 2002 and 2008, capacity: each 2.0 tons of iron per hour.
- (n) One (1) stand grinder, identified as SG#4, installed in 2006, equipped with a baghouse, known as baghouse D, exhausted through Stack D, capacity: 2.67 tons of iron per hour.
- (o) Three (3) stand grinders, equipped with a baghouse, known as baghouse A, installed in 1993, 1993 and 1994, exhausted through Stack A, capacity: 2.67 tons of iron per hour, each.
- (p) One (1) continuous blast steel shot blaster, known as continuous blast, equipped with a baghouse, known as baghouse A, installed in 2004, exhausted through Stack A, capacity: 10.0 tons of iron per hour.
- (q) One (1) Isocure (phenolic urethane cold box) core-system, consisting of two (2) Isocure core machines, one (1) Isocure sand mixer, one (1) sand heater, one (1) sand storage bin (1,000 pounds of sand capacity), a cold sand silo (50 tons capacity) equipped with a filter for PM control, and a pneumatic sand conveying system, installed in 1985, exhausted through Stacks S1, S2 and S4, capacity: 0.75 tons of cores per hour, total.
- (r) One (1) shell (phenolic hot box) core system, consisting of seven (7) shell core machines, four (4) sand conveyors, and two (2) sand silos; four (4) shell core machines installed in 1960, two (2) shell core machines installed in 1983, and one (1) shell core machine installed in 2007, capacity: 28 tons of sand for each silo and 1.0 ton of cores per hour, total.

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) Grinding and machining operations (326 IAC 6-3-2).
- (b) Degreasing operations that do not exceed 145 gallons per twelve (12) months, except if subject to 326 IAC 20-6 (326 IAC 8-3-3) (326 IAC 8-3-6).
- (c) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.
- (d) Replacement or repair of electrostatic precipitators, bags in baghouses and filter in other air filtration equipment.
- (e) Paved and unpaved roads and parking lots with public access.

- (f) Gasoline generators not exceeding 110 horsepower.
- (g) Natural gas-fired combustion units, rated at a total of 4.509 million British thermal units per hour.
- (h) Mold release agents using low volatile products.
- (i) Combustion source flame safety purging on startup.
- (j) Refractory storage not requiring air pollution control equipment.
- (k) Storage tanks with capacities less than 1,000 gallons.
- (l) Forced and induced draft cooling tower system not regulated under a NESHAP.
- (m) Heat exchanger, cleaning and repair.
- (n) A laboratory as defined in 326 IAC 2-7-1(21)(D).
- (o) Any operation using aqueous solutions containing less than 1 percent by weight of VOCs excluding HAPs.
- (p) One (1) diesel fired emergency generator rated at 400 output horsepower, not to exceed five hundred (500) hours of operation per year.

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

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

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SECTION B GENERAL CONDITIONS

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

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

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

- (a) This permit, F053-27072-00002, is issued for a fixed term of ten (10) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

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

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

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

B.4 Enforceability [326 IAC 2-8-6] [IC 13-17-12]

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

B.5 Severability [326 IAC 2-8-4(4)]

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

B.6 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]

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

B.7 Duty to Provide Information [326 IAC 2-8-4(5)(E)]

- (a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.
- (b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.8 Certification [326 IAC 2-8-3(d)][326 IAC 2-8-4(3)(C)(i)][326 IAC 2-8-5(1)]

- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by an "authorized individual" of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form, or its equivalent, with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.
- (c) An "authorized individual" is defined at 326 IAC 2-1.1-1(1).

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

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

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

- (b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) The annual compliance certification report shall include the following:
 - (1) The appropriate identification of each term or condition of this permit that is the basis of the certification;
 - (2) The compliance status;
 - (3) Whether compliance was continuous or intermittent;
 - (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-8-4(3); and
 - (5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

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

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

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

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

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall maintain and implement Preventive Maintenance Plans (PMPs) including the following information on each facility:
- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.
- (b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMPs do not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

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

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation except as provided in 326 IAC 2-8-12.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:
- (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
 - (2) The permitted facility was at the time being properly operated;
 - (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
 - (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality,
Compliance and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for Compliance and Enforcement
Branch)
Facsimile Number: 317-233-6865

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

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

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

The notice fulfills the requirement of 326 IAC 2-8-4(3)(C)(ii) and must contain the following:

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

The notification which shall be submitted by the Permittee does not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
 - (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
 - (e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-8-3(c)(6) be revised in response to an emergency.
 - (f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-8 and any other applicable rules.
 - (g) Operations may continue during an emergency only if the following conditions are met:
 - (1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.
 - (2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:
 - (A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and

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

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

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

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

- (a) All terms and conditions of permits established prior to F053-27072-00002 and issued pursuant to permitting programs approved into the state implementation plan have been either:
- (1) incorporated as originally stated,
 - (2) revised, or
 - (3) deleted.
- (b) All previous registrations and permits are superseded by this permit.

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

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) 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.15 Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)]

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

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

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. A deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report.

The Quarterly Deviation and Compliance Monitoring Report does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-8-4(5)(C)][326 IAC 2-8-7(a)][326 IAC 2-8-8]

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Federally Enforceable State Operating Permit modification, revocation and reissuance, or termination, or of a notification of

planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-8-4(5)(C)] The notification by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:
 - (1) That this permit contains a material mistake.
 - (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
 - (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-8-8(a)]
- (c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-8-8(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-8-8(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-8-8(c)]

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

- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-8-3. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

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

- (b) A timely renewal application is one that is:
 - (1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
 - (2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-8 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if,

subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ any additional information identified as being needed to process the application.

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

- (a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

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

Any such application shall be certified by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

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

- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-8-15(b) through (d) without a prior permit revision, if each of the following conditions is met:

- (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
- (2) Any approval required by 326 IAC 2-8-11.1 has been obtained;
- (3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
- (4) The Permittee notifies the:

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

and

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

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

- (5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-8-15(b) through (d). The Permittee shall make such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ in the notices specified in 326 IAC 2-8-15(b)(2), (c)(1), and (d).

- (b) Emission Trades [326 IAC 2-8-15(c)]
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(c).
- (c) Alternative Operating Scenarios [326 IAC 2-8-15(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(7). No prior notification of IDEM, OAQ, or U.S. EPA is required.
- (d) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

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

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

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

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

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

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

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

- (a) The Permittee must comply with the requirements of 326 IAC 2-8-10 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

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

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

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

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

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

B.24 Advanced Source Modification Approval [326 IAC 2-8-4(11)] [326 IAC 2-1.1-9]

- (a) The requirements to obtain a permit modification under 326 IAC 2-8-11.1 are satisfied by this permit for the proposed emission units, control equipment or insignificant activities in Sections A.2 and A.3.
- (b) Pursuant to 326 IAC 2-1.1-9 any permit authorizing construction may be revoked if construction of the emission unit has not commenced within eighteen (18) months from the date of issuance of the permit, or if during the construction, work is suspended for a continuous period of one (1) year or more.

B.25 Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][62 FR 8314] [326 IAC 1-1-6]

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

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

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

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

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

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

(a) Pursuant to 326 IAC 2-8:

- (1) The potential to emit any regulated pollutant, except particulate matter (PM), from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period.
- (2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and
- (3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.

(b) Pursuant to 326 IAC 2-2 (PSD), potential to emit particulate matter (PM) from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period.

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

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

C.3 Opacity [326 IAC 5-1]

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

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A,

Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

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

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

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

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

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

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

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

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

All required notifications shall be submitted to:

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

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

Testing Requirements [326 IAC 2-8-4(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 IDEM, OAQ.

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

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

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

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

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

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

C.10 Compliance Monitoring [326 IAC 2-8-4(3)][326 IAC 2-8-5(a)(1)]

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance or ninety (90) days of initial start-up, whichever is later. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

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

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

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

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

C.11 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

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

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

(a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale.

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

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

C.13 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]

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

C.14 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]

- (a) Upon detecting an excursion or exceedance, the Permittee shall restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:
 - (1) initial inspection and evaluation;
 - (2) recording that operations returned to normal without operator action (such as through response by a computerized distribution control system); or
 - (3) any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.
- (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
 - (1) monitoring results;
 - (2) review of operation and maintenance procedures and records; and/or
 - (3) inspection of the control device, associated capture system, and the process.
- (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (e) The Permittee shall maintain the following records:
 - (1) monitoring data;
 - (2) monitor performance data, if applicable; and
 - (3) corrective actions taken.

C.15 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4][326 IAC 2-8-5]

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.

- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

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

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

C.16 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance or ninety (90) days of initial start-up, whichever is later.

C.17 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

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

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (e) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

Stratospheric Ozone Protection

C.18 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 EMISSIONS UNIT OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]: Charge Handling and Melting Operations (Baghouse E)

- (a) Two (2) electric induction furnaces, equipped with a baghouse, known as baghouse E, installed in 1996, exhausted through Stack E, capacity: 4.4 tons of iron per hour, each.

Under NESHAP Subpart ZZZZZZ, the two electric induction furnaces and the fugitive emissions from foundry operations are considered existing affected sources.

- (b) Two (2) charge handling systems, equipped with a baghouse, known as baghouse E, installed in 1996 and 2000, exhausted through Stack E, capacity: 4.4 tons of iron per hour, each.

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

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

D.1.1 PM, PM₁₀ and PM_{2.5} Limitations [326 IAC 2-2] [326 IAC 2-8-4]

In order to render the requirements of 326 IAC 2-2 and 326 IAC 2-7 not applicable, the PM, PM₁₀, and PM_{2.5} emission rates from the emission units listed below shall be limited as follows:

- (a) The total combined metal throughput to the two (2) electric induction furnaces shall not exceed 37,300 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (b) The PM emission rate from baghouse E associated with the two (2) electric induction furnaces and the two (2) charge handling systems shall not exceed a total of 0.210 pounds per ton of metal charged and melted.
- (c) The PM₁₀ emission rate from baghouse E associated with the two (2) electric induction furnaces and the two (2) charge handling systems shall not exceed a total of 0.336 pounds per ton of metal charged and melted.
- (d) The PM_{2.5} emission rate from baghouse E associated with the two (2) electric induction furnaces and the two (2) charge handling systems shall not exceed a total of 0.336 pounds per ton of metal charged and melted.

Compliance with these limitations, combined with the limited potential to emit from other emission units at this source, shall limit the source-wide PTE of PM, PM₁₀, and PM_{2.5} to less than 100 tons per twelve (12) consecutive month period and shall render the requirements of 326 IAC 2-2 and 326 IAC 2-7 not applicable.

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

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the baghouse E associated with the electric induction furnaces and charge handling operations shall not exceed 28.0 pounds per hour when operating at a total process weight rate of 17.6 tons per hour.

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

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

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

D.1.3 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 these facilities and their control device.

Compliance Determination Requirements

D.1.4 Testing Requirements [326 IAC 2-8-5(a)(1),(4)] [326 IAC 2-1.1-11]

In order to demonstrate compliance with Conditions D.1.1 and D.1.2, the Permittee shall perform PM, PM₁₀ and PM_{2.5} testing of baghouse E controlling the particulate emissions associated with the charge handling and melting operations which exhaust through stack E as follows:

- (a) Within 180 days of publication of the new or revised condensable PM test method(s) referenced in the U. S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM_{2.5}), signed on May 8th, 2008.

or

- (b) Five (5) years from the most recent valid compliance stack test, which ever is later.

Testing shall be conducted utilizing methods as approved by the Commissioner. These tests shall be repeated at least five (5) years from the date of this most recent valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing. PM₁₀ and PM_{2.5} includes filterable and condensable PM.

D.1.5 Particulate Control

In order to comply with Conditions D.1.1 and D.1.2, baghouse E for particulate control shall be in operation and control emissions from the charge handling and melting operations at all times that the electric induction furnaces and/or charge handling systems are in operation.

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

D.1.6 Visible Emissions Notations

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

response steps in accordance with Section C - Response to Excursions or Exceedences shall be considered a deviation from this permit.

D.1.7 Baghouse Parametric Monitoring

The Permittee shall record the total pressure drop across the baghouse E used in conjunction with the electric induction furnaces and charge handling systems, at least once per day when either of the electric furnaces or either of the charge handling systems are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 3.0 and 9.5 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedences. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedences shall be considered a deviation from this permit.

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

D.1.8 Broken or Failed Bag Detection

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

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

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

D.1.9 Record Keeping Requirements

- (a) To document compliance with Condition D.1.1(a), the Permittee shall maintain records of the total amount of metal melted in the two (2) electric induction furnaces on a monthly basis.
- (b) To document compliance with Condition D.1.6, the Permittee shall maintain daily records of visible emission notations of the stack exhaust E. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation, (e.g. the process did not operate that day).
- (c) To document compliance with Condition D.1.7, the Permittee shall maintain daily records of the pressure drop during normal operation. The Permittee shall include in its daily records when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading, (e.g. the process did not operate that day).
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.10 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.1.1(a) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

SECTION D.2

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]: Shakeout, Pouring, Casting, Cooling, Sand Handling, Shot Blasting & Grinding Operations (Baghouse D & Wet collector C)

- (c) One (1) Aisco rotary drum shakeout operation, equipped with multi-wash collector, known as wet collector C, installed in 1982, exhausted through Stack C, capacity: 10 tons of iron and 60 tons of sand per hour.
- (d) One (1) Disa #1 pouring/casting line, 90% of emissions captured by baghouse D, installed in 1982, exhausted through Stack D, capacity: 10 tons of iron per hour.
- (e) One (1) Disa #1 castings cooling process, equipped with a baghouse, known as baghouse D, installed in 1982, exhausted through Stack D, capacity: 10 tons of iron per hour.
- (f) One (1) Disa #1 sand handling process, equipped with a baghouse, known as baghouse D, installed in 1982, exhausted through Stack D, capacity: 65 tons of sand per hour.
- (g) One (1) Disa #2 pouring/casting line, 90% of emissions captured by baghouse D installed in 2000, exhausted through Stack D, capacity: 10 tons of iron per hour.
- (h) One (1) Disa #2 castings cooling process, equipped with a baghouse, known as baghouse D, installed in 2000, exhausted through Stack D, capacity: 10 tons of iron per hour.
- (i) One (1) Disa #2 sand handling process, equipped with a baghouse, known as baghouse D, installed in 2000, exhausted through Stack D, capacity: 65 tons of sand per hour.
- (j) One (1) Didion rotary media shakeout drum, equipped with a baghouse, known as baghouse D, installed in 1999, exhausted through Stack D, capacity: 10 tons of iron and 0.2 tons of sand per hour.
- (k) Two (2) shotblast operations, equipped with a baghouse, known as baghouse D, installed in 1963 (Atlas) and 1982 (Peru), exhausted through Stack D, capacity: 5.0 tons of iron per hour, each.
- (l) One (1) mesh belt shotblast machine, equipped with a baghouse, known as baghouse D installed in 1999, exhausted through Stack D, capacity: 5.0 tons of iron castings and 1.25 tons of steel shot per hour.
- (m) Two (2) belt sanders, equipped with a baghouse, known as baghouse D, installed in 2002 and 2008, capacity: each 2.0 tons of iron per hour.
- (n) One (1) stand grinder, identified as SG#4, installed in 2006, equipped with a baghouse, known as baghouse D, exhausted through Stack D, capacity: 2.67 tons of iron per hour.

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

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

D.2.1 PM, PM₁₀ and PM_{2.5} Limitations [326 IAC 2-2] [326 IAC 2-8-4]

In order to render the requirements of 326 IAC 2-2 and 326 IAC 2-7 not applicable, the PM, PM₁₀, and PM_{2.5} emission rates from the emission units listed below shall be limited as follows:

- (a) The total PM emission rate from baghouse D shall not exceed a total of 7.00 pounds per hour.
- (b) The total PM₁₀ emission rate from baghouse D shall not exceed a total of 10.0 pounds per hour.
- (c) The total PM_{2.5} emission rate from baghouse D shall not exceed a total of 10.0 pounds per hour.
- (d) The following emission units shall be limited to 6,000 hours of operation per twelve (12) consecutive month period with compliance determined at the end of each month. Baghouse D is used in conjunction with:
 - (1) Disa #1 pouring/casting line
 - (2) Disa #1 casting cooling process
 - (3) Disa #1 sand handling process
 - (4) Disa #2 pouring/casting line
 - (5) Disa #2 casting cooling process
 - (6) Disa #2 sand handling process
 - (7) Didion rotary media shakeout drum
 - (8) Atlas and Peru shotblast operations
 - (9) Mesh belt shotblast machine
 - (10) One (1) belt sander
 - (11) One (1) stand grinder, identified as SG#4
- (e) The PM emission rate from wet collector C used in conjunction with the Aisco rotary drum shakeout operation shall not exceed 0.608 pounds per ton of metal.
- (f) The PM₁₀ emission rate from wet collector C used in conjunction with the Aisco rotary drum shakeout operation shall not exceed a total of 0.608 pounds per ton of metal.
- (g) The PM_{2.5} emission rate from wet collector C used in conjunction with the Aisco rotary drum shakeout operation shall not exceed a total of 0.608 pounds per ton of metal.

Compliance with these limitations, combined with the limited potential to emit from other emission units at this source, shall limit the source-wide PTE of PM, PM₁₀, and PM_{2.5} to less than 100 tons per twelve (12) consecutive month period and shall render the requirements of 326 IAC 2-2 and 326 IAC 2-7 not applicable.

D.2.2 Particulate [326 IAC 6-3-2]

- (a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the wet collector C used in conjunction with the Aisco rotary drum shakeout operation shall not exceed 47.8 pounds per hour when operating at a total process weight rate of 70.0 tons per hour.

(b) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the baghouse D shall not exceed 58.6 pounds per hour when operating at a total process weight rate of 201.2 tons per hour.

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

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

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

D.2.3 VOC Limitation [326 IAC 8-1-6]

In order to render the requirements of 326 IAC 8-1-6 not applicable, the VOC emission rates from the emission units listed below shall be limited as follows:

- (a) The combined metal throughput to the Disa #1 line and the Disa #2 line shall not exceed 37,300 tons per twelve (12) consecutive month period, total, with compliance determined at the end of each month.
- (b) The total VOC emissions from the Disa #1 and the Disa #2 pouring, cooling and shakeout operations shall not exceed 1.34 pounds per ton of metal.

Compliance with the above limit, combined with the potential to emit VOC from other emission units at the source, shall limit the VOC from the entire source to less than 100 tons per twelve (12) consecutive month period and render the requirements of 326 IAC 2-7 (Part 70) and 326 IAC 2-2 not applicable.

D.2.4 HAP Limitations [326 IAC 2-8-4]

The amount of organic HAPs from baghouse D (associated with the Disa #1 and Disa #2 pouring/casting lines as well as the Didion shakeout) and the fugitive HAP emissions from the Disa #1 and Disa #2 pouring/casting lines shall not exceed a total of 2.28 pounds per hour.

Compliance with the above limit, combined with the potential to emit single HAP, and combined HAPs from other emission units at the source, shall limit the single HAP and combined HAPs from the entire source to less than 10, and 25 tons per twelve (12) consecutive month period respectively, and render the requirements of 326 IAC 2-7 (Part 70) and 326 IAC 2-2 not applicable.

D.2.5 Carbon Monoxide (CO) [326 IAC 2-2] [326 IAC 2-8]

Pursuant to 326 IAC 2-8-4, the following shall apply:

- (a) CO emissions from the Disa #1 and Disa #2 pouring/castings, cooling, and shakeout operation shall not exceed 4.88 lbs of CO per ton of metal throughput.
- (b) The combined metal throughput to the Disa #1 and Disa #2 pouring/castings, cooling, and shakeout operation shall not exceed 37,300 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with these limits combined with the potential CO emissions from all other emission units at this source will limit the source-wide total potential to emit of CO to less than 100 tons per 12 consecutive month period and will render 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

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

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

Compliance Determination Requirements

D.2.7 Testing Requirements [326 IAC 2-8-5(a)(1),(4)] [326 IAC 2-1.1-11]

In order to demonstrate compliance with Conditions D.2.1 and D.2.2, a compliance stack test of PM, PM₁₀ and PM_{2.5} for baghouse D, which controls the Disa #1 and #2 pouring/casting, Disa #1 and #2 casting cooling, Disa #1 and #2 sand handling, Didion rotary media drum shakeout, and the mesh belt shotblast, two (2) shotblaster operations, the two (2) belt sanders, and the one (1) stand grinder, identified as SG#4, shall be performed per schedule below:

- (a) Within 180 days of publication of the new or revised condensable PM test method(s) referenced in the U. S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM_{2.5}), signed on May 8th, 2008.

or

- (b) Five (5) years from the most recent valid compliance stack test, which ever is later.

These tests shall be conducted utilizing methods approved by the Commissioner. These tests shall be repeated at least five (5) years from the date of the most recent valid compliance demonstration. PM₁₀ and PM_{2.5} includes filterable and condensable PM. Testing shall be conducted in accordance with Section C-Performance testing.

D.2.8 Particulate Control

- (a) In order to comply with Conditions D.2.1 and D.2.2, wet collector C for particulate control shall be in operation and control emissions from the Aisco rotary drum shakeout operation at all times that this process is in operation.
- (b) In order to comply with Conditions D.2.1 and D.2.2, baghouse D for particulate control shall be in operation and control emissions from the emission units listed in Condition D.2.1(c) at all times that any of these processes are in operation.

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

D.2.9 Visible Emissions Notations

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

response steps in accordance with Section C - Response to Excursions or Exceedences shall be considered a deviation from this permit.

D.2.10 Parametric Monitoring

- (a) The Permittee shall record the fan amperage of the wet collector C, controlling the Aisco rotary drum shakeout operation at least once per day when this process is in operation. When for any one reading, the fan amperage of the wet collector C is less than 105 amps or a minimum amperage established by the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedences. On any day the fan amperage readings are not available, the Permittee shall record the pressure drop across the wet collector. On days that pressure drop is the parameter being recorded, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedences if the pressure drop is less than 1.5 inches of water or a pressure drop minimum established by the latest stack test. An amperage or pressure drop that is below the above mentioned minimum is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedences, shall be considered a deviation from this permit.
- (b) The Permittee shall record the pressure drop across the baghouse D used in conjunction with the emission units listed in Condition D.2.1(c) at least once per day when any of these facilities is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 3.0 and 9.5 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedences. A pressure reading that is outside the above mentioned range is not a deviation from this Response to Excursions or Exceedences, shall be considered a deviation from this permit.

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

D.2.11 Broken or Failed Bag Detection [326 IAC 2-7-6(1)] {326 IAC 2-7-5(1)}

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

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

D.2.12 Wet collector Failure

In the event that a wet collector failure has been observed:

If failure is indicated, 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). Failure to take response steps in accordance with Section C - Response to Excursions or Exceedences, shall be considered a deviation from this permit.

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

D.2.13 Record Keeping Requirements

- (a) To document compliance with Condition D.2.1(d), the Permittee shall maintain records of the total hours that any emission unit controlled by baghouse D is in operation on a monthly basis.
- (b) To document compliance with Condition D.2.3(a) and D.2.5(b), the Permittee shall maintain records of the total combined metal throughput to the Disa #1 and Disa #2 pouring/castings, cooling, and shakeout operation on a monthly basis.
- (c) To document compliance with Condition D.2.9, the Permittee shall maintain records of visible emission notations of the stack exhausts C and D once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation, (e.g., the process did not operate that day)
- (d) To document compliance with Condition D.2.10, the Permittee shall maintain records of pressure drop and the fan amperage reading during normal operation. The Permittee shall include in its daily records when a pressure drop reading and the fan amperage reading is not taken and the reason for the lack of a pressure drop reading and the fan amperage reading (e.g., the process did not operate that day)
- (e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.2.14 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.2.1(d), D.2.3(a) and D.2.5(b) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

SECTION D.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]: Grinding & Shotblasting Operations (Baghouse A)

- (o) Three (3) stand grinders, equipped with a baghouse, known as baghouse A, installed in 1993, 1993 and 1994, exhausted through Stack A, capacity: 2.67 tons of iron per hour, each.
- (p) One (1) continuous blast steel shotblaster, known as continuous blast, equipped with a baghouse, known as baghouse A, installed in 2004, exhausted through Stack A, capacity: 10.0 tons of iron per hour.

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

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

D.3.1 PM, PM₁₀ and PM_{2.5} Limitations [326 IAC 2-2] [326 IAC 2-8-4]

In order to render the requirements of 326 IAC 2-2 and 326 IAC 2-7 not applicable, the PM, PM₁₀, and PM_{2.5} emission rates from the emission units listed below shall be limited as follows:

- (a) The PM emission rate from baghouse A associated with the three (3) stand grinders and the continuous blast steel shotblaster shall not exceed a total of 3.00 pounds per hour.
- (b) The PM₁₀ emission rate from baghouse A associated with the three (3) stand grinders and the continuous blast steel shotblaster shall not exceed a total of 3.00 pounds per hour.
- (c) The PM_{2.5} emission rate from baghouse A associated with the three (3) stand grinders and the continuous blast steel shotblaster shall not exceed a total of 3.00 pounds per hour.

Compliance with these limitations, combined with the limited potential to emit from other emission units at this source, shall limit the source-wide PTE of PM, PM₁₀, and PM_{2.5} to less than 100 tons per twelve (12) consecutive month period and shall render the requirements of 326 IAC 2-2 and 326 IAC 2-7 not applicable.

D.3.2 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the baghouse A associated with the three (3) stand grinders and the continuous blast steel shotblaster shall not exceed 28.4 pounds per hour when operating at a total process weight rate of 18.0 tons per hour.

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

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

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

D.3.3 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 these facilities and their control devices.

Compliance Determination Requirements

D.3.4 Testing Requirements [326 IAC 2-8-5(a)(1),(4)] [326 IAC 2-1.1-11]

In order to demonstrate compliance with Conditions D.3.1(a)(b)(c) and Condition D.3.2, the Permittee shall perform PM, PM₁₀ and PM_{2.5} testing of baghouse A controlling particulates associated with the three (3) stand grinders and the continuous blast steel shotblaster as follows:

- (a) Within 180 days of publication of the new or revised condensable PM test method(s) referenced in the U. S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM_{2.5}), signed on May 8th, 2008.

or

- (b) Five (5) years from the most recent valid compliance stack test, which ever is later.

These tests shall be conducted utilizing methods as approved by the Commissioner. These tests shall be repeated at least five (5) years from the date of this most recent valid compliance demonstration. PM₁₀ and PM_{2.5} includes filterable and condensable PM. Testing shall be conducted in accordance with Section C - Performance Testing.

D.3.5 Particulate Control

In order to comply with Conditions D.3.1(a) (b),and (c) and Condition D.3.2, baghouse A for particulate control shall be in operation and control emissions from the three (3) stand grinders and the continuous blast steel shot blaster at all times that these facilities are in operation.

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

D.3.6 Visible Emissions Notations

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

D.3.7 Baghouse Parametric Monitoring

The Permittee shall record the pressure drop across the baghouse A used in conjunction with the three (3) stand grinders and the continuous blast steel shotblaster, at least once per day when any of the three (3) stand grinders and/or the continuous blast steel shotblaster are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 3.0 and 7.0 inches of water or a range established during the latest stack test, the Permittee shall

take reasonable response steps in accordance with Section C- Response to Excursions or Exceedences. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedences, shall be considered a deviation from this permit.

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

D.3.8 Broken or Failed Bag Detection

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

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

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

D.3.9 Record Keeping Requirements

- (a) To document compliance with Condition D.3.6, the Permittee shall maintain a daily record of visible emission notations of the stack exhaust A once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation, (e.g. the process did not operate that day).
- (b) To document compliance with Condition D.3.7, the Permittee shall maintain a daily record of pressure drop during normal operation. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading, (e.g. the process did not operate that day).
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.4

FACILITY CONDITIONS

Facility Description [326 IAC 2-8-4(10)]: Core Making Operations

- (q) One (1) Isocure (phenolic urethane cold box) core-system, consisting of two (2) Isocure core machines, one (1) Isocure sand mixer, one (1) sand heater, one (1) sand storage bin (1,000 pounds of sand capacity), a cold sand silo (50 tons capacity) equipped with a filter for PM control, and a pneumatic sand conveying system, installed in 1985, exhausted through Stacks S1, S2 and S4, capacity: 0.75 tons of cores per hour, total.
- (r) One (1) shell (phenolic hot box) core system, consisting of seven (7) shell core machines, four (4) sand conveyors, and two (2) sand silos; four (4) shell core machines installed in 1960 and two (2) shell core machines installed in 1983, and one (1) shell core machine installed in 2007, capacity: 28 tons of sand for each silo and 1.0 ton of cores per hour, total.

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

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

D.4.1 Volatile Organic Compounds (VOCs) [326 IAC 8-1-6]

Any change or modification which would increase the potential to emit VOC to twenty-five (25) tons per year or more from the two (2) Isocure core machines, installed in 1985, or the two (2) shell core machines, installed in 1983, or the one (1) shell core machine installed in 2007, shall require prior approval from IDEM, OAQ.

D.4.2 Hazardous Air Pollutants (HAPs) [326 IAC 2-8-4]

The amount of TEA usage from amine gas catalysts in the isocure-core system shall not exceed 17,520 pounds per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with the above limit, combined with the potential to emit single HAP, and combined HAPs from other emission units at the source, shall limit the single HAP and combined HAPs from the entire source to less than 10, and 25 tons per twelve (12) consecutive month period respectively, and render the requirements of 326 IAC 2-7 (Part 70) and 326 IAC 2-2 not applicable.

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

D.4.3 Record Keeping Requirements

To document compliance with Conditions D.4.1 and D.4.2, the Permittee shall maintain records of the amount of all resins and catalysts as well as the VOC and HAPs content of all resins and catalysts used in the core making operations.

D.4.4 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.4.2 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

SECTION D.5

FACILITY OPERATION CONDITIONS

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

- (a) Grinding and machining operations (326 IAC 6-3-2).
- (b) Degreasing operations that do not exceed 145 gallons per twelve (12) months, except if subject to 326 IAC 20-6 (326 IAC 8-3-3) (326 IAC 8-3-6).

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

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

D.5.1 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the grinding and machining operations shall not exceed the pound per hour emission rate established as E in the following formula:

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

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

D.5.2 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

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

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements; and
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

D.5.3 Volatile Organic Compounds (VOC) [326 IAC 8-3-5]

Pursuant 326 IAC 8-3-5(a) (Organic Solvent Degreasing Operations), for each of the cold cleaner degreasing units, the owner or operator shall ensure that the following control equipment requirements are met:

- (a) The Permittee shall ensure that the following control equipment requirements are met:
 - (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
 - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch)

measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));

- (B) The solvent is agitated; or
 - (C) The solvent is heated.
- (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
- (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in 326 IAC 8-3-5(b).
- (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
- (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):
- (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
 - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
 - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the Permittee shall ensure that the following operating requirements are met:
- (1) Close the cover whenever articles are not being handled in the degreaser.
 - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
 - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

Compliance Determination Requirements

There are no compliance determination conditions required for these specific facilities.

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

There are no compliance monitoring conditions required for these specific facilities.

SECTION E.1 FACILITY OPERATION CONDITIONS

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

Emissions Unit Description:

- (a) Two (2) electric induction furnaces, equipped with a baghouse, known as baghouse E, installed in 1996, exhausted through Stack E, capacity: 4.4 tons of iron per hour, each.

Under NESHAP Subpart ZZZZZZ, the two electric induction furnaces and the fugitive emissions from foundry operations are considered existing affected sources.

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

National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements

E.1.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants under 40 CFR Part 63 [40 CFR Part 63, Subpart A]

- (a) Pursuant to 40 CFR 63 the permittee shall comply with the provisions of 40 CFR 63 Subpart ZZZZZZ (iron and steel foundry area source) for the existing large iron and steel foundries, specified in Attachment A.

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

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

E.1.2 Iron and steel foundry NESHAP [40 CFR 63.10880]

Pursuant to 40 CFR Part 63, the two (2) electric induction furnaces, are subject to 40 CFR Part 63, Subpart ZZZZZZ. The permittee which engages in iron and steel foundries area source operation shall comply with the provisions of 40 CFR Part 63, Subpart ZZZZZZ (included as Attachment A of this permit). It is an existing affected iron and steel foundry area source because it commenced construction before September 17, 2007. Pursuant to 40 CFR 63.10880 the Permittee shall be in compliance with the following requirements in this NESHAP under large foundries.

The existing iron and steel foundry is subject to the following portions of 40 CFR 63, Subpart ZZZZZZ. Non applicable portions of the NESHAP will not be included in the permit.

Applicable portions of the NESHAPs are the following:

- (1) 40 CFR 63.10880 (a)
40 CFR 63.10880 (b)(1)
40 CFR 63.10880 (e)
40 CFR 63.10880 (f), but already done
40 CFR 63.10881 (a)(1), (2), and (3)
40 CFR 63.10881 (d)(2)

40 CFR 63.10885 (a)
40 CFR 63.10885(b)(2), (3), and (4)
40 CFR 63.10895 (a), (b), (c)(1), (e).
40 CFR 63.10896, all except (a)(5)
40 CFR 63.10897(a)(1)
40 CFR 63.10897 (d), (e), (f), (g)
40 CFR 63.10898 (a)(1), (2), and (3)
40 CFR 63.10898 (b), (c), (d), (g), (h), (i), (k), and (l)
40 CFR 63.10899 (a)
40 CFR 63.10899 (b)(1), (3), (6), (7), (9), (10), (11), (12), (13)(i)
40 CFR 63.10899 (c) and (d)
40 CFR 63.10900
40 CFR 63.10906

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
CERTIFICATION**

Source Name: Atlas Foundry Company, Inc.
Source Address: Factory and Henderson Avenues, Marion, Indiana 46952
Mailing Address: P.O. Box 688, Marion, IN 46952
FESOP Permit No.: F053-27072-00002

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

Please check what document is being certified:

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

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

Signature:

Printed Name:

Title/Position:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
Phone: (317) 233-0178
Fax: (317) 233-6865**

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

Source Name: Atlas Foundry Company, Inc.
Source Address: Factory and Henderson Avenues, Marion, Indiana 46952
Mailing Address: P.O. Box 688, Marion, IN 46952
FESOP Permit No.: F053-27072-00002

This form consists of 2 pages

Page 1 of 2

- | |
|---|
| <input type="checkbox"/> This is an emergency as defined in 326 IAC 2-7-1(12) <ul style="list-style-type: none">• The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and• The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16 |
|---|

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

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

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

Page 2 of 2

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

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

A certification is not required for this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF AIR QUALITY
 COMPLIANCE AND ENFORCEMENT BRANCH
 FESOP Quarterly Report**

Source Name: Atlas Foundry Company, Inc.
 Source Address: Factory and Henderson Avenues, Marion, Indiana 46952
 Mailing Address: P.O. Box 688, Marion, IN 46952
 FESOP Permit No.: F053-27072-00002
 Facilities: Two (2) electric induction furnaces, two (2) charge handling systems; Disa #1 and the Disa #2 pouring/casting, cooling and shakeout operations.
 Parameter: Metal throughput
 Limit: Total of 37,300 tons per twelve (12) consecutive month period with compliance determined at the end of each month, equivalent to less than one hundred (100) tons per year of CO, PM, PM₁₀ and PM_{2.5} for entire source and equivalent to less than ten (10) tons per year of a single HAP and less than twenty-five (25) tons per year for the combination of HAPs; equivalent to total pouring, cooling and shakeout CO emissions of less than hundred (100) tons per year, and VOC emissions of less than twenty-five (25) tons per year for each line.

YEAR: _____

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

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

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

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF AIR QUALITY
 COMPLIANCE AND ENFORCEMENT BRANCH**

FESOP Quarterly Report

Source Name: Atlas Foundry Company, Inc.
 Source Address: Factory and Henderson Avenues, Marion, Indiana 46952
 Mailing Address: P.O. Box 688, Marion, Indiana 46952
 FESOP No.: F 053-27027-00002
 Facilities: Disa #1 pouring/casting line, casting cooling process, sand handling process, Disa #2 pouring/casting line, casting cooling process, sand handling process, Didion rotary media shakeout drum, Atlas and Peru shotblast operations, Mesh belt shotblast machine, belt sander and the stand grinder as SG#4.
 Parameter: Hours of Operation
 Limit: 6,000 hours per twelve (12) consecutive month period with compliance determined at the end of each month.

Emission Unit _____ YEAR: _____

Month	Hours of Operation	Hours of Operation	Hours of Operation
	This Month	Previous 11 Months	12 Month Total

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

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF AIR QUALITY
 COMPLIANCE AND ENFORCEMENT BRANCH**

FESOP Quarterly Report

Source Name: Atlas Foundry Company, Inc.
 Source Address: Factory and Henderson Avenues, Marion, Indiana 46952
 Mailing Address: P.O. Box 688, Marion, Indiana 46952
 FESOP No.: F 053-27027-00002
 Facility: Isocure-Core System
 Parameter: Amount of TEA Usage
 Limit: 17,520 pounds per twelve (12) consecutive month period with compliance determined at the end of each month.

YEAR: _____

Month	Amount of TEA (pounds)	Amount of TEA (pounds)	Amount of TEA (pounds)
	This Month	Previous 11 Months	12 Month Total

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

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF AIR QUALITY
 COMPLIANCE AND ENFORCEMENT BRANCH
 FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
 QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Atlas Foundry Company, Inc.
 Source Address: Factory and Henderson Avenues,, Marion, Indiana 46952
 Mailing Address: P.O. Box 688, Marion, IN 46952
 FESOP Permit No.: F053-27072-00002

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

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

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

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

Attachment A

Subpart ZZZZZ—National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries Area Sources

Applicability and Compliance Dates

§ 63.10880 Am I subject to this subpart?

(a) You are subject to this subpart if you own or operate an iron and steel foundry that is an area source of hazardous air pollutant (HAP) emissions.

(b) This subpart applies to each new or existing affected source. The affected source is each iron and steel foundry.

(1) An affected source is existing if you commenced construction or reconstruction of the affected source before September 17, 2007.

(2) An affected source is new if you commenced construction or reconstruction of the affected source on or after September 17, 2007. If an affected source is not new pursuant to the preceding sentence, it is not new as a result of a change in its compliance obligations pursuant to §63.10881(d).

(c) On and after January 2, 2008, if your iron and steel foundry becomes a major source as defined in §63.2, you must meet the requirements of 40 CFR part 63, subpart EEEEE.

(d) This subpart does not apply to research and development facilities, as defined in section 112(c)(7) of the Clean Air Act.

(e) You are exempt from the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71, provided you are not otherwise required by law to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a). Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart.

(f) If you own or operate an existing affected source, you must determine the initial applicability of the requirements of this subpart to a small foundry or a large foundry based on your facility's metal melt production for calendar year 2008. If the metal melt production for calendar year 2008 is 20,000 tons or less, your area source is a small foundry. If your metal melt production for calendar year 2008 is greater than 20,000 tons, your area source is a large foundry. You must submit a written notification to the Administrator that identifies your area source as a small foundry or a large foundry no later than January 2, 2009.

(g) If you own or operate a new affected source, you must determine the initial applicability of the requirements of this subpart to a small foundry or a large foundry based on your facility's annual metal melting capacity at startup. If the annual metal melting capacity is 10,000 tons or less, your area source is a small foundry. If the annual metal melting capacity is greater than 10,000 tons, your area source is a large foundry. You must submit a written notification to the Administrator that identifies your area source as a small foundry or a large foundry no later than 120 days after startup.

§ 63.10881 What are my compliance dates?

(a) If you own or operate an existing affected source, you must achieve compliance with the applicable provisions of this subpart by the dates in paragraphs (a)(1) through (3) of this section.

(1) Not later than January 2, 2009 for the pollution prevention management practices for metallic scrap in §63.10885(a) and binder formulations in §63.10886.

(2) Not later than January 4, 2010 for the pollution prevention management practices for mercury in §63.10885(b).

(3) Except as provided in paragraph (d) of this section, not later than 2 years after the date of your large foundry's notification of the initial determination required in §63.10880(f) for the standards and management practices in §63.10895.

(b) If you have a new affected source for which the initial startup date is on or before January 2, 2008, you must achieve compliance with the provisions of this subpart not later than January 2, 2008.

(c) If you own or operate a new affected source for which the initial startup date is after January 2, 2008, you must achieve compliance with the provisions of this subpart upon startup of your affected source.

(d) Following the initial determination for an existing affected source required in §63.10880(f),

(1) Beginning January 1, 2010, if the annual metal melt production of your small foundry exceeds 20,000 tons during the preceding calendar year, you must submit a notification of foundry reclassification to the Administrator within 30 days and comply with the requirements in paragraphs (d)(1)(i) or (ii) of this section, as applicable.

(i) If your small foundry has never been classified as a large foundry, you must comply with the requirements for a large foundry no later than 2 years after the date of your foundry's notification that the annual metal melt production exceeded 20,000 tons.

(ii) If your small foundry had previously been classified as a large foundry, you must comply with the requirements for a large foundry no later than the date of your foundry's most recent notification that the annual metal melt production exceeded 20,000 tons.

(2) If your facility is initially classified as a large foundry (or your small foundry subsequently becomes a large foundry), you must comply with the requirements for a large foundry for at least 3 years before reclassifying your facility as a small foundry, even if your annual metal melt production falls below 20,000 tons. After 3 years, you may reclassify your facility as a small foundry provided your annual metal melt production for the preceding calendar year was 20,000 tons or less. If you reclassify your large foundry as a small foundry, you must submit a notification of reclassification to the Administrator within 30 days and comply with the requirements for a small foundry no later than the date you notify the Administrator of the reclassification. If the annual metal melt production exceeds 20,000 tons during a subsequent year, you must submit a notification of reclassification to the Administrator within 30 days and comply with the requirements for a large foundry no later than the date you notify the Administrator of the reclassification.

(e) Following the initial determination for a new affected source required in §63.10880(g),

(1) If you increase the annual metal melt capacity of your small foundry to exceed 10,000 tons, you must submit a notification of reclassification to the Administrator within 30 days and comply with the requirements for a large foundry no later than the startup date for the new equipment, if applicable, or the date of issuance for your revised State or Federal operating permit.

(2) If your facility is initially classified as a large foundry (or your small foundry subsequently becomes a large foundry), you must comply with the requirements for a large foundry for at least 3 years before reclassifying your facility as a small foundry. After 3 years, you may reclassify your facility as a small foundry provided your most recent annual metal melt capacity is 10,000 tons or less. If you reclassify your large foundry as a small foundry, you must notify the Administrator within 30 days and comply with the requirements for a small foundry no later than the date your melting equipment was removed or taken out of service, if applicable, or the date of issuance for your revised State or Federal operating permit.

Pollution Prevention Management Practices for New and Existing Affected Sources

§ 63.10885 What are my management practices for metallic scrap and mercury switches?

(a) *Metallic scrap management program.* For each segregated metallic scrap storage area, bin or pile, you must comply with the materials acquisition requirements in paragraph (a)(1) or (2) of this section. You must keep a copy of the material specifications onsite and readily available to all personnel with material acquisition duties, and provide a copy to each of your scrap providers. You may have certain scrap subject to paragraph (a)(1) of this section and other scrap subject to paragraph (a)(2) of this section at your facility provided the metallic scrap remains segregated until charge make-up.

(1) *Restricted metallic scrap.* You must prepare and operate at all times according to written material specifications for the purchase and use of only metal ingots, pig iron, slitter, or other materials that do not include post-consumer automotive body scrap, post-consumer engine blocks, post-consumer oil filters, oily turnings, lead components, chlorinated plastics, or free liquids. For the purpose of this subpart, "free liquids" is defined as material that fails the paint filter test by EPA Method 9095B, "Paint Filter Liquids Test" (revision 2), November 2004 (incorporated by reference—see §63.14). The requirements for no free liquids do not apply if the owner or operator can demonstrate that the free liquid is water that resulted from scrap exposure to rain.

(2) *General iron and steel scrap.* You must prepare and operate at all times according to written material specifications for the purchase and use of only iron and steel scrap that has been depleted (to the extent practicable) of organics and HAP metals in the charge materials used by the iron and steel foundry. The materials specifications must include at minimum the information specified in paragraph (a)(2)(i) or (ii) of this section.

(i) Except as provided in paragraph (a)(2)(ii) of this section, specifications for metallic scrap materials charged to a scrap preheater or metal melting furnace to be depleted (to the extent practicable) of the presence of used oil filters, chlorinated plastic parts, accessible lead-containing components (such as batteries and wheel weights), and a program to ensure the scrap materials are drained of free liquids.

(ii) For scrap charged to a cupola metal melting furnace that is equipped with an afterburner, specifications for metallic scrap materials to be depleted (to the extent practicable) of the presence of chlorinated plastics, accessible lead-containing components (such as batteries and wheel weights), and a program to ensure the scrap materials are drained of free liquids.

(b) *Mercury requirements.* For scrap containing motor vehicle scrap, you must procure the scrap pursuant to one of the compliance options in paragraphs (b)(1), (2), or (3) of this section for each scrap provider, contract, or shipment. For scrap that does not contain motor vehicle scrap, you must procure the scrap pursuant to the requirements in paragraph (b)(4) of this section for each scrap provider, contract, or shipment. You may have one scrap provider, contract, or shipment subject to one compliance provision and others subject to another compliance provision.

(1) *Site-specific plan for mercury switches.* You must comply with the requirements in paragraphs (b)(1)(i) through (v) of this section.

(i) You must include a requirement in your scrap specifications for removal of mercury switches from vehicle bodies used to make the scrap.

(ii) You must prepare and operate according to a plan demonstrating how your facility will implement the scrap specification in paragraph (b)(1)(i) of this section for removal of mercury switches. You must submit the plan to the Administrator for approval. You must operate according to the plan as submitted during the review and approval process, operate according to the approved plan at all times after approval, and address any deficiency identified by the Administrator or delegated authority within 60 days following disapproval of a plan. You may request approval to revise the plan and may operate according to the revised plan unless and until the revision is disapproved by the Administrator or delegated authority. The Administrator or delegated authority may change the approval status of the plan upon 90-days written notice based upon the semiannual report or other information. The plan must include:

(A) A means of communicating to scrap purchasers and scrap providers the need to obtain or provide motor vehicle scrap from which mercury switches have been removed and the need to ensure the proper management of the mercury switches removed from the scrap as required under the rules implementing subtitle C of the Resource Conservation and Recovery Act (RCRA) (40 CFR parts 261 through 265 and 268). The plan must include documentation of direction to appropriate staff to communicate to suppliers throughout the scrap supply chain the need to promote the removal of mercury switches from end-of-life vehicles. Upon the request of the Administrator or delegated authority, you must provide examples of materials that are used for outreach to suppliers, such as letters, contract language, policies for purchasing agents, and scrap inspection protocols;

(B) Provisions for obtaining assurance from scrap providers motor vehicle scrap provided to the facility meet the scrap specification;

(C) Provisions for periodic inspections or other means of corroboration to ensure that scrap providers and dismantlers are implementing appropriate steps to minimize the presence of mercury switches in motor vehicle scrap and that the mercury switches removed are being properly managed, including the minimum frequency such means of corroboration will be implemented; and

(D) Provisions for taking corrective actions (i.e., actions resulting in scrap providers removing a higher percentage of mercury switches or other mercury-containing components) if needed, based on the results of procedures implemented in paragraph (b)(1)(ii)(C) of this section).

(iii) You must require each motor vehicle scrap provider to provide an estimate of the number of mercury switches removed from motor vehicle scrap sent to the facility during the previous year and the basis for the estimate. The Administrator may request documentation or additional information at any time.

(iv) You must establish a goal for each scrap supplier to remove at least 80 percent of the mercury switches. Although a site-specific plan approved under paragraph (b)(1) of this section may require only the removal of convenience light switch mechanisms, the Administrator will credit all documented and verifiable mercury-containing components removed from motor vehicle scrap (such as sensors in anti-locking brake systems, security systems, active ride control, and other applications) when evaluating progress towards the 80 percent goal.

(v) For each scrap provider, you must submit semiannual progress reports to the Administrator that provide the number of mercury switches removed or the weight of mercury recovered from the switches, the estimated number of vehicles processed, an estimate of the percent of mercury switches removed, and certification that the removed mercury switches were recycled at RCRA-permitted facilities or otherwise properly managed pursuant to RCRA subtitle C regulations referenced in paragraph (b)(1)(ii)(A) of this section. This information can be submitted in aggregate form and does not have to be submitted for each shipment. The Administrator may change the approval status of a site-specific plan following 90-days notice based on the progress reports or other information.

(2) *Option for approved mercury programs.* You must certify in your notification of compliance status that you participate in and purchase motor vehicle scrap only from scrap providers who participate in a program for removal of mercury switches that has been approved by the Administrator based on the criteria in paragraphs (b)(2)(i) through (iii) of this section. If you purchase motor vehicle scrap from a broker, you must certify that all scrap received from that broker was obtained from other scrap providers who participate in a program for the removal of mercury switches that has been approved by the Administrator based on the criteria in paragraphs (b)(2)(i) through (iii) of this section. The National Mercury Switch Recovery Program and the State of Maine Mercury Switch Removal Program are EPA-approved programs under paragraph (b)(2) of this section unless and until the Administrator disapproves the program (in part or in whole) under paragraph (b)(2)(iii) of this section.

(i) The program includes outreach that informs the dismantlers of the need for removal of mercury switches and provides training and guidance for removing mercury switches;

(ii) The program has a goal to remove at least 80 percent of mercury switches from motor vehicle scrap the scrap provider processes. Although a program approved under paragraph (b)(2) of this section may require

only the removal of convenience light switch mechanisms, the Administrator will credit all documented and verifiable mercury-containing components removed from motor vehicle scrap (such as sensors in anti-locking brake systems, security systems, active ride control, and other applications) when evaluating progress towards the 80 percent goal; and

(iii) The program sponsor agrees to submit progress reports to the Administrator no less frequently than once every year that provide the number of mercury switches removed or the weight of mercury recovered from the switches, the estimated number of vehicles processed, an estimate of the percent of mercury switches recovered, and certification that the recovered mercury switches were recycled at facilities with permits as required under the rules implementing subtitle C of RCRA (40 CFR parts 261 through 265 and 268). The progress reports must be based on a database that includes data for each program participant; however, data may be aggregated at the State level for progress reports that will be publicly available. The Administrator may change the approval status of a program or portion of a program (e.g., at the State level) following 90-days notice based on the progress reports or on other information.

(iv) You must develop and maintain onsite a plan demonstrating the manner through which your facility is participating in the EPA-approved program.

(A) The plan must include facility-specific implementation elements, corporate-wide policies, and/or efforts coordinated by a trade association as appropriate for each facility.

(B) You must provide in the plan documentation of direction to appropriate staff to communicate to suppliers throughout the scrap supply chain the need to promote the removal of mercury switches from end-of-life vehicles. Upon the request of the Administrator or delegated authority, you must provide examples of materials that are used for outreach to suppliers, such as letters, contract language, policies for purchasing agents, and scrap inspection protocols.

(C) You must conduct periodic inspections or other means of corroboration to ensure that scrap providers are aware of the need for and are implementing appropriate steps to minimize the presence of mercury in scrap from end-of-life vehicles.

(3) *Option for specialty metal scrap.* You must certify in your notification of compliance status and maintain records of documentation that the only materials from motor vehicles in the scrap are materials recovered for their specialty alloy (including, but not limited to, chromium, nickel, molybdenum, or other alloys) content (such as certain exhaust systems) and, based on the nature of the scrap and purchase specifications, that the type of scrap is not reasonably expected to contain mercury switches.

(4) *Scrap that does not contain motor vehicle scrap.* For scrap not subject to the requirements in paragraphs (b)(1) through (3) of this section, you must certify in your notification of compliance status and maintain records of documentation that this scrap does not contain motor vehicle scrap.

§ 63.10886 What are my management practices for binder formulations?

For each furfuryl alcohol warm box mold or core making line at a new or existing iron and steel foundry, you must use a binder chemical formulation that does not use methanol as a specific ingredient of the catalyst formulation. This requirement does not apply to the resin portion of the binder system.

Requirements for New and Existing Affected Sources Classified as Small Foundries

§ 63.10890 What are my management practices and compliance requirements?

(a) You must comply with the pollution prevention management practices for metallic scrap and mercury switches in §63.10885 and binder formulations in §63.10886.

(b) You must submit an initial notification of applicability according to §63.9(b)(2).

(c) You must submit a notification of compliance status according to §63.9(h)(1)(i). You must send the notification of compliance status before the close of business on the 30th day after the applicable compliance date specified in §63.10881. The notification must include the following compliance certifications, as applicable:

(1) "This facility has prepared, and will operate by, written material specifications for metallic scrap according to §63.10885(a)(1)" and/or "This facility has prepared, and will operate by, written material specifications for general iron and steel scrap according to §63.10885(a)(2)."

(2) "This facility has prepared, and will operate by, written material specifications for the removal of mercury switches and a site-specific plan implementing the material specifications according to §63.10885(b)(1) and/or "This facility participates in and purchases motor vehicle scrap only from scrap providers who participate in a program for removal of mercury switches that has been approved by the Administrator according to §63.10885(b)(2) and has prepared a plan for participation in the EPA-approved program according to §63.10885(b)(2)(iv)" and/or "The only materials from motor vehicles in the scrap charged to a metal melting furnace at this facility are materials recovered for their specialty alloy content in accordance with §63.10885(b)(3) which are not reasonably expected to contain mercury switches" and/or "This facility complies with the requirements for scrap that does not contain motor vehicle scrap in accordance with §63.10885(b)(4)."

(3) "This facility complies with the no methanol requirement for the catalyst portion of each binder chemical formulation for a furfuryl alcohol warm box mold or core making line according to §63.10886."

(d) As required by §63.10(b)(1), you must maintain files of all information (including all reports and notifications) for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent 2 years of data shall be retained on site. The remaining 3 years of data may be retained off site. Such files may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche.

(e) You must maintain records of the information specified in paragraphs (e)(1) through (7) of this section according to the requirements in §63.10(b)(1).

(1) Records supporting your initial notification of applicability and your notification of compliance status according to §63.10(b)(2)(xiv).

(2) Records of your written materials specifications according to §63.10885(a) and records that demonstrate compliance with the requirements for restricted metallic scrap in §63.10885(a)(1) and/or for the use of general scrap in §63.10885(a)(2) and for mercury in §63.10885(b)(1) through (3), as applicable. You must keep records documenting compliance with §63.10885(b)(4) for scrap that does not contain motor vehicle scrap.

(3) If you are subject to the requirements for a site-specific plan for mercury switch removal under §63.10885(b)(1), you must:

(i) Maintain records of the number of mercury switches removed or the weight of mercury recovered from the switches and properly managed, the estimated number of vehicles processed, and an estimate of the percent of mercury switches recovered; and

(ii) Submit semiannual reports of the number of mercury switches removed or the weight of mercury recovered from the switches and properly managed, the estimated number of vehicles processed, an estimate of the percent of mercury switches recovered, and a certification that the recovered mercury switches were recycled at RCRA-permitted facilities. The semiannual reports must include a certification that you have conducted periodic inspections or taken other means of corroboration as required under §63.10885(b)(1)(ii)(C). You must identify which option in paragraph §63.10885(b) applies to each scrap provider, contract, or shipment. You may include this information in the semiannual compliance reports required under paragraph (f) of this section.

(4) If you are subject to the option for approved mercury programs under §63.10885(b)(2), you must maintain records identifying each scrap provider and documenting the scrap provider's participation in an approved mercury switch removal program. If you purchase motor vehicle scrap from a broker, you must maintain records identifying each broker and documentation that all scrap provided by the broker was obtained from other scrap providers who participate in an approved mercury switch removal program.

(5) Records to document use of binder chemical formulation that does not contain methanol as a specific ingredient of the catalyst formulation for each furfuryl alcohol warm box mold or core making line as required by §63.10886. These records must be the Material Safety Data Sheet (provided that it contains appropriate information), a certified product data sheet, or a manufacturer's hazardous air pollutant data sheet.

(6) Records of the annual quantity and composition of each HAP-containing chemical binder or coating material used to make molds and cores. These records must be copies of purchasing records, Material Safety Data Sheets, or other documentation that provides information on the binder or coating materials used.

(7) Records of metal melt production for each calendar year.

(f) You must submit semiannual compliance reports to the Administrator according to the requirements in §63.10(e). The report must clearly identify any deviation from the pollution prevention management practices in §§63.10885 or 63.10886 and the corrective action taken.

(g) You must submit a written notification to the Administrator of the initial classification of your facility as a small foundry as required in §63.10880(f) and (g), as applicable, and for any subsequent reclassification as required in §63.10881(d)(1) or (e), as applicable.

(h) Following the initial determination for an existing affected source as a small foundry, if the annual metal melt production exceeds 20,000 tons during the preceding year, you must comply with the requirements for large foundries by the applicable dates in §63.10881(d)(1)(i) or (d)(1)(ii). Following the initial determination for a new affected source as a small foundry, if you increase the annual metal melt capacity to exceed 10,000 tons, you must comply with the requirements for a large foundry by the applicable dates in §63.10881(e)(1).

(i) You must comply with the following requirements of the General Provisions (40 CFR part 63, subpart A): §§63.1 through 63.5; §63.6(a), (b), (c), and (e)(1); §63.9; §63.10(a), (b)(1), (b)(2)(xiv), (b)(3), (d)(1), (d)(4), and (f); and §§63.13 through 63.16. Requirements of the General Provisions not cited in the preceding sentence do not apply to the owner or operator of a new or existing affected source that is classified as a small foundry.

Requirements for New and Existing Affected Sources Classified as Large Iron and Steel Foundries

§ 63.10895 What are my standards and management practices?

(a) If you own or operate an affected source that is a large foundry as defined in §63.10906, you must comply with the pollution prevention management practices in §§63.10885 and 63.10886, the requirements in paragraphs (b) through (e) of this section, and the requirements in §§63.10896 through 63.10900.

(b) You must operate a capture and collection system for each metal melting furnace at a new or existing iron and steel foundry unless that furnace is specifically uncontrolled as part of an emissions averaging group. Each capture and collection system must meet accepted engineering standards, such as those published by the American Conference of Governmental Industrial Hygienists.

(c) You must not discharge to the atmosphere emissions from any metal melting furnace or group of all metal melting furnaces that exceed the applicable limit in paragraph (c)(1) or (2) of this section. When an alternative emissions limit is provided for a given emissions source, you are not restricted in the selection of which applicable alternative emissions limit is used to demonstrate compliance.

(1) For an existing iron and steel foundry, 0.8 pounds of particulate matter (PM) per ton of metal charged or 0.06 pounds of total metal HAP per ton of metal charged.

(2) For a new iron and steel foundry, 0.1 pounds of PM per ton of metal charged or 0.008 pounds of total metal HAP per ton of metal charged.

(d) If you own or operate a new affected source, you must comply with each control device parameter operating limit in paragraphs (d)(1) and (2) of this section that applies to you.

(1) For each wet scrubber applied to emissions from a metal melting furnace, you must maintain the 3-hour average pressure drop and scrubber water flow rate at or above the minimum levels established during the initial or subsequent performance test.

(2) For each electrostatic precipitator applied to emissions from a metal melting furnace, you must maintain the voltage and secondary current (or total power input) to the control device at or above the level established during the initial or subsequent performance test.

(e) If you own or operate a new or existing iron and steel foundry, you must not discharge to the atmosphere fugitive emissions from foundry operations that exhibit opacity greater than 20 percent (6-minute average), except for one 6-minute average per hour that does not exceed 30 percent.

§ 63.10896 What are my operation and maintenance requirements?

(a) You must prepare and operate at all times according to a written operation and maintenance (O&M) plan for each control device for an emissions source subject to a PM, metal HAP, or opacity emissions limit in §63.10895. You must maintain a copy of the O&M plan at the facility and make it available for review upon request. At a minimum, each plan must contain the following information:

(1) General facility and contact information;

(2) Positions responsible for inspecting, maintaining, and repairing emissions control devices which are used to comply with this subpart;

(3) Description of items, equipment, and conditions that will be inspected, including an inspection schedule for the items, equipment, and conditions. For baghouses that are equipped with bag leak detection systems, the O&M plan must include the site-specific monitoring plan required in §63.10897(d)(2).

(4) Identity and estimated quantity of the replacement parts that will be maintained in inventory; and

(5) For a new affected source, procedures for operating and maintaining a CPMS in accordance with manufacturer's specifications.

(b) You may use any other O&M, preventative maintenance, or similar plan which addresses the requirements in paragraph (a)(1) through (5) of this section to demonstrate compliance with the requirements for an O&M plan.

§ 63.10897 What are my monitoring requirements?

(a) You must conduct an initial inspection of each PM control device for a metal melting furnace at an existing affected source. You must conduct each initial inspection no later than 60 days after your applicable compliance date for each installed control device which has been operated within 60 days of the compliance date. For an installed control device which has not operated within 60 days of the compliance date, you must conduct an initial inspection prior to startup of the control device. Following the initial inspections, you must perform periodic inspections and maintenance of each PM control device for a metal melting furnace at an existing affected source. You must perform the initial and periodic inspections according to the requirements

in paragraphs (a)(1) through (4) of this section. You must record the results of each initial and periodic inspection and any maintenance action in the logbook required in §63.10899(b)(13).

(1) For the initial inspection of each baghouse, you must visually inspect the system ductwork and baghouse units for leaks. You must also inspect the inside of each baghouse for structural integrity and fabric filter condition. Following the initial inspections, you must inspect and maintain each baghouse according to the requirements in paragraphs (a)(1)(i) and (ii) of this section.

(i) You must conduct monthly visual inspections of the system ductwork for leaks.

(ii) You must conduct inspections of the interior of the baghouse for structural integrity and to determine the condition of the fabric filter every 6 months.

(2) For the initial inspection of each dry electrostatic precipitator, you must verify the proper functioning of the electronic controls for corona power and rapper operation, that the corona wires are energized, and that adequate air pressure is present on the rapper manifold. You must also visually inspect the system ductwork and electrostatic housing unit and hopper for leaks and inspect the interior of the electrostatic precipitator to determine the condition and integrity of corona wires, collection plates, hopper, and air diffuser plates. Following the initial inspection, you must inspect and maintain each dry electrostatic precipitator according to the requirements in paragraphs (a)(2)(i) through (iii) of this section.

(i) You must conduct a daily inspection to verify the proper functioning of the electronic controls for corona power and rapper operation, that the corona wires are energized, and that adequate air pressure is present on the rapper manifold.

(ii) You must conduct monthly visual inspections of the system ductwork, housing unit, and hopper for leaks.

(iii) You must conduct inspections of the interior of the electrostatic precipitator to determine the condition and integrity of corona wires, collection plates, plate rappers, hopper, and air diffuser plates every 24 months.

(3) For the initial inspection of each wet electrostatic precipitator, you must verify the proper functioning of the electronic controls for corona power, that the corona wires are energized, and that water flow is present. You must also visually inspect the system ductwork and electrostatic precipitator housing unit and hopper for leaks and inspect the interior of the electrostatic precipitator to determine the condition and integrity of corona wires, collection plates, plate wash spray heads, hopper, and air diffuser plates. Following the initial inspection, you must inspect and maintain each wet electrostatic precipitator according to the requirements in paragraphs (a)(3)(i) through (iii) of this section.

(i) You must conduct a daily inspection to verify the proper functioning of the electronic controls for corona power, that the corona wires are energized, and that water flow is present.

(ii) You must conduct monthly visual inspections of the system ductwork, electrostatic precipitator housing unit, and hopper for leaks.

(iii) You must conduct inspections of the interior of the electrostatic precipitator to determine the condition and integrity of corona wires, collection plates, plate wash spray heads, hopper, and air diffuser plates every 24 months.

(4) For the initial inspection of each wet scrubber, you must verify the presence of water flow to the scrubber. You must also visually inspect the system ductwork and scrubber unit for leaks and inspect the interior of the scrubber for structural integrity and the condition of the demister and spray nozzle. Following the initial inspection, you must inspect and maintain each wet scrubber according to the requirements in paragraphs (a)(4)(i) through (iii) of this section.

(i) You must conduct a daily inspection to verify the presence of water flow to the scrubber.

- (ii) You must conduct monthly visual inspections of the system ductwork and scrubber unit for leaks.
- (iii) You must conduct inspections of the interior of the scrubber to determine the structural integrity and condition of the demister and spray nozzle every 12 months.
- (b) For each wet scrubber applied to emissions from a metal melting furnace at a new affected source, you must use a continuous parameter monitoring system (CPMS) to measure and record the 3-hour average pressure drop and scrubber water flow rate.
- (c) For each electrostatic precipitator applied to emissions from a metal melting furnace at a new affected source, you must measure and record the hourly average voltage and secondary current (or total power input) using a CPMS.

(d) If you own or operate an existing affected source, you may install, operate, and maintain a bag leak detection system for each negative pressure baghouse or positive pressure baghouse as an alternative to the baghouse inspection requirements in paragraph (a)(1) of this section. If you own or operate a new affected source, you must install, operate, and maintain a bag leak detection system for each negative pressure baghouse or positive pressure baghouse. You must install, operate, and maintain each bag leak detection system according to the requirements in paragraphs (d)(1) through (3) of this section.

(1) Each bag leak detection system must meet the requirements in paragraphs (d)(1)(i) through (vii) of this section.

- (i) The system must be certified by the manufacturer to be capable of detecting emissions of particulate matter at concentrations of 10 milligrams per actual cubic meter (0.00044 grains per actual cubic foot) or less.
- (ii) The bag leak detection system sensor must provide output of relative particulate matter loadings and the owner or operator shall continuously record the output from the bag leak detection system using a strip chart recorder, data logger, or other means.
- (iii) The system must be equipped with an alarm that will sound when an increase in relative particulate loadings is detected over the alarm set point established in the operation and maintenance plan, and the alarm must be located such that it can be heard by the appropriate plant personnel.
- (iv) The initial adjustment of the system must, at minimum, consist of establishing the baseline output by adjusting the sensitivity (range) and the averaging period of the device, and establishing the alarm set points. If the system is equipped with an alarm delay time feature, you also must adjust the alarm delay time.
- (v) Following the initial adjustment, do not adjust the sensitivity or range, averaging period, alarm set point, or alarm delay time. Except, once per quarter, you may adjust the sensitivity of the bag leak detection system to account for seasonable effects including temperature and humidity according to the procedures in the monitoring plan required by paragraph (d)(2) of this section.
- (vi) For negative pressure baghouses, induced air baghouses, and positive pressure baghouses that are discharged to the atmosphere through a stack, the bag leak detector sensor must be installed downstream of the baghouse and upstream of any wet scrubber.
- (vii) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.

(2) You must prepare a site-specific monitoring plan for each bag leak detection system to be incorporated in your O&M plan. You must operate and maintain each bag leak detection system according to the plan at all times. Each plan must address all of the items identified in paragraphs (d)(2)(i) through (vi) of this section.

- (i) Installation of the bag leak detection system.

(ii) Initial and periodic adjustment of the bag leak detection system including how the alarm set-point will be established.

(iii) Operation of the bag leak detection system including quality assurance procedures.

(iv) Maintenance of the bag leak detection system including a routine maintenance schedule and spare parts inventory list.

(v) How the bag leak detection system output will be recorded and stored.

(vi) Procedures for determining what corrective actions are necessary in the event of a bag leak detection alarm as required in paragraph (d)(3) of this section.

(3) In the event that a bag leak detection system alarm is triggered, you must initiate corrective action to determine the cause of the alarm within 1 hour of the alarm, initiate corrective action to correct the cause of the problem within 24 hours of the alarm, and complete corrective action as soon as practicable, but no later than 10 calendar days from the date of the alarm. You must record the date and time of each valid alarm, the time you initiated corrective action, the correction action taken, and the date on which corrective action was completed. Corrective actions may include, but are not limited to:

(i) Inspecting the bag house for air leaks, torn or broken bags or filter media, or any other condition that may cause an increase in emissions.

(ii) Sealing off defective bags or filter media.

(iii) Replacing defective bags or filter media or otherwise repairing the control device.

(iv) Sealing off a defective baghouse department.

(v) Cleaning the bag leak detection system probe, or otherwise repairing the bag leak detection system.

(vi) Shutting down the process producing the particulate emissions.

(e) You must make monthly inspections of the equipment that is important to the performance of the total capture system (i.e., pressure sensors, dampers, and damper switches). This inspection must include observations of the physical appearance of the equipment (e.g., presence of holes in the ductwork or hoods, flow constrictions caused by dents or accumulated dust in the ductwork, and fan erosion). You must repair any defect or deficiency in the capture system as soon as practicable, but no later than 90 days. You must record the date and results of each inspection and the date of repair of any defect or deficiency.

(f) You must install, operate, and maintain each CPMS or other measurement device according to your O&M plan. You must record all information needed to document conformance with these requirements.

(g) In the event of an exceedance of an established emissions limitation (including an operating limit), you must restore operation of the emissions source (including the control device and associated capture system) to its normal or usual manner or operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the exceedance. You must record the date and time correction action was initiated, the correction action taken, and the date corrective action was completed.

(h) If you choose to comply with an emissions limit in §63.10895(c) using emissions averaging, you must calculate and record for each calendar month the pounds of PM or total metal HAP per ton of metal melted from the group of all metal melting furnaces at your foundry. You must calculate and record the weighted average pounds per ton emissions rate for the group of all metal melting furnaces at the foundry determined from the performance test procedures in §63.10898(d) and (e).

§ 63.10898 What are my performance test requirements?

(a) You must conduct a performance test to demonstrate initial compliance with the applicable emissions limits for each metal melting furnace or group of all metal melting furnaces that is subject to an emissions limit in §63.10895(c) and for each building or structure housing foundry operations that is subject to the opacity limit for fugitive emissions in §63.10895(e). You must conduct the test within 180 days of your compliance date and report the results in your notification of compliance status.

(1) If you own or operate an existing iron and steel foundry, you may choose to submit the results of a prior performance test for PM or total metal HAP that demonstrates compliance with the applicable emissions limit for a metal melting furnace or group of all metal melting furnaces provided the test was conducted within the last 5 years using the methods and procedures specified in this subpart and either no process changes have been made since the test, or you can demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance with the applicable emissions limit despite such process changes.

(2) If you own or operate an existing iron and steel foundry and you choose to submit the results of a prior performance test according to paragraph (a)(1) of this section, you must submit a written notification to the Administrator of your intent to use the previous test data no later than 60 days after your compliance date. The notification must contain a full copy of the performance test and contain information to demonstrate, if applicable, that either no process changes have been made since the test, or that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite such process changes.

(3) If you have an electric induction furnace equipped with an emissions control device at an existing foundry, you may use the test results from another electric induction furnace to demonstrate compliance with the applicable PM or total metal HAP emissions limit in §63.10895(c) provided the furnaces are similar with respect to the type of emission control device that is used, the composition of the scrap charged, furnace size, and furnace melting temperature.

(4) If you have an uncontrolled electric induction furnace at an existing foundry, you may use the test results from another electric induction furnace to demonstrate compliance with the applicable PM or total metal HAP emissions limit in §63.10895(c) provided the test results are prior to any control device and the electric induction furnaces are similar with respect to the composition of the scrap charged, furnace size, and furnace melting temperature.

(5) For electric induction furnaces that do not have emission capture systems, you may install a temporary enclosure for the purpose of representative sampling of emissions. A permanent enclosure and capture system is not required for the purpose of the performance test.

(b) You must conduct subsequent performance tests to demonstrate compliance with all applicable PM or total metal HAP emissions limits in §63.10895(c) for a metal melting furnace or group of all metal melting furnaces no less frequently than every 5 years and each time you elect to change an operating limit or make a process change likely to increase HAP emissions.

(c) You must conduct each performance test according to the requirements in §63.7(e)(1), Table 1 to this subpart, and paragraphs (d) through (g) of this section.

(d) To determine compliance with the applicable PM or total metal HAP emissions limit in §63.10895(c) for a metal melting furnace in a lb/ton of metal charged format, compute the process-weighted mass emissions (E^P) for each test run using Equation 1 of this section:

$$E^P = \frac{C \times Q \times T}{P \times K} \quad (\text{Eq 1})$$

Where:

E_p = Process-weighted mass emissions rate of PM or total metal HAP, pounds of PM or total metal HAP per ton (lb/ton) of metal charged;

C = Concentration of PM or total metal HAP measured during performance test run, grains per dry standard cubic foot (gr/dscf);

Q = Volumetric flow rate of exhaust gas, dry standard cubic feet per hour (dscf/hr);

T = Total time during a test run that a sample is withdrawn from the stack during melt production cycle, hr;

P = Total amount of metal charged during the test run, tons; and

K = Conversion factor, 7,000 grains per pound.

(e) To determine compliance with the applicable emissions limit in §63.10895(c) for a group of all metal melting furnaces using emissions averaging,

(1) Determine and record the monthly average charge rate for each metal melting furnace at your iron and steel foundry for the previous calendar month; and

(2) Compute the mass-weighted PM or total metal HAP using Equation 2 of this section.

$$E_c = \frac{\sum_{i=1}^n (E_{pi} \times T_{ii})}{\sum_{i=1}^n T_{ii}} \quad (\text{Eq. 2})$$

Where:

E_c = The mass-weighted PM or total metal HAP emissions for the group of all metal melting furnaces at the foundry, pounds of PM or total metal HAP per ton of metal charged;

E_{pi} = Process-weighted mass emissions of PM or total metal HAP for individual emission unit i as determined from the performance test and calculated using Equation 1 of this section, pounds of PM or total metal HAP per ton of metal charged;

T_{ii} = Total tons of metal charged for individual emission unit i for the calendar month prior to the performance test, tons; and

n = The total number of metal melting furnaces at the iron and steel foundry.

(3) For an uncontrolled electric induction furnace that is not equipped with a capture system and has not been previously tested for PM or total metal HAP, you may assume an emissions factor of 2 pounds per ton of PM or 0.13 pounds of total metal HAP per ton of metal melted in Equation 2 of this section instead of a measured test value. If the uncontrolled electric induction furnace is equipped with a capture system, you must use a measured test value.

(f) To determine compliance with the applicable PM or total metal HAP emissions limit for a metal melting furnace in §63.10895(c) when emissions from one or more regulated furnaces are combined with other non-regulated emissions sources, you may demonstrate compliance using the procedures in paragraphs (f)(1) through (3) of this section.

(1) Determine the PM or total metal HAP process-weighted mass emissions for each of the regulated streams prior to the combination with other exhaust streams or control device.

(2) Measure the flow rate and PM or total metal HAP concentration of the combined exhaust stream both before and after the control device and calculate the mass removal efficiency of the control device using Equation 3 of this section.

$$\% \text{ reduction} = \frac{E_i - E_o}{E_i} \times 100\% \quad (\text{Eq. 3})$$

Where:

E_i = Mass emissions rate of PM or total metal HAP at the control device inlet, lb/hr;

E_o = Mass emissions rate of PM or total metal HAP at the control device outlet, lb/hr.

(3) Meet the applicable emissions limit based on the calculated PM or total metal HAP process-weighted mass emissions for the regulated emissions source using Equation 4 of this section:

$$E_{p, \text{total}} = E_{pl} \times \left(1 - \frac{\% \text{ reduction}}{100} \right) \quad (\text{Eq. 4})$$

Where:

$E_{p, \text{released}}$ = Calculated process-weighted mass emissions of PM (or total metal HAP) predicted to be released to the atmosphere from the regulated emissions source, pounds of PM or total metal HAP per ton of metal charged; and

$E_{p, i}$ = Process-weighted mass emissions of PM (or total metal HAP) in the uncontrolled regulated exhaust stream, pounds of PM or total metal HAP per ton of metal charged.

(g) To determine compliance with an emissions limit for situations when multiple sources are controlled by a single control device, but only one source operates at a time or other situations that are not expressly considered in paragraphs (d) through (f) of this section, you must submit a site-specific test plan to the Administrator for approval according to the requirements in §63.7(c)(2) and (3).

(h) You must conduct each opacity test for fugitive emissions according to the requirements in §63.6(h)(5) and Table 1 to this subpart.

(i) You must conduct subsequent performance tests to demonstrate compliance with the opacity limit in §63.10895(e) no less frequently than every 6 months and each time you make a process change likely to increase fugitive emissions.

(j) In your performance test report, you must certify that the capture system operated normally during the performance test.

(k) You must establish operating limits for a new affected source during the initial performance test according to the requirements in Table 2 of this subpart.

(l) You may change the operating limits for a wet scrubber, electrostatic precipitator, or baghouse if you meet the requirements in paragraphs (l)(1) through (3) of this section.

(1) Submit a written notification to the Administrator of your plan to conduct a new performance test to revise the operating limit.

(2) Conduct a performance test to demonstrate compliance with the applicable emissions limitation in §63.10895(c).

(3) Establish revised operating limits according to the applicable procedures in Table 2 to this subpart.

§ 63.10899 What are my recordkeeping and reporting requirements?

(a) As required by §63.10(b)(1), you must maintain files of all information (including all reports and notifications) for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent 2 years of data shall be retained on site. The remaining 3 years of data may be retained off site. Such files may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche.

(b) In addition to the records required by 40 CFR 63.10, you must keep records of the information specified in paragraphs (b)(1) through (13) of this section.

(1) You must keep records of your written materials specifications according to §63.10885(a) and records that demonstrate compliance with the requirements for restricted metallic scrap in §63.10885(a)(1) and/or for the use of general scrap in §63.10885(a)(2) and for mercury in §63.10885(b)(1) through (3), as applicable. You must keep records documenting compliance with §63.10885(b)(4) for scrap that does not contain motor vehicle scrap.

(2) If you are subject to the requirements for a site-specific plan for mercury under §63.10885(b)(1), you must:

(i) Maintain records of the number of mercury switches removed or the weight of mercury recovered from the switches and properly managed, the estimated number of vehicles processed, and an estimate of the percent of mercury switches recovered; and

(ii) Submit semiannual reports of the number of mercury switches removed or the weight of mercury recovered from the switches and properly managed, the estimated number of vehicles processed, an estimate of the percent of mercury switches recovered, and a certification that the recovered mercury switches were recycled at RCRA-permitted facilities. The semiannual reports must include a certification that you have conducted periodic inspections or taken other means of corroboration as required under §63.10885(b)(1)(ii)(C). You must identify which option in §63.10885(b) applies to each scrap provider, contract, or shipment. You may include this information in the semiannual compliance reports required under paragraph (c) of this section.

(3) If you are subject to the option for approved mercury programs under §63.10885(b)(2), you must maintain records identifying each scrap provider and documenting the scrap provider's participation in an approved mercury switch removal program. If your scrap provider is a broker, you must maintain records identifying each of the broker's scrap suppliers and documenting the scrap supplier's participation in an approved mercury switch removal program.

(4) You must keep records to document use of any binder chemical formulation that does not contain methanol as a specific ingredient of the catalyst formulation for each furfuryl alcohol warm box mold or core making line as required by §63.10886. These records must be the Material Safety Data Sheet (provided that it contains appropriate information), a certified product data sheet, or a manufacturer's hazardous air pollutant data sheet.

(5) You must keep records of the annual quantity and composition of each HAP-containing chemical binder or coating material used to make molds and cores. These records must be copies of purchasing records, Material Safety Data Sheets, or other documentation that provide information on the binder or coating materials used.

- (6) You must keep records of monthly metal melt production for each calendar year.
- (7) You must keep a copy of the operation and maintenance plan as required by §63.10896(a) and records that demonstrate compliance with plan requirements.
- (8) If you use emissions averaging, you must keep records of the monthly metal melting rate for each furnace at your iron and steel foundry, and records of the calculated pounds of PM or total metal HAP per ton of metal melted for the group of all metal melting furnaces required by §63.10897(h).
- (9) If applicable, you must keep records for bag leak detection systems as follows:
- (i) Records of the bag leak detection system output;
 - (ii) Records of bag leak detection system adjustments, including the date and time of the adjustment, the initial bag leak detection system settings, and the final bag leak detection system settings; and
 - (iii) The date and time of all bag leak detection system alarms, and for each valid alarm, the time you initiated corrective action, the corrective action taken, and the date on which corrective action was completed.
- (10) You must keep records of capture system inspections and repairs as required by §63.10897(e).
- (11) You must keep records demonstrating conformance with your specifications for the operation of CPMS as required by §63.10897(f).
- (12) You must keep records of corrective action(s) for exceedances and excursions as required by §63.10897(g).
- (13) You must record the results of each inspection and maintenance required by §63.10897(a) for PM control devices in a logbook (written or electronic format). You must keep the logbook onsite and make the logbook available to the Administrator upon request. You must keep records of the information specified in paragraphs (b)(13)(i) through (iii) of this section.
- (i) The date and time of each recorded action for a fabric filter, the results of each inspection, and the results of any maintenance performed on the bag filters.
 - (ii) The date and time of each recorded action for a wet or dry electrostatic precipitator (including ductwork), the results of each inspection, and the results of any maintenance performed for the electrostatic precipitator.
 - (iii) The date and time of each recorded action for a wet scrubber (including ductwork), the results of each inspection, and the results of any maintenance performed on the wet scrubber.
- (c) You must submit semiannual compliance reports to the Administrator according to the requirements in §63.10(e). The reports must include, at a minimum, the following information as applicable:
- (1) Summary information on the number, duration, and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective action taken;
 - (2) Summary information on the number, duration, and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other calibration checks, if applicable); and

(3) Summary information on any deviation from the pollution prevention management practices in §§63.10885 and 63.10886 and the operation and maintenance requirements §63.10896 and the corrective action taken.

(d) You must submit written notification to the Administrator of the initial classification of your new or existing affected source as a large iron and steel facility as required in §63.10880(f) and (g), as applicable, and for any subsequent reclassification as required in §63.10881(d) or (e), as applicable.

§ 63.10900 What parts of the General Provisions apply to my large foundry?

(a) If you own or operate a new or existing affected source that is classified as a large foundry, you must comply with the requirements of the General Provisions (40 CFR part 63, subpart A) according to Table 3 of this subpart.

(b) If you own or operator a new or existing affected source that is classified as a large foundry, your notification of compliance status required by §63.9(h) must include each applicable certification of compliance, signed by a responsible official, in Table 4 of this subpart.

Other Requirements and Information

§ 63.10905 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by EPA or a delegated authority such as your State, local, or tribal agency. If the EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency has the authority to implement and enforce this subpart. You should contact your EPA Regional Office to find out if implementation and enforcement of this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under 40 CFR part 63, subpart E, the authorities contained in paragraph (c) of this section are retained by the EPA Administrator and are not transferred to the State, local, or tribal agency.

(c) The authorities that cannot be delegated to State, local, or tribal agencies are specified in paragraphs (c)(1) through (6) of this section.

(1) Approval of an alternative non-opacity emissions standard under 40 CFR 63.6(g).

(2) Approval of an alternative opacity emissions standard under §63.6(h)(9).

(3) Approval of a major change to test methods under §63.7(e)(2)(ii) and (f). A "major change to test method" is defined in §63.90.

(4) Approval of a major change to monitoring under §63.8(f). A "major change to monitoring" under is defined in §63.90.

(5) Approval of a major change to recordkeeping and reporting under §63.10(f). A "major change to recordkeeping/reporting" is defined in §63.90.

(6) Approval of a local, State, or national mercury switch removal program under §63.10885(b)(2).

§ 63.10906 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act, in §63.2, and in this section.

Annual metal melt capacity means the lower of the total metal melting furnace equipment melt rate capacity assuming 8,760 operating hours per year summed for all metal melting furnaces at the foundry or, if applicable, the maximum permitted metal melt production rate for the iron and steel foundry calculated on an annual basis. Unless otherwise specified in the permit, permitted metal melt production rates that are not specified on an annual basis must be annualized assuming 24 hours per day, 365 days per year of operation. If the permit limits the operating hours of the furnace(s) or foundry, then the permitted operating hours are used to annualize the maximum permitted metal melt production rate.

Annual metal melt production means the quantity of metal melted in a metal melting furnace or group of all metal melting furnaces at the iron and steel foundry in a given calendar year. For the purposes of this subpart, metal melt production is determined on the basis on the quantity of metal charged to each metal melting furnace; the sum of the metal melt production for each furnace in a given calendar year is the annual metal melt production of the foundry.

Bag leak detection system means a system that is capable of continuously monitoring relative particulate matter (dust) loadings in the exhaust of a baghouse to detect bag leaks and other upset conditions. A bag leak detection system includes, but is not limited to, an instrument that operates on triboelectric, electrodynamic, light scattering, light transmittance, or other effect to continuously monitor relative particulate matter loadings.

Binder chemical means a component of a system of chemicals used to bind sand together into molds, mold sections, and cores through chemical reaction as opposed to pressure.

Capture system means the collection of components used to capture gases and fumes released from one or more emissions points and then convey the captured gas stream to a control device or to the atmosphere. A capture system may include, but is not limited to, the following components as applicable to a given capture system design: Duct intake devices, hoods, enclosures, ductwork, dampers, manifolds, plenums, and fans.

Chlorinated plastics means solid polymeric materials that contain chlorine in the polymer chain, such as polyvinyl chloride (PVC) and PVC copolymers.

Control device means the air pollution control equipment used to remove particulate matter from the effluent gas stream generated by a metal melting furnace.

Cupola means a vertical cylindrical shaft furnace that uses coke and forms of iron and steel such as scrap and foundry returns as the primary charge components and melts the iron and steel through combustion of the coke by a forced upward flow of heated air.

Deviation means any instance in which an affected source or an owner or operator of such an affected source:

- (1) Fails to meet any requirement or obligation established by this subpart including, but not limited to, any emissions limitation (including operating limits), management practice, or operation and maintenance requirement;
- (2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any iron and steel foundry required to obtain such a permit; or
- (3) Fails to meet any emissions limitation (including operating limits) or management standard in this subpart during startup, shutdown, or malfunction, regardless of whether or not such failure is permitted by this subpart.

Electric arc furnace means a vessel in which forms of iron and steel such as scrap and foundry returns are melted through resistance heating by an electric current flowing through the arcs formed between the electrodes and the surface of the metal and also flowing through the metal between the arc paths.

Electric induction furnace means a vessel in which forms of iron and steel such as scrap and foundry returns are melted through resistance heating by an electric current that is induced in the metal by passing an alternating current through a coil surrounding the metal charge or surrounding a pool of molten metal at the bottom of the vessel.

Exhaust stream means gases emitted from a process through a conveyance as defined in this subpart.

Foundry operations mean all process equipment and practices used to produce metal castings for shipment. *Foundry operations* include: Mold or core making and coating; scrap handling and preheating; metal melting and inoculation; pouring, cooling, and shakeout; shotblasting, grinding, and other metal finishing operations; and sand handling.

Free liquids means material that fails the paint filter liquids test by EPA Method 9095B, Revision 2, November 1994 (incorporated by reference—see §63.14). That is, if any portion of the material passes through and drops from the filter within the 5-minute test period, the material contains *free liquids*.

Fugitive emissions means any pollutant released to the atmosphere that is not discharged through a system of equipment that is specifically designed to capture pollutants at the source, convey them through ductwork, and exhaust them using forced ventilation. *Fugitive emissions* include pollutants released to the atmosphere through windows, doors, vents, or other building openings. *Fugitive emissions* also include pollutants released to the atmosphere through other general building ventilation or exhaust systems not specifically designed to capture pollutants at the source.

Furfuryl alcohol warm box mold or core making line means a mold or core making line in which the binder chemical system used is that system commonly designated as a furfuryl alcohol warm box system by the foundry industry.

Iron and steel foundry means a facility or portion of a facility that melts scrap, ingot, and/or other forms of iron and/or steel and pours the resulting molten metal into molds to produce final or near final shape products for introduction into commerce. Research and development facilities, operations that only produce non-commercial castings, and operations associated with nonferrous metal production are not included in this definition.

Large foundry means, for an existing affected source, an iron and steel foundry with an annual metal melt production greater than 20,000 tons. For a new affected source, *large foundry* means an iron and steel foundry with an annual metal melt capacity greater than 10,000 tons.

Mercury switch means each mercury-containing capsule or switch assembly that is part of a convenience light switch mechanism installed in a vehicle.

Metal charged means the quantity of scrap metal, pig iron, metal returns, alloy materials, and other solid forms of iron and steel placed into a metal melting furnace. Metal charged does not include the quantity of fluxing agents or, in the case of a cupola, the quantity of coke that is placed into the metal melting furnace.

Metal melting furnace means a cupola, electric arc furnace, electric induction furnace, or similar device that converts scrap, foundry returns, and/or other solid forms of iron and/or steel to a liquid state. This definition does not include a holding furnace, an argon oxygen decarburization vessel, or ladle that receives molten metal from a metal melting furnace, to which metal ingots or other material may be added to adjust the metal chemistry.

Mold or core making line means the collection of equipment that is used to mix an aggregate of sand and binder chemicals, form the aggregate into final shape, and harden the formed aggregate. This definition does not include a line for making greensand molds or cores.

Motor vehicle means an automotive vehicle not operated on rails and usually is operated with rubber tires for use on highways.

Motor vehicle scrap means vehicle or automobile bodies, including automobile body hulks, that have been processed through a shredder. *Motor vehicle scrap* does not include automobile manufacturing bundles, or miscellaneous vehicle parts, such as wheels, bumpers, or other components that do not contain mercury switches.

Nonferrous metal means any pure metal other than iron or any metal alloy for which an element other than iron is its major constituent in percent by weight.

On blast means those periods of cupola operation when combustion (blast) air is introduced to the cupola furnace and the furnace is capable of producing molten metal. On blast conditions are characterized by both blast air introduction and molten metal production.

Responsible official means responsible official as defined in §63.2.

Scrap preheater means a vessel or other piece of equipment in which metal scrap that is to be used as melting furnace feed is heated to a temperature high enough to eliminate volatile impurities or other tramp materials by direct flame heating or similar means of heating. Scrap dryers, which solely remove moisture from metal scrap, are not considered to be scrap preheaters for purposes of this subpart.

Scrap provider means the person (including a broker) who contracts directly with an iron and steel foundry to provide motor vehicle scrap. Scrap processors such as shredder operators or vehicle dismantlers that do not sell scrap directly to a foundry are not *scrap providers*.

Scrubber blowdown means liquor or slurry discharged from a wet scrubber that is either removed as a waste stream or processed to remove impurities or adjust its composition or pH.

Small foundry means, for an existing affected source, an iron and steel foundry that has an annual metal melt production of 20,000 tons or less. For a new affected source, *small foundry* means an iron and steel foundry that has an annual metal melt capacity of 10,000 tons or less.

Total metal HAP means, for the purposes of this subpart, the sum of the concentrations of compounds of antimony, arsenic, beryllium, cadmium, chromium, cobalt, lead, manganese, mercury, nickel, and selenium as measured by EPA Method 29 (40 CFR part 60, appendix A–8). Only the measured concentration of the listed analytes that are present at concentrations exceeding one-half the quantitation limit of the analytical method are to be used in the sum. If any of the analytes are not detected or are detected at concentrations less than one-half the quantitation limit of the analytical method, the concentration of those analytes will be assumed to be zero for the purposes of calculating the total metal HAP for this subpart.

Table 1 to Subpart ZZZZZ of Part 63—Performance Test Requirements for New and Existing Affected Sources Classified as Large Foundries

As required in §63.10898(c) and (h), you must conduct performance tests according to the test methods and procedures in the following table:

For . . .	You must . . .	According to the following requirements. . .
1. Each metal melting furnace subject to a PM or total metal HAP limit in §63.10895(c)	a. Select sampling port locations and the number of traverse points in each stack or duct using EPA Method 1 or 1A (40 CFR part 60, appendix A) b. Determine volumetric flow rate of the stack gas using	Sampling sites must be located at the outlet of the control device (or at the outlet of the emissions source if no control device is present) prior to any releases to the atmosphere. i. Collect a minimum sample

	<p>Method 2, 2A, 2C, 2D, 2F, or 2G (40 CFR part 60, appendix A)</p> <p>c. Determine dry molecular weight of the stack gas using EPA Method 3, 3A, or 3B (40 CFR part 60, appendix A).¹</p> <p>d. Measure moisture content of the stack gas using EPA Method 4 (40 CFR part 60, A)</p> <p>e. Determine PM concentration using EPA Method 5, 5B, 5D, 5F, or 5I, as applicable or total metal HAP concentration using EPA Method 29 (40 CFR part 60, appendix A)</p>	<p>volume of 60 dscf of gas during each PM sampling run. The PM concentration is determined using only the front-half (probe rinse and filter) of the PM catch.</p> <p>ii. For Method 29, only the measured concentration of the listed metal HAP analytes that are present at concentrations exceeding one-half the quantification limit of the analytical method are to be used in the sum. If any of the analytes are not detected or are detected at concentrations less than one-half the quantification limit of the analytical method, the concentration of those analytes is assumed to be zero for the purposes of calculating the total metal HAP.</p>
		<p>iii. A minimum of three valid test runs are needed to comprise a PM or total metal HAP performance test.</p>
		<p>iv. For cupola metal melting furnaces, sample PM or total metal HAP only during times when the cupola is on blast.</p>
		<p>v. For electric arc and electric induction metal melting furnaces, sample PM or total metal HAP only during normal melt production conditions, which may include, but are not limited to the following operations: Charging, melting, alloying, refining, slagging, and tapping.</p>
		<p>vi. Determine and record the total combined weight of tons of metal charged during the duration of each test run. You must compute the process-weighted mass</p>

		emissions of PM according to Equation 1 of §63.10898(d) for an individual furnace or Equation 2 of §63.10898(e) for the group of all metal melting furnaces at the foundry.
2. Fugitive emissions from buildings or structures housing any iron and steel foundry emissions sources subject to opacity limit in §63.10895(e)	a. Using a certified observer, conduct each opacity test according to EPA Method 9 (40 CFR part 60, appendix A-4) and 40 CFR 63.6(h)(5)	<p>i. The certified observer may identify a limited number of openings or vents that appear to have the highest opacities and perform opacity observations on the identified openings or vents in lieu of performing observations for each opening or vent from the building or structure. Alternatively, a single opacity observation for the entire building or structure may be performed, if the fugitive release points afford such an observation.</p> <p>ii. During testing intervals when PM or total metal HAP performance tests, if applicable, are being conducted, conduct the opacity test such that the opacity observations are recorded during the PM or total metal HAP performance tests.</p>
	b. As alternative to Method 9 performance test, conduct visible emissions test by Method 22 (40 CFR part 60, appendix A-7). The test is successful if no visible emissions are observed for 90 percent of the readings over 1 hour. If VE is observed greater than 10 percent of the time over 1 hour, then the facility must conduct another performance test as soon as possible, but no later than 15 calendar days after the Method 22 test, using Method 9 (40 CFR part 60, appendix A-4)	<p>i. The observer may identify a limited number of openings or vents that appear to have the highest visible emissions and perform observations on the identified openings or vents in lieu of performing observations for each opening or vent from the building or structure. Alternatively, a single observation for the entire building or structure may be performed, if the fugitive release points afford such an observation.</p> <p>ii. During testing intervals when PM or total metal HAP</p>

		performance tests, if applicable, are being conducted, conduct the visible emissions test such that the observations are recorded during the PM or total metal HAP performance tests.
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¹You may also use as an alternative to EPA Method 3B (40 CFR part 60, appendix A), the manual method for measuring the oxygen, carbon dioxide, and carbon monoxide content of exhaust gas, ANSI/ASME PTC 19.10–1981, “Flue and Exhaust Gas Analyses” (incorporated by reference—see §63.14).

Table 2 to Subpart ZZZZZ of Part 63—Procedures for Establishing Operating Limits for New Affected Sources Classified as Large Foundries

As required in §63.10898(k), you must establish operating limits using the procedures in the following table:

For . . .	You must . . .
1. Each wet scrubber subject to the operating limits in §63.10895(d)(1) for pressure drop and scrubber water flow rate.	Using the CPMS required in §63.10897(b), measure and record the pressure drop and scrubber water flow rate in intervals of no more than 15 minutes during each PM or total metal HAP test run. Compute and record the average pressure drop and average scrubber water flow rate for all the valid sampling runs in which the applicable emissions limit is met.
2. Each electrostatic precipitator subject to operating limits in §63.10895(d)(2) for voltage and secondary current (or total power input).	Using the CPMS required in §63.10897(c), measure and record voltage and secondary current (or total power input) in intervals of no more than 15 minutes during each PM or total metal HAP test run. Compute and record the minimum hourly average voltage and secondary current (or total power input) from all the readings for each valid sampling run in which the applicable emissions limit is met.

Table 3 to Subpart ZZZZZ of Part 63—Applicability of General Provisions to New and Existing Affected Sources Classified as Large Foundries

As required in §63.10900(a), you must meet each requirement in the following table that applies to you:

Citation	Subject	Applies to large foundry?	Explanation
63.1	Applicability	Yes.	
63.2	Definitions	Yes.	

63.3	Units and abbreviations	Yes.	
63.4	Prohibited activities	Yes.	
63.5	Construction/reconstruction	Yes.	
63.6(a)–(g)	Compliance with standards and maintenance requirements	Yes.	
63.6(h)	Opacity and visible emissions standards	Yes.	
63.6(i)(i)–(j)	Compliance extension and Presidential compliance exemption	Yes.	
63.7(a)(3), (b)–(h)	Performance testing requirements	Yes.	
63.7(a)(1)–(a)(2)	Applicability and performance test dates	No	Subpart ZZZZZ specifies applicability and performance test dates.
63.8(a)(1)–(a)(3), (b), (c)(1)–(c)(3), (c)(6)–(c)(8), (d), (e), (f)(1)–(f)(6), (g)(1)–(g)(4)	Monitoring requirements	Yes.	
63.8(a)(4)	Additional monitoring requirements for control devices in §63.11	No.	
63.8(c)(4)	Continuous monitoring system (CMS) requirements	No.	
63.8(c)(5)	Continuous opacity monitoring system (COMS) minimum procedures	No.	
63.8(g)(5)	Data reduction	No.	
63.9	Notification requirements	Yes.	
63.10(a), (b)(1)–(b)(2)(xii) – (b)(2)(xiv), (b)(3), (d)(1)–(2), (e)(1)–(2), (f)	Recordkeeping and reporting requirements	Yes.	
63.10(c)(1)–(6), (c)(9)–(15)	Additional records for continuous monitoring systems	No.	
63.10(c)(7)–(8)	Records of excess emissions and parameter monitoring exceedances for	Yes.	

	CMS		
63.10(d)(3)	Reporting opacity or visible emissions observations	Yes.	
63.10(e)(3)	Excess emissions reports	Yes.	
63.10(e)(4)	Reporting COMS data	No.	
63.11	Control device requirements	No.	
63.12	State authority and delegations	Yes.	
63.13–63.16	Addresses of State air pollution control agencies and EPA regional offices. Incorporation by reference. Availability of information and confidentiality. Performance track provisions	Yes.	

Table 4 to Subpart ZZZZZ of Part 63—Compliance Certifications for New and Existing Affected Sources Classified as Large Iron and Steel Foundries

As required by §63.10900(b), your notification of compliance status must include certifications of compliance according to the following table:

For . . .	Your notification of compliance status required by §63.9(h) must include this certification of compliance, signed by a responsible official:
Each new or existing affected source classified as a large foundry and subject to scrap management requirements in §63.10885(a)(1) and/or (2)	“This facility has prepared, and will operate by, written material specifications for metallic scrap according to §63.10885(a)(1)” and/or “This facility has prepared, and will operate by, written material specifications for general iron and steel scrap according to §63.10885(a)(2).”
Each new or existing affected source classified as a large foundry and subject to mercury switch removal requirements in §63.10885(b)	“This facility has prepared, and will operate by, written material specifications for the removal of mercury switches and a site-specific plan implementing the material specifications according to §63.10885(b)(1)” and/or “This facility participates in and purchases motor vehicles scrap only from scrap providers who participate in a program for removal of mercury switches that has been approved by the EPA Administrator according to §63.10885(b)(2) and have prepared a plan for participation in the EPA approved program according to §63.10885(b)(2)(iv)” and/or “The only materials from motor vehicles in the scrap charged to a metal melting furnace at this facility are materials recovered for their

	specialty alloy content in accordance with §63.10885(b)(3) which are not reasonably expected to contain mercury switches” and/or “This facility complies with the requirements for scrap that does not contain motor vehicle scrap in accordance with §63.10885(b)(4).”
Each new or existing affected source classified as a large foundry and subject to §63.10886	“This facility complies with the no methanol requirement for the catalyst portion of each binder chemical formulation for a furfuryl alcohol warm box mold or core making line according to §63.10886.”
Each new or existing affected source classified as a large foundry and subject to §63.10895(b)	“This facility operates a capture and collection system for each emissions source subject to this subpart according to §63.10895(b).”
Each existing affected source classified as a large foundry and subject to §63.10895(c)(1)	“This facility complies with the PM or total metal HAP emissions limit in §63.10895(c) for each metal melting furnace or group of all metal melting furnaces based on a previous performance test in accordance with §63.10898(a)(1).”
Each new or existing affected source classified as a large foundry and subject to §63.10896(a)	“This facility has prepared and will operate by an operation and maintenance plan according to §63.10896(a).”
Each new or existing (if applicable) affected source classified as a large foundry and subject to §63.10897(d)	“This facility has prepared and will operate by a site-specific monitoring plan for each bag leak detection system and submitted the plan to the Administrator for approval according to §63.10897(d)(2).”

Indiana Department of Environmental Management Office of Air Quality

Addendum to the Technical Support Document (TSD) for a Federally Enforceable Operating Permit (FESOP) Renewal

Source Background and Description

Source Name:	Atlas Foundry
Source Location:	P.O. Box 688, Marion, Indiana, 46952
County:	Grant County
SIC Code:	3321
FESOP No.:	F053-27072-00002
Permit Reviewer:	Swarna Prabha

On February 19, 2009, the Office of Air Quality (OAQ) had a notice published in Marion Chronicle Tribune, Marion, Indiana, stating that Atlas Foundry had applied for a renewal to their Federally Enforceable Operating Permit (FESOP) to continue to operate stationary gray and ductile iron foundry, located at Factory Avenue & Henderson Avenue, Marion, Indiana, 46952. The notice also stated that the OAQ proposed to issue a FESOP renewal for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

Comments and Responses

NOTE: The Technical Support Document (TSD) is used by IDEM, OAQ for historical purposes. IDEM, OAQ does not make any changes to the original TSD, but the Permit will have the updated changes.

On March 23, 2009, Pat Gartland of Atlas Foundry submitted comments to IDEM, OAQ on the draft FESOP renewal. The comments and revised permit language are provided below with deleted language as ~~strikeouts~~ and new language **bolded**.

Comment 1: Please revise Condition D.1.4 as noted below. The date for the testing should be 180 days after the effective date of EPA's new or revised test method rather than the publication date. Atlas should be under no obligation until rule is effective as law and the rule may be stayed by a court subsequent to publication. The references to the federal NSR rule for PM_{2.5} should reference the date that was published in the federal register, and the actual date that is five years after the last valid test should be cited. The revisions below make the condition more clear.

D.1.4 Testing Requirements [326 IAC 2-8-5(a)(1),(4)] [326 IAC 2-1.1-11]

In order to demonstrate compliance with Conditions D.1.1 and D.1.2, the Permittee shall perform PM, PM₁₀ and PM_{2.5} testing of baghouse E controlling the particulate emissions associated with the charge handling and melting operations which exhaust through stack E, within 180 days of ~~publication~~ **the effective date** of the new or revised condensable PM test method(s) referenced in the U. S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM_{2.5}), ~~signed on May 8th, 2008 or once every five (5) years from the most recent valid compliance stack test,~~ **published in the May 16, 2008 Federal register or May 2, 2011**, which ever is later. Testing shall be conducted utilizing methods as approved by the Commissioner.

...

Response to Comment 1: Once the test methods are published, they are considered approved methods, thus the testing schedule is based on the publication date. Also, IDEM, OAQ does not assign any date for the stack test to be performed, because the source needs to keep track of the date and schedule for the facility to be tested. The IDEM OAQ has revised the test language as follows to make it clearer.

D.1.4 Testing Requirements [326 IAC 2-8-5(a)(1),(4)] [326 IAC 2-1.1-11]

~~In order to demonstrate compliance with Conditions D.1.1 and D.1.2, the Permittee shall perform PM, PM₁₀ and PM_{2.5} testing of baghouse E controlling the particulate emissions associated with the charge handling and melting operations which exhaust through stack E, within 180 days of publication of the new or revised condensable PM test method(s) referenced in the U. S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM_{2.5}), signed on May 8th, 2008 or once every five (5) years from the most recent valid compliance stack test, which ever is later. Testing shall be conducted utilizing methods as approved by the Commissioner.~~

~~These tests shall be repeated at least once every five (5) years from the date of this most recent valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing. PM₁₀ and PM_{2.5} includes filterable and condensable PM.~~

In order to demonstrate compliance with Conditions D.1.1 and D.1.2, the Permittee shall perform PM, PM₁₀ and PM_{2.5} testing of baghouse E controlling the particulate emissions associated with the charge handling and melting operations which exhaust through stack E as follows:

(a) Within 180 days of publication of the new or revised condensable PM test method(s) referenced in the U. S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM_{2.5}), signed on May 8th, 2008.

or

(b) Five (5) years from the most recent valid compliance stack test, which ever is later.

Testing shall be conducted utilizing methods as approved by the Commissioner. These tests shall be repeated at least five (5) years from the date of this most recent valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing. PM₁₀ and PM_{2.5} includes filterable and condensable PM.

Comment 2: Please revise Condition 2.7 as noted below. The date for the testing should be 180 days after the effective date of EPA's new or revised test method rather than the publication date for the reasons previously stated. Please remove the requirements to conduct repeat stack testing for CO. The original stack test was conducted to determine an emission factor for CO. We believe that repeat testing for CO is not warranted because emission factor previously established is consistent with other available information, the furnace and pouring, cooling, & shakeout operations have not changed since the previously conducted stack tests, and the cost of repeat testing is expensive.

D.2.7 Testing Requirements [326 IAC 2-8-5(a)(1),(4)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Conditions D.2.1 and D.2.2, a compliance stack test of PM, PM₁₀ and PM_{2.5} for baghouse D, which controls the Disa #1 and #2 pouring/casting, Disa #1 and #2 casting cooling, Disa #1 and #2 sand handling, Didion rotary media drum shakeout, and the mesh belt shotblast, two (2) shotblaster operations, the two (2) belt sanders, and the one (1) stand grinder, identified as SG#4, shall be performed within 180 days of ~~publication~~ **the effective date** of the new or revised condensable PM test method(s) referenced in the U. S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM_{2.5}), ~~signed on May 8th, 2008, or once every five (5) years from the most recent valid compliance stack test~~ **Published in the May 16, 2008 Federal Register or May 5, 2009**, which ever is later.

...

- ~~(b) In order to demonstrate the compliance with Condition D.2.5, the Permittee shall perform a compliance stack test of CO for baghouse D, utilizing methods approved by the Commissioner.~~

~~This test shall be repeated no less than once every five (5) years from the date of this most recent valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.~~

Response to Comment 2: Once the test methods are published, they are considered approved methods, thus the testing schedule is based on the publication date. Also, IDEM, OAQ does not assign any date for the stack test to be performed, because the source needs to keep track of the date and schedule for the facility to be tested, as previously stated. The IDEM OAQ agrees that repeat testing for CO is not warranted because emission factor previously established is consistent with other available information, the furnace and pouring, cooling, & shakeout operations have not changed since the previously conducted stack tests. The testing condition D.2.7(b) for CO is removed from the permit, and the language is revised to make it clearer.

D.2.7 Testing Requirements [326 IAC 2-8-5(a)(1),(4)] [326 IAC 2-1.1-11]

- ~~(a) In order to demonstrate compliance with Conditions D.2.1 and D.2.2, a compliance stack test of PM, PM₁₀ and PM_{2.5} for baghouse D, which controls the Disa #1 and #2 pouring/casting, Disa #1 and #2 casting cooling, Disa #1 and #2 sand handling, Didion rotary media drum shakeout, and the mesh belt shotblast, two (2) shotblaster operations, the two (2) belt sanders, and the one (1) stand grinder, identified as SG#4, shall be performed within 180 days of publication of the new or revised condensable PM test method(s) referenced in the U. S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM_{2.5}), signed on May 8th, 2008, or five (5) years from the most recent valid compliance stack test, which ever is later.~~

~~This testing shall be conducted utilizing methods approved by the Commissioner. This test shall be repeated no less than once every five (5) years from the date of most recent valid compliance demonstration. PM₁₀ and PM_{2.5} includes filterable and condensable PM.~~

- ~~(b) In order to demonstrate the compliance with Condition D.2.5, the Permittee shall perform a compliance stack test of CO for baghouse D, utilizing methods approved by the Commissioner.~~

~~This test shall be repeated no less than once every five (5) years from the date of the most recent valid compliance demonstration. PM₁₀ and PM_{2.5} includes filterable and condensable PM. Testing shall be conducted in accordance with Section C - Performance testing.~~

D.2.7 Testing Requirements [326 IAC 2-8-5(a)(1),(4)] [326 IAC 2-1.1-11]

In order to demonstrate compliance with Conditions D.2.1 and D.2.2, a compliance stack test of PM, PM₁₀ and PM_{2.5} for baghouse D, which controls the Disa #1 and #2 pouring/casting, Disa #1 and #2 casting cooling, Disa #1 and #2 sand handling, Didion rotary media drum shakeout, and the mesh belt shotblast, two (2) shotblaster operations, the two (2) belt sanders, and the one (1) stand grinder, identified as SG#4, shall be performed per schedule below:

- (a) Within 180 days of publication of the new or revised condensable PM test method(s) referenced in the U. S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM_{2.5}), signed on May 8th, 2008.**

or

- (b) Five (5) years from the most recent valid compliance stack test, which ever is later.**

These tests shall be conducted utilizing methods approved by the Commissioner. These tests shall be repeated at least five (5) years from the date of the most recent valid compliance demonstration. PM₁₀ and PM_{2.5} includes filterable and condensable PM. Testing shall be conducted in accordance with Section C - Performance testing.

Comment 3: In section D.2.11, the processes controlled by the baghouse are best described as continuous. Please delete D.2.11(b) regarding batch processes to make this requirement more clear to our operators.

D.2.11 Broken or Failed Bag Detection [326 IAC 2-7-6(1)] {326 IAC 2-7-5(1)}

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

Response to Comment 3: As requested by the Permittee, the Section D.2.11 (b) has been deleted from the permit, because the processes controlled by the baghouse are best described as continuous.

D.2.11 Broken or Failed Bag Detection [326 IAC 2-7-6(1)] {326 IAC 2-7-5(1)}

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

...
Comment 4: Please revise Condition D.2.13 as noted below. D.2.13(b) and D.2.13(c) both require records of the amount of metal melted and can therefore be combined.

D.2.13 Record Keeping Requirements

- (a) To document compliance with Condition D.2.1(d), the Permittee shall maintain records of the total hours that any emission unit controlled by baghouse D is in operation on a monthly basis.
- ~~(b) To document compliance with Condition D.2.3(a), the Permittee shall maintain records of the total amount of metal throughput to the Disa #1 pouring line and the Disa #2 pouring line on a monthly basis.~~
- (c) To document compliance with Conditions **D.2.3(a)** and D.2.5(b), the Permittee shall maintain records of the total combined metal throughput to the Disa #1 and Disa #2 pouring/castings, cooling, and shakeout operation on a monthly basis.

Response to Comment 4: As requested by the Permittee, the Condition D.2.13(b), Record Keeping Requirements is combined with Condition D.2.13(c) because the total amount of metal throughput to Dias#1 and Disa #2 is also listed under Condition D.2.13(c).

D.2.13 Record Keeping Requirements

- (a) To document compliance with Condition D.2.1(d), the Permittee shall maintain records of the total hours that any emission unit controlled by baghouse D is in operation on a monthly basis.
- ~~(b) To document compliance with Condition D.2.3(a), the Permittee shall maintain records of the total amount of metal throughput to the Disa #1 pouring line and the Disa #2 pouring line on a monthly basis.~~
- (e b) To document compliance with Conditions **D.2.3(a)** and D.2.5(b), the Permittee shall maintain records of the total combined metal throughput to the Disa #1 and Disa #2 pouring/castings, cooling, and shakeout operation on a monthly basis.
- ~~(d c)~~ To document compliance with Condition D.2.9, the Permittee shall maintain records of visible emission notations of the stack exhausts C and D once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation, (e.g., the process did not operate that day)
- (e d) To document compliance with Condition D.2.10, the Permittee shall maintain records of pressure drop and the fan amperage reading during normal operation. The Permittee shall include in its daily records when a pressure drop reading and the fan amperage reading is not taken and the reason for the lack of a pressure drop reading and the fan amperage reading (e.g., the process did not operate that day)
- (f e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

Comment 5: Please revise Condition D.3.4 as noted below. The date for the testing should be 180 days after the effective date of EPA's new or revised test method rather than the publication date for the reasons previously stated.

D.3.4 Testing Requirements [326 IAC 2-8-5(a)(1),(4)] [326 IAC 2-1.1-11]

In order to demonstrate compliance with Conditions D.3.1(a) (b), (c) and Condition D.3.2, the Permittee shall perform PM, PM₁₀ and PM_{2.5} testing of baghouse A controlling particulates associated with the three (3) stand grinders and the continuous blast steel shotblaster, shall be performed within 180 days of ~~publication~~ **the effective date** of the new or revised condensable PM test method(s) referenced in the U. S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM_{2.5}), ~~signed on May 8th, 2008 or once every five (5) years from the most recent valid compliance stack test,~~ **published in the May 16, 2008 Federal Register or December 7, 2009**, which ever is later.

...

Response to Comment 5: Once the test methods are published, they are considered approved methods, thus the testing schedule is based on the publication date. Also, IDEM, OAQ does not assign particular date for the stack test to be performed, because the source needs to keep track of the date and schedule for the facility to be tested, as previously stated. The language is revised to make it clearer as follows:

D.3.4 Testing Requirements [326 IAC 2-8-5(a)(1),(4)] [326 IAC 2-1.1-11]

~~In order to demonstrate compliance with Conditions D.3.1(a) (b), and (c) and Condition D.3.2, the Permittee shall perform PM, PM₁₀ and PM_{2.5} testing of baghouse A controlling particulates associated with the three (3) stand grinders and the continuous blast steel shotblaster, shall be performed within 180 days of publication of the new or revised condensable PM test method(s) referenced in the U. S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM_{2.5}), signed on May 8th, 2008, or five (5) years from the most recent valid compliance stack test, which ever is later.~~

~~This testing shall be conducted utilizing methods as approved by the Commissioner.~~

~~This test shall be repeated at least once every five (5) years from the date of most recent valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing. PM₁₀ and PM_{2.5} includes filterable and condensable PM.~~

In order to demonstrate compliance with Conditions D.3.1(a)(b)(c) and Condition D.3.2, the Permittee shall perform PM, PM₁₀ and PM_{2.5} testing of baghouse A controlling particulates associated with the three (3) stand grinders and the continuous blast steel shotblaster as follows:

- (a) **Within 180 days of publication of the new or revised condensable PM test method(s) referenced in the U. S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM_{2.5}), signed on May 8th, 2008.**

or

- (b) **Five (5) years from the most recent valid compliance stack test, which ever is later.**

These tests shall be conducted utilizing methods as approved by the Commissioner. These tests shall be repeated at least five (5) years from the date of this most recent valid compliance demonstration. PM₁₀ and PM_{2.5} includes filterable and condensable PM. Testing shall be conducted in accordance with Section C - Performance Testing.

...
Additional changes:

IDEM, OAQ has also included the following updates to the FESOP renewal:

1. The NESHAP applicability description was inadvertently left out from the source description in Sections A.2(a) and D.1(a). The NESHAP applicability description is added as follows:

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) Two (2) electric induction furnaces, equipped with a baghouse, known as baghouse E, installed in 1996, exhausted through Stack E, capacity: 4.4 tons of iron per hour, each.

Under NESHAP Subpart ZZZZZZ, the two electric induction furnaces and the fugitive emissions from foundry operations are considered existing affected sources.

...
SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]: Charge Handling and Melting Operations (Baghouse E)

- (a) Two (2) electric induction furnaces, equipped with a baghouse, known as baghouse E, installed in 1996, exhausted through Stack E, capacity: 4.4 tons of iron per hour, each.

Under NESHAP Subpart ZZZZZZ, the two electric induction furnaces and the fugitive emissions from foundry operations are considered existing affected sources.

- (b) Two (2) charge handling systems, equipped with a baghouse, known as baghouse E, installed in 1996 and 2000, exhausted through Stack E, capacity: 4.4 tons of iron per hour, each.

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

2. Upon further evaluation, the applicability of Subpart UUU (Standards of Performance for Calciners and Dryers in Mineral Industries) NSPS has been determined for this source.

The requirements of the New Source Performance Standard for Calciners and Dryers in Mineral Industries, 40 CFR Part 60.730, Subpart UUU, are not included in the permit because Atlas Foundry Company, Inc. utilizes mechanical sand reclamation and not thermal sand reclamation. Pursuant to EPA's Applicability Determination Index (ADI) database (<http://www.epa.gov/compliance/monitoring/programs/caa/adi.html>) posting dated April 29, 2004 (Control Number: 0500056), emission units used in the reclamation of foundry sand that remove water through direct or indirect heating meet the definition of calciners and dryers as defined in 40 CFR 60.731. However, mechanical sand reclamation does not meet this definition since heat is not being added for the reclamation of the sand.

3. IDEM's Branches and Sections have been renamed. All occurrences to Permit Administration and Development Section and the Permits Branch have been revised to Permit Administration and Support Section, and all occurrences to Asbestos Section, Compliance Data Section, Air Compliance Section, and Compliance Branch have been changed to Compliance and Enforcement Branch as follows:

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

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

~~Compliance Branch, Office of Air Quality
Indiana Department of Environmental Management
100 North Senate Avenue,
Indianapolis, IN 46204-2251~~

~~Indiana Department of Environmental Management
Asbestos Section, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251~~

~~Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251~~

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

....

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE **AND ENFORCEMENT** BRANCH

....

IDEM Contact

Question regarding this permit can be directed to Ms. Swarna Prabha the Indiana Department of Environmental Management, Office of Air Quality, 100 North Senate Avenue, MC 6153 IGCN 1003, Indianapolis, In 46204-2251 or by telephone at 317-234-5376 or toll free at 1-800-452-6027 extension 4-5376.

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

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

Source Description and Location

Source Name:	Atlas Foundry Company, Inc.
Source Location:	Factory and Henderson Avenues, Marion, IN 46952
County:	Grant
SIC Code:	3321
Operation Permit No.:	F053-27072-00002
Permit Reviewer:	Swarna Prabha

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

Existing Approvals

On October 06, 2008, Atlas Foundry submitted an application to the OAQ requesting to renew its operating permit. The source was issued FESOP No. 053-12834-00002, on July 6, 2004. The source has since received the following approvals:

- (1) First Administrative Amendment No.: 053-22350-00002, issued on February 1, 2006; and
- (2) Significant Permit Revision No.: 053 - 25079 - 00002, issued on March 31, 2008.

Enforcement Issues

There are no pending enforcement actions related to this revision.

County Attainment Status

The source is located in Grant County.

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

¹Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.

Unclassifiable or attainment effective April 5, 2005, for PM_{2.5}.

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

- (b) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC emissions and NOx emissions are considered when evaluating the rule applicability relating to ozone. Grant County has been emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
See the State Rule Applicability – Entire Source section.
- (c) Grant County has been classified as attainment in Indiana for pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.
- (d) On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in Indiana.

Fugitive Emissions

This type of operation is one of the twenty-eight (28) listed source categories under 326 IAC 2-2, 326 IAC 2-3 or 326 IAC 2-7, therefore fugitive emissions are counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Permitted Emission Units and Pollution Control Equipment

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

- (a) Two (2) electric induction furnaces, equipped with a baghouse, known as baghouse E, installed in 1996, exhausted through Stack E, capacity: 4.4 tons of iron per hour, each.
 - (b) Two (2) charge handling systems, equipped with a baghouse, known as baghouse E, installed in 1996 and 2000, exhausted through Stack E, capacity: 4.4 tons of iron per hour, each.
 - (c) One (1) Aisco rotary drum shakeout operation, equipped with a wet multi-wash collector, known as wet collector C, installed in 1982, exhausted through Stack C, capacity: 10 tons of iron and 60 tons of sand per hour.
- NOTE: The description for the control device identified as wet scrubber C for Aisco rotary drum shakeout is corrected from scrubber to wet multi-wash collector C.
- (d) One (1) Disa #1 pouring/casting line, 90% of emissions captured by baghouse D, installed in 1982, exhausted through Stack D, capacity: 10 tons of iron per hour.
 - (e) One (1) Disa #1 castings cooling process, equipped with a baghouse, known as baghouse D, installed in 1982, exhausted through Stack D, capacity: 10 tons of iron per hour.
 - (f) One (1) Disa #1 sand handling process, equipped with a baghouse, known as baghouse D, installed in 1982, exhausted through Stack D, capacity: 65 tons of sand per hour.
 - (g) One (1) Disa #2 pouring/casting line, 90% of emissions captured by baghouse D installed in 2000, exhausted through Stack D, capacity: 10 tons of iron per hour.
 - (h) One (1) Disa #2 castings cooling process, equipped with a baghouse, known as baghouse D, installed in 2000, exhausted through Stack D, capacity: 10 tons of iron per hour.
 - (i) One (1) Disa #2 sand handling process, equipped with a baghouse, known as baghouse D, installed in 2000, exhausted through Stack D, capacity: 65 tons of sand per hour.

- (j) One (1) Didion rotary media shakeout drum, equipped with a baghouse, known as baghouse D, installed in 1999, exhausted through Stack D, capacity: 10 tons of iron and 0.2 tons of sand per hour.
- (k) Two (2) shotblast operations, equipped with a baghouse, known as baghouse D, installed in 1963 (Atlas) and 1982 (Peru), exhausted through Stack D, capacity: 5.0 tons of iron per hour, each.
- (l) One (1) mesh belt shotblast machine, equipped with a baghouse, known as baghouse D installed in 1999, exhausted through Stack D, capacity: 5.0 tons of iron castings and 1.25 tons of steel shot per hour.
- (m) Two (2) belt sander, equipped with a baghouse, known as baghouse D, installed in 2002 and 2008, capacity: each 2.0 tons of iron per hour.

NOTE: The one new belt sander, equipped with a baghouse D, installed in 2008, capacity; 2.0 tons of iron per hour has been added to the emission facilities. This facility is similar to the existing belt sander, installed in 2002. There is no increase in emissions because this emission unit has limited emissions as specified in Condition D.2.1.

- (n) One (1) stand grinder, identified as SG#4, installed in 2006, equipped with a baghouse, known as baghouse D, exhausted through Stack D, capacity: 2.67 tons of iron per hour.
- (o) Three (3) stand grinders, equipped with a baghouse, known as baghouse A, installed in 1993, 1993 and 1994, exhausted through Stack A, capacity: 2.67 tons of iron per hour, each.
- (p) One (1) continuous blast steel shotblaster, known as continuous blast, equipped with a baghouse, known as baghouse A, installed in 2004, exhausted through Stack A, capacity: 10.0 tons of iron per hour.
- (q) One (1) Isocure (phenolic urethane cold box) core-system, consisting of two (2) Isocure core machines, one (1) Isocure sand mixer, one (1) sand heater, one (1) sand storage bin (1,000 pounds of sand capacity), a cold sand silo (50 tons capacity) equipped with a filter for PM control, and a pneumatic sand conveying system, installed in 1985, exhausted through Stacks S1, S2 and S4, capacity: 0.75 tons of cores per hour, total.

NOTE: The Capacity for Isocure cold sand silo is originally listed as 28 tons is corrected to 50 tons. There is no change in emissions because emissions are based on the total amount of sand processed.

- (r) One (1) shell (phenolic hot box) core system, consisting of seven (7) shell core machines, four (4) sand conveyors, and two (2) sand silos; four (4) shell core machines installed in 1960, two (2) shell core machines installed in 1983, and one (1) shell core machine installed in 2007, capacity: 28 tons of sand for each silo and 1.0 ton of cores per hour, total.

NOTE: The one (1) shell core machine installed in 2007 is subject to 326 IAC 8-1-6, and was inadvertently left out in the permit.

Emission Units and Control Stacks:

Following is the summary table for the control stack/s and the related emission units:

Operations	Control ID
Two (2) Electric Induction Furnaces, Scrap and Charge Handling	Baghouse E/ stack E
Aisco rotary drum-shakeout operations	Wet collector C/ stack C
Disa #1 and Disa #2 Pouring/Casting/cooling, sand handling, Didion rotary media shakeout drum, shot blast operations, belt sander, and stand grinder SG#4	Baghouse D/ stack D
Three (3) stand grinders, continuous blast steel shotblaster	Baghouse A/ stack A

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

- (a) Grinding and machining operations (326 IAC 6-3-2).
- (b) Degreasing operations that do not exceed 145 gallons per twelve (12) months, except if subject to 326 IAC 20-6 (326 IAC 8-3-3) (326 IAC 8-3-6).
- (c) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.
- (d) Replacement or repair of electrostatic precipitators, bags in baghouses and filter in other air filtration equipment.
- (e) Paved and unpaved roads and parking lots with public access.
- (f) Gasoline generators not exceeding 110 horsepower.
- (g) Natural gas-fired combustion units, rated at a total of 4.509 million British thermal units per hour.
- (h) Mold release agents using low volatile products.
- (i) Combustion source flame safety purging on startup.
- (j) Refractory storage not requiring air pollution control equipment.
- (k) Storage tanks with capacities less than 1,000 gallons.
- (l) Forced and induced draft cooling tower system not regulated under a NESHAP.
- (m) Heat exchanger, cleaning and repair.
- (n) A laboratory as defined in 326 IAC 2-7-1(21)(D).
- (o) Any operation using aqueous solutions containing less than 1 percent by weight of VOCs excluding HAPs.
- (p) One (1) diesel fired emergency generator rated at 400 output horsepower, not to exceed five hundred (500) hours of operation per year.

New Emission Units and Pollution Control Equipment

There are no new emission units being constructed during this renewal process.

Unrestricted Potential Emissions

The table below summarizes the potential to emit of the entire source before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	4639
PM ₁₀ ⁽¹⁾	924
PM _{2.5}	924
SO ₂	1.97
NO _x	5.96
VOC	80.6
CO	99.3

⁽¹⁾ Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant". US EPA has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions.

HAPs	Potential To Emit (tons/year)
Xylenes	8.9
Ethylbenzene	0.6
MIBK	2.5
Glycol Ethers	1.6
Methanol	2.04
Formaldehyde	3.5E-03
n-Hexane	16.6
Toluene	30.5
Lead	negligible
TOTAL HAPs	40.9

- (a) This potential to emit (as defined in IAC 2-7-1(29)) of PM₁₀ and PM_{2.5} is still greater than 100 tons per year. The source is subject to the provisions of 326 IAC 2-7. However, the source has agreed to continue to limit their PM₁₀ and PM_{2.5} emissions to less than Title V levels, therefore the source will be issued a FESOP renewal.
- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of all other criteria pollutants are less than 100 tons per year.
- (c) The potential to emit (as defined in IAC 2-7-1(29)) of any single HAP, is equal to or greater than ten (10) tons per year and/or the potential to emit (as defined in IAC 2-7-1(29)) of any combination of HAPs is equal to or greater than twenty-five tons per year. However the source has accepted to limit their single HAP emissions and total HAPs emissions below Title V limits. Therefore, the source will be issued a FESOP renewal.
- (e) This type of operation is one of the twenty-eight (28) listed source categories under 326 IAC 2-2, 326 IAC 2-3 or 326 IAC 2-7, therefore fugitive emissions are counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.
- (d) These emissions are based upon FESOP SPR No. 059-25079-2000, issued on March 31, 2006.

Emission Calculations

See Appendix A of this document for detailed emission calculations.

Potential to Emit After Issuance of the FESOP

The source has opted to remain a FESOP source. The table below summarizes the potential to emit, reflecting all limits of the emission units. Any control equipment is considered federally enforceable only after issuance of this FESOP, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Process/ Emission Unit	Potential To Emit of the Entire Source (tons/year)									
	PM	PM10*	PM2.5*	SO ₂	NO _x	VOC	CO	Total HAPs	Worst Single HAP	
Two(2) charge handling systems	1.12	0.67	0.67	0	0	0	0	.0057	0.015 (lead)	
Two (2) electric induction furnaces	2.8	5.60	5.60	0	0	0	0	.0868	0.65 (lead)	
Pouring/Casting Disa#1 & 2	26.11	6.15	6.15	0.373	0.187	2.611	91.012**	5.47	negl.	
Castings/Cooling Disa #1	21	30	30	0	0	0		0.0	.104 (lead)	
Pouring/Casting Disa#1 & 2	21	30	30	0	0	0		.0002	negl.	
casting/Cooling Disa # 2	21	30	30	0	0	0		0.0	.08 (lead)	
Aisco Rotary Drum	11.34	11.34	11.34	0	0	11.19		.136	0.029 (lead)	
Didion Rotary Media Drum	21	30	30	0	0	18		.0007	negl.	
Two (2) Shot Blaster	21	30.0	30.0	0	0	0		.0001	negl.	
Mesh Belt Shot blast	21	30.0	30.0	0	0	0		.0001	negl.	
Continuous Shot blast	13.14	13.14	13.14	0	0	0		.0061	negl.	
Three (3) Stand Grinder	0.006	0.028	0.028	0	0	0		.0049	negl.	
1 Belt Sander	21	30.0	30.0	0	0	0		.00007	negl.	
9 Shell Core Machines	0.0	0.0	0.0	0	0	0		0	0.088	negl.
Two (2) Isocure Core Machines	0.0	0.0	0.0	0	0	15.3		0	8.76	negl.
Sand Handling Disa # 1	21.0	30.0	30.0	0	0	0	0	0.0	negl.	
Sand Handling Disa # 2	21.0	30.0	30.0	0	0	0	0	0.0	negl.	
Magnesium Treatment	0.0	0.0	0.0	0	0	0	0	0.0	negl.	
Core Sand System	0.591	0.591	0.591	0	0	0	0	0.0	negl.	
Unpaved Roads	2.75	0.701	0.701	0	0	0	0	0.0	negl.	

Process/ Emission Unit	Potential To Emit of the Entire Source (tons/year)								
	PM	PM10*	PM2.5*	SO ₂	NO _x	VOC	CO	Total HAPs	Worst Single HAP
Emergency Diesel Generator	0.220	0.22	0.22	0.205	3.10	0.251	0.668	0.0	negl.
insignificant activities	2.451	2.563	2.563	0.012	1.98	0.134	1.661	0.043	negl.
Total PTE After Issuance	81.5	71.0	71.0	0.59	5.27	47.6	93.34	14.6	.874 (lead)
Title V Major Source Thresholds	NA	100	100	100	100	100	100	25	10
PSD Major Source Thresholds	100	100	100	100	100	100	100	NA	NA
PTE after Production Limitation. negl. = negligible * Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant". US EPA has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions. ** The emission factor of 4.88 pounds of CO per ton of iron poured is based on the stack test results dated May 8, 2007. The captured CO is primarily emitted through Baghouse D. This emission factor accommodates an additional 2.33 tons of CO emitted per year from the miscellaneous combustion sources and corresponds to a melt rate of 40,000 of iron per hour. There are no PM2.5 Emission Factors in AP42 , PM10 = PM2.5. Limits are based on the existing FESOP # 053-12834-00002 as specified in SPR No.: 053-25079.00002, issued on March 31, 2008.									

(a) FESOP Status

This renewal to an existing Title V minor stationary source will not change the minor status, because the potential to emit criteria pollutants from the entire source will still be limited to less than the Title V major source threshold levels. Therefore, the source will still be subject to the provisions of 326 IAC 2-8 (FESOP).

The following are the existing PM, PM₁₀ and PM_{2.5} emissions limits:

Emission Unit/Operation	PM10 Limit	PM2.5 Limit	PM limit
Two (2) Electric Induction Furnaces and two (2) charge handling systems (Baghouse E)	0.336 (lbs/ton)	0.336 (lbs/ton)	0.210 (lbs/ton)
Disa #1 and Disa #2 Pouring/Casting/cooling, sand handling, Didion rotary media shakeout drum, shot blast operations, belt sander, and stand grinder SG#4 (Baghouse D)	10.0 (lbs/hr)	10.0 (lbs/hr)	7.0 (lbs/hr)
Disa Aisco Rotary Drum Shakeout operation (Wet collector C)	0.608 (lbs/ton)	0.608 (lbs/ton)	0.608 (lbs/ton)
Three (3) stand grinders, continuous blast steel shotblaster (Baghouse A)	3.0 (lbs/hr)	3.0 (lbs/hr)	3.00 (lbs/hr)

Compliance with these limits, combined with the potential to emit PM, PM₁₀ and PM_{2.5} from all other emission units at this source, shall limit the source-wide total potential to emit of PM, PM₁₀ and PM_{2.5} to less than 100 tons per 12 consecutive month period, and shall render 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 not applicable.

- (b) PSD Minor Source 326 IAC 2-2
 This existing PSD minor stationary source will not change the PSD minor status, because the potential to emit of all attainment regulated pollutants from the entire source will continue to be less than the PSD major source threshold levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

Federal Rule Applicability Determination

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

National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (b) This source is subject to the National Emission Standards for Hazardous Air Pollutants (NESHAPs), 40 CFR 63, Subpart ZZZZZZ. It is an existing affected iron and steel foundry area source because it commenced construction before September 17, 2007. Pursuant to 40 CFR 63.10880 the Permittee shall be in compliance with the following requirements in this NESHAP under large foundries.

Nonapplicable portions of the NESHAP will not be included in the permit. The existing affected source associated with the Iron and Steel Foundries is subject to the following portions of 40 CFR 63, Subpart ZZZZZZ:

- (1) 40 CFR 63.10880 (a)
 40 CFR 63.10880 (b)(1)
 40 CFR 63.10880 (e)
 40 CFR 63.10880 (f), but already done
 40 CFR 63.10881 (a)(1), (2), and (3)

- 40 CFR 63.10881 (d)(2)
- 40 CFR 63.10885 (a)
- 40 CFR 63.10885(b)(2), (3), and (4)
- 40 CFR 63.10895 (a), (b), (c)(1), (e).
- 40 CFR 63.10896, all except (a)(5)
- 40 CFR 63.10897(a)(1)
- 40 CFR 63.10897 (d), (e), (f), (g)
- 40 CFR 63.10898 (a)(1), (2), and (3)
- 40 CFR 63.10898 (b), (c), (d), (g), (h), (i), (k), and (l)
- 40 CFR 63.10899 (a)
- 40 CFR 63.10899 (b)(1), (3), (6), (7), (9), (10), (11), (12), (13)(i)
- 40 CFR 63.10899 (c) and (d)
- 40 CFR 63.10900
- 40 CFR 63.10906

There are no requirements of 40 CFR 63 Subpart A – General Provisions, which are incorporated as 326 IAC 20-1-1 and 326 IAC 14-1-1.

- (2) If the permittee is an owner or operator of an area source subject to this 40 CFR 63 Subpart ZZZZZZ, the source is exempt from the obligation to obtain a permit under 40 CFR part 70 or 71.
- (3) This source is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs), 40 CFR 63, Subpart EEEEE (Iron and Steel foundries), (40 CFR Part 63.768 - 63.7765), because this source is not a major source of HAPs as defined in 40 CFR 63.2.
- (4) This source is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs), 40 CFR 63, Subpart RRR (Secondary Aluminum Production), (40 CFR Part 63.1500 - 63.1519), because this source is not a secondary Aluminum Production facility, and is not a major source of hazardous air pollutants (HAPs) as defined in §63.2.
- (4) There are no other National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included for this proposed revision.

Compliance Assurance Monitoring (CAM)

- (c) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the permit, because the potential to emit of the source is limited to less than the Title V major source thresholds and the source is not required to obtain a Part 70 or Part 71 permit.

State Rule Applicability Determination

The following state rules are applicable to the entire source:

- (a) 326 IAC 2-8-4 (FESOP)
This renewal to an existing Title V minor stationary source will not change the minor status, because the potential to emit criteria pollutants from the entire source will still be limited to less than the Title V major source threshold levels. Therefore, the source will still be subject to the provisions of 326 IAC 2-8 (FESOP). See PTE of the Entire Source After Issuance of the FESOP renewal Section above.
- (b) 326 IAC 2-2 (Prevention of Significant Deterioration(PSD))
Atlas Foundry Company, Inc. was constructed prior to the PSD applicability date of August 7, 1977. The source was considered a major PSD source as of the August 7, 1977 rule applicability date. This source is one of the 28 listed source categories, became a minor PSD source with the issuance

of FESOP Renewal No. 053-12834-00002, since all criteria pollutants, including PM, are limited to less than one hundred (100) tons per year.

- (c) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The operation of Atlas Foundry will emit less than ten (10) tons per year for a single HAP and less than twenty-five (25) tons per year for a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.
- (d) 326 IAC 2-6 (Emission Reporting)
Pursuant to 326 IAC 2-6-1, this source is not subject to this rule because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not located in Lake or Porter Counties, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, 326 IAC 2-6 does not apply.
- (e) 326 IAC 5-1 (Opacity Limitations)
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in the permit:
 - (1) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
 - (2) 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.
- (f) 326 IAC 9 (Carbon Monoxide Emission Limits)
Pursuant to 326 IAC 9-1-2(a)(2), this source is not subject to this rule because each of the induction furnaces has a maximum throughput of 4.4 tons per hour which is less than ten (10) tons per hour. Therefore, 326 IAC 2-9-1-1 does not apply.

State Rule Applicability - Individual Facilities

326 IAC 2-8-4 (FESOP)

In order to comply with the requirements of 326 IAC 2-8-4 (FESOP), the source shall comply with the following limits:

Two (2) electric induction furnaces and Two (2) charge handling systems:

The following existing limits will be maintained in the renewal.

- (a) The total combined metal throughput to the two (2) electric induction furnaces shall not exceed 37,300 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (b) The PM emission rate from baghouse E associated with the two (2) electric induction furnaces and the two (2) charge handling systems shall not exceed a total of 0.210 pounds per ton of metal charged and melted.
- (c) The PM₁₀ emission rate from baghouse E associated with the two (2) electric induction furnaces and the two (2) charge handling systems shall not exceed a total of 0.336 pounds per ton of metal charged and melted.
- (d) The PM_{2.5} emission rate from baghouse E associated with the two (2) electric induction furnaces and the two (2) charge handling systems shall not exceed a total of 0.336 pounds per ton of metal charged and melted.

Disa #1 and Disa #2 Pouring/Casting/cooling, sand handling, Didion rotary media shakeout drum, shot blast operations, belt sander, and stand grinder SG#4 (Baghouse D).

The following existing limits will be maintained in the renewal:

- (a) The total PM emission rate from baghouse D shall not exceed a total of 7.00 (seven) pounds per hour.
- (b) The total PM₁₀ emission rate from baghouse D shall not exceed a total of 10.0 (ten) pounds per hour.
- (c) The total PM_{2.5} emission rate from baghouse D shall not exceed a total of 10.0 (ten) pounds per hour.
- (d) The amount of organic HAPs from baghouse D (associated with the Disa #1 and Disa #2 pouring/casting lines as well as the Didion shakeout) and the fugitive HAP emissions from the Disa #1 and Disa #2 pouring/casting lines shall not exceed a total of 2.28 pounds per hour. Compliance with this limit satisfies the requirements of 326 IAC 2-8-4 for a single and the combination of HAPs.
- (f) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
 - (1) The combined metal throughput to the Disa #1 line and the Disa #2 line shall not exceed 37,300 tons per twelve (12) consecutive month period, total, with compliance determined at the end of each month.
 - (2) The total VOC emissions from the Disa #1 and the Disa #2 pouring, cooling and shakeout operations shall not exceed 1.34 pounds per ton of metal.
 - (3) Compliance with the above limits renders the requirements of 326 IAC 8-1-6 not applicable to either of the Disa #1 and the Disa #2 pouring, cooling and shakeout operations.
- (g) Carbon Monoxide (CO) [326 IAC 2-2] [326 IAC 2-8-4]
 - (1) CO emissions from the pouring/castings, cooling, and shakeout operation shall not exceed 4.88 lbs of CO per ton of metal throughput.
 - (2) The combined metal throughput to the pouring/castings, cooling, and shakeout operation shall not exceed 37,300 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with these limits combined with the potential CO emissions from all other emission units at this source will limit the source-wide total potential to emit of CO to less than 100 tons per 12 consecutive month period and will render 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

Three (3) stand grinders and One (1) continuous blast steel shotblaster:

The following existing limits will be maintained in the renewal:

- (a) The PM emission rate from baghouse A associated with the three (3) stand grinders and the continuous blast steel shotblaster shall not exceed a total of 3.00 pounds per hour.
- (b) The PM₁₀ emission rate from baghouse A associated with the three (3) stand grinders and the continuous blast steel shotblaster shall not exceed a total of 3.00 pounds per hour.

- (c) The PM_{2.5} emission rate from baghouse A associated with the three (3) stand grinders and the continuous blast steel shotblaster shall not exceed a total of 3.00 pounds per hour.
- (d) Compliance with the above limits renders the requirements of 326 IAC 2-2 not applicable.
- (e) Compliance with the limit in (b) also satisfies the requirements of 326 IAC 2-8-4 for the entire source.

Two (2) Isocure core machines, installed in 1985, or the two (2) shell core machines, installed in 1983, or the one (1) shell core machine installed in 2007

The following existing limits will be maintained in the renewal:

- (a) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)

Any change or modification which would increase the potential to emit VOC to twenty-five (25) tons per year or more from the two (2) Isocure core machines, installed in 1985, or the two (2) shell core machines, installed in 1983, or the one (1) shell core machine installed in 2007, shall require prior approval from IDEM, OAQ.

- (b) Hazardous Air Pollutants (HAPs) [326 IAC 2-8-4]
The amount of TEA usage from amine gas catalysts in the isocure-core system shall not exceed 17,520 pounds per twelve (12) consecutive month period with compliance determined at the end of each month. Compliance with this limit satisfies the requirements of 326 IAC 2-8-4.

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

- (a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the baghouse E associated with the electric induction furnaces and charge handling operations shall not exceed 28.0 pounds per hour when operating at a total process weight rate of 17.6 tons per hour.
- (b) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the baghouse A associated with the three (3) stand grinders and the continuous blast steel shotblaster shall not exceed 28.4 pounds per hour when operating at a total process weight rate of 18.0 tons per hour.
- (c) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the baghouse D shall not exceed 58.6 pounds per hour when operating at a total process weight rate of 201.2 tons per hour.
- (d) Grinding and machining operations (326 IAC 6-3-2).
The allowable particulate emission rate from the grinding and machining operations shall not exceed the pound per hour emission rate established as E in the following formula:

The pounds per hour limitation in sections (a) through (d) was calculated with the following equation:

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

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

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance

provisions, however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-8-4. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

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

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

Emission Unit	Control Device/stack	Time frame for Testing	Pollutant	Frequency of Testing	Limit or Requirement
Electric Induction furnaces and charge handling system	Baghouse E ⁽¹⁾ stack E	Within 180 days after publication of revised test method or within five (5) years of the last valid compliant stack test, which ever is later.	PM, PM ₁₀ , PM _{2.5}	Once every five (5) years	PM =< 0.21 lbs/ ton metal PM ₁₀ , PM _{2.5} each, =< 0.336 lbs/ton metal
Disa #1, Disa #2, Didion Media Rotary drum, mesh belt shotblast, belt sander, stand grinder SG#4	Baghouse D ⁽²⁾ Stack D	By May 5, 2009 or within 180 days of publication of revised test method, which ever is later.	PM, PM ₁₀ , PM _{2.5}	Once every five (5) years	PM=< 7 lbs/hr PM, PM ₁₀ , PM _{2.5} each =<10 lbs/ hr
Three (3) Stand Grinders and blast steel shot blaster	Baghouse A ⁽³⁾	By December 7, 2009 or within 180 days of publication of revised test method, which ever is later.	PM, PM ₁₀ , PM _{2.5}	Once every five (5) years	PM =< 3 lbs/hr, PM ₁₀ , PM _{2.5} each =<3 lbs/hr
Disa #1, Disa #2, Didion Media Rotary drum, mesh belt shotblast, belt sander, stand grinder SG#4	Baghouse D ⁽⁴⁾ Stack D	Within five (5) years from May 8, 2007.	CO	Once every five (5) years	CO =< 4.88 lbs/ton metal

- 1. The last stack test occurred on May 2, 2006 for PM / PM₁₀ baghouse E / stack E. The source was in compliance at that time. The next scheduled PM/PM₁₀ test will be in 2011. However, due to the new federal rule regarding the PM_{2.5}, the test shall be performed per schedule above.*
- 2. The next scheduled stack test is scheduled by May 5, 2009. However, due to the new federal rule regarding the PM_{2.5}, the test shall be performed per schedule above.*
- 3. The last stack test occurred on December 7, 2004 for PM / PM₁₀ for baghouse A /stack A. The source was in compliance at that time. The next scheduled PM, PM₁₀, PM_{2.5} test will be by December 7, 2009. However, due to the new federal rule regarding the PM_{2.5}, the test shall be performed per schedule above.*
- 4. The default CO emission factor for foundry sector based on the Self-Disclosure Agreement are specified as 6.0 lbs/ton of metal poured for the combined pouring, cooling and shakeout processes. The applicant used CO emission factor of 4.88 lbs/ton of metal based on the stack test performed in 2007. In order to demonstrate compliance, the Permittee is required to perform stack test for compliance with State or Federal requirement as specified.*

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

Control	Parameter	Frequency	Range	Excursions and Exceedances
Electric Induction Furnaces-Baghouse E	Water Pressure Drop	Daily	3.0 to 9.5 inches	Response Steps
	Visible Emissions		Normal-Abnormal	
Disa #1, Disa #2, Didion Rotary drum, shot blaster operation, sanding, grinding-Baghouse D	Water Pressure Drop	Daily	3.0 to 9.5 inches	Response Steps
	Visible Emissions		Normal-Abnormal	
Aisco Rotary drum-wet collector C	Fan Amperage*	Daily	>105 Amps	Response Steps
	Visible Emissions		Normal-Abnormal	
Baghouse A	Water Pressure Drop	Daily	3 to 6 inches	Response Steps

*Per the Permittee the parametric monitoring of the wet collector C controlling the Aisco rotary drum shakeout operation has shown that fan amperage is a more reliable parameter than pressure drop on a day-to-day basis. Therefore, the fan amperage is changed as the primary monitoring parameter, and the pressure drop as the parameter to monitor if the fan amperage is not available. The pressure drop line freezes when it is cold outside.

These monitoring conditions are necessary because the control devices for the above facilities must operate properly to ensure compliance with 326 IAC 6-3 (Process Operations) and 326 IAC 2-8-4 (FESOP).

Conclusion and Recommendation

The staff recommends to the Commissioner that the FESOP Renewal 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 on January 5 and January 6, 2009.

The operation of this stationary gray and ductile iron foundry shall be subject to the conditions of the attached FESOP Renewal No. 053-27072-00002.

Appendix A: Emission Calculations

Grey Iron Foundry Emissions

Company Name: Atlas Foundry Company, Inc.
 Address City IN Zip: Factory and Henderson Avenues, Marion, Indiana 46952
 FESOP: F 053-27072-0002
 Reviewer: S. Prabha

** Process Emissions **

Limited Throughput
37,300

Process:	Rate (tons iron/hr)	Pollutant	Emission Factor (lb/ton produced)	Emissions Before Control (ton/yr)	Type of control	Control Efficiency (%)	Emissions After Control (ton/yr)	Emissions After Limits & Control (ton/yr)		
Scrap & Charge Handling (1996/2000) 2 operations @ 4.4 TPH ea. SCC# 3-04-003-15 FIRE 6.01 AP-42 Ch. 12.10 Fifth edition 1995	8.8	PM	0.60	23.13	Baghouse E	90.00%	2.31	1.12		
		PM-10	0.36	13.88	Baghouse E	90.00%	1.39	0.67		
		SO2	0.00	0.00				0.00	0.0000	
		NOx	0.00	0.00				0.00	0.0000	
		VOC	0.00	0.00				0.00	0.0000	
		CO	0.00	0.00				0.00	0.0000	
		chromium	0.00023	0.00887	Baghouse E	90.00%	0.00089	0.0004		
		cobalt	0.00002	0.00077	Baghouse E	90.00%	0.00008	0.0000		
		nickel	0.00040	0.01542	Baghouse E	90.00%	0.00154	0.0007		
		arsenic	0.00008	0.00308	Baghouse E	90.00%	0.00031	0.0001		
		cadmium	0.00004	0.00154	Baghouse E	90.00%	0.00015	0.0001		
		selenium	0.00001	0.00039	Baghouse E	90.00%	0.00004	0.0000		
		Lead	0.00230	0.08865	Baghouse E	90.00%	0.00887	0.0043		
		Total HAPs							0.01187	0.00574

Allowable Emissions:

The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than 30 tons per hour:

$$P = 8.8 \text{ tons/hr}$$

$$\text{limit} = 4.1 \times (8.8^{0.67}) = 17.6 \text{ lb/hr (allowable)}$$

with potential:

$$2.31 \text{ tons/yr} \times 2000 \text{ lb/ton} / 8760 \text{ hr/yr} = 0.528 \text{ lb/hr (will comply)}$$

Atlas Foundry Company, Inc.
 Factory and Henderson Avenues, Marion, Indiana 46952

F 053-27072-0002 Limited Throughput
 37,300

Process:	Rate (tons iron/hr)	Pollutant	Emission Factor (lb/ton produced)	Emissions Before Control (ton/yr)	Type of control	Control Efficiency (%)	Emissions After Control From Stack Tests (ton/yr)	Emissions After Limits & Control (ton/yr)		
Melting - 2 Electric Induction Furnaces (1996) Source of Criteria Pollutant Factors: EPA SCC# 3-04-003-03 FIRE 6.01 AP-42 Ch. 12.10 Fifth edition 1995	8.8	PM	0.90	34.69	Baghouse E	90.00%	3.47	2.80		
		PM-10	0.86	33.15	Baghouse E	90.00%	3.31	5.60		
		SO2	0.00	0.00			0.00	0.0000		
		NOx	0.00	0.00			0.00	0.0000		
		VOC	0.00	0.00			0.00	0.0000		
		CO	0.00	0.00			0.000	0.0000		
		chromium	0.00023	0.00887	Baghouse E	90.00%	0.00089	0.0004		
		cobalt	0.00002	0.00077	Baghouse E	90.00%	0.00008	0.0000		
		nickel	0.00040	0.01542	Baghouse E	90.00%	0.00154	0.0007		
		arsenic	0.00008	0.00308	Baghouse E	90.00%	0.00031	0.0001		
		cadmium	0.00004	0.00154	Baghouse E	90.00%	0.00015	0.0001		
		manganese	0.02250	0.86724	Baghouse E	90.00%	0.08672	0.0420		
		selenium	0.00001	0.00039	Baghouse E	90.00%	0.00004	0.0000		
		Lead	0.04250	1.63812	Baghouse E	90.00%	0.16381	0.04342		
		Total HAPs							0.25	0.087

* CO Emission Factor used is based on Stack test results

Allowable Emissions:

The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than 30 tons per hour:

$$P = 8.8 \text{ tons/hr}$$

$$\text{limit} = 4.1 \times (8.8^{0.67}) = 17.6 \text{ lb/hr (allowable)}$$

with potential:
 3.47 tons/yr x 2000 lb/ton / 8760 hr/yr = 0.792 lb/hr (will comply)

Process:	Rate (tons iron/hr)	Pollutant	Emission Factor (lb/ton produced)	Emissions Before Control (ton/yr)	Type of control	Control Efficiency (%)	Emissions After Control (ton/yr)	Emissions After Limits & Control (ton/yr)		
UNCONTROLLED	20.0	PM	1.40	122.64		0.000%	122.64	26.110		
Pouring/Casting Disa #1 & 2 (1982 & 2000) Source of Criteria Pollutant Factors: FIRE 6.01 SCC# 3-04-003-18 (except as noted) 50% of the Pouring/Casting Emissions Are Uncontrolled for PM & PM-10 and Metallic HAPs	20.0	PM-10	0.33	28.91		0.000%	28.908	6.155		
		SO2	0.02	1.752				1.752	0.373	
		NOx	0.01	0.876				0.876	0.187	
		VOC	0.14	12.26				12.26	2.61	
		CO	0.00	0.00				0.00	0.000	
		chromium	0.00080	0.0701			0.000%	0.0701	0.015	
		cobalt	0.00007	0.0057			0.000%	0.0057	0.001	
		nickel	0.00141	0.1231			0.000%	0.1231	0.026	
		arsenic	0.00028	0.0241			0.000%	0.0241	0.005	
		cadmium	0.00013	0.0110			0.000%	0.0110	0.002	
		selenium	0.00002	0.0018			0.000%	0.0018	0.000	
		Lead	0.00809	0.7082			0.000%	0.7082	0.1508	
		Total Organic HAPs							24.8	5.28
		Total HAPs							25.7	5.48

Allowable Emissions:

The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than 30 tons per hour:

For each: Disa #1 and Disa #2

$$P = 10 \text{ tons/hr}$$

$$\text{limit} = 4.1 \times (10^{0.67}) = 19.2 \text{ lb/hr (allowable)}$$

with potential:
 61.3 tons/yr x 2000 lb/ton / 8760 hr/yr = 14.0 lb/hr (will comply)

Atlas Foundry Company, Inc.
 Factory and Henderson Avenues, Marion, Indiana 46952

F 053-27072-0002 Limited Throughput
 37,300 tons/year Limited Hours
 6,000

Process:	Rate (tons iron/hr)	Pollutant	Emission Factor (lb/ton produced)	Emissions Before Control (ton/yr)	Type of control	Control Efficiency (%)	Emissions After Control (ton/yr)	Emissions After Limits & Control (ton/yr)	Emissions After Limits & Control (ton/yr)	
Casting/Cooling Disa #1 (1982) Source of Criteria Pollutant Factors: FIRE 6.01 SCC# 3-04-003-25	10.0	PM	1.40	61.32	Baghouse D	99.900%	0.061	21.000	0.042	
		PM-10	1.40	61.32	Baghouse D	99.900%	0.061	30.000	0.042	
		SO2	0.00	0.00			0.00	0.000	0.000	
		NOx	0.00	0.00			0.00	0.000	0.000	
		VOC	0.00	0.00			0.00	0.000	0.000	
		CO	---	0.00			0.00	0.000	0.000	
		Lead	---	0.00	Baghouse D	99.900%	0.00	0.0000	0.000	
		Total HAPs						0.00	0.00	0.00

Baghouse D is limited to 21.0 tons of PM and 30 tons of PM-10 per year by limited emission rate of 7.00 and 10.0 lbs/hr of PM and PM-10, respectively with 6,000 hours of operation per year

Allowable Emissions:

The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than 30 tons per hour:

$$P = 10 \text{ tons/hr}$$

$$\text{limit} = 4.1 \times (10^{0.67}) = 19.2 \text{ lb/hr (allowable)}$$

with potential:

$$0.061 \text{ tons/yr} \times 2000 \text{ lb/ton} / 8760 \text{ hr/yr} = 0.014 \text{ lb/hr (will comply)}$$

Process: CONTROLLED	Rate (tons iron/hr)	Pollutant	Emission Factor (lb/ton produced)	Emissions Before Control (ton/yr)	Type of control	Control Efficiency (%)	Emissions After Control (ton/yr)	Emissions After Limits & Control (ton/yr)	Emissions After Limits & Control (ton/yr)	
Pouring/Casting Disa #1 & #2 (1982 & 2000) Source of Criteria Pollutant Factors: FIRE 6.01 SCC# 3-04-003-18 (except as noted) 50% of the Pouring/Casting Emissions Are Uncontrolled for PM & PM-10 and Metallic HAPs	20.0	PM	1.40	122.64	Baghouse D	99.900%	0.123	21.000	0.084	
		PM-10	0.33	28.91	Baghouse D	99.900%	0.029	30.000	0.020	
		Accounted For in	SO2	0.00	0.000			0.000	0.000	0.000
		Uncontrolled	NOx	0.00	0.000			0.000	0.000	0.000
		CO	---	0.000			0.000	0.000	0.000	
		chromium	0.00080	0.070	Baghouse D	99.900%	0.00007	0.00001	0.00005	
		cobalt	0.00007	0.006	Baghouse D	99.900%	0.00001	0.00000	0.00000	
		nickel	0.00141	0.123	Baghouse D	99.900%	0.00012	0.00003	0.00008	
		arsenic	0.00028	0.024	Baghouse D	99.900%	0.00002	0.00001	0.00002	
		cadmium	0.00013	0.011	Baghouse D	99.900%	0.00001	0.00000	0.00001	
		selenium	0.00002	0.002	Baghouse D	99.900%	0.00000	0.00000	0.00000	
		Lead	0.00809	0.708	Baghouse D	99.900%	0.00071	0.00015	0.00049	
		Total HAPs						0.001	0.0002	0.001

Baghouse D is limited to 21.0 tons of PM and 30 tons of PM-10 per year by limited emission rate of 7.00 and 10.0 lbs/hr of PM and PM-10, respectively with 6,000 hours of operation per year

Allowable Emissions:

The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than 30 tons per hour:

For each: Disa #1 and Disa #2

$$P = 0.1 \text{ tons/hr}$$

$$\text{limit} = 4.1 \times (0.1^{0.67}) = 0.877 \text{ lb/hr (allowable)}$$

with potential:

$$0.0613 \text{ tons/yr} \times 2000 \text{ lb/ton} / 8760 \text{ hr/yr} = 0.014 \text{ lb/hr (will comply)}$$

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 Factory and Henderson Avenues, Marion, Indiana 46952

F 053-27072-0002 Limited Throughput
 37,300 tons/year Limited Hours
 6,000

Process:	Rate (tons iron/hr)	Pollutant	Emission Factor (lb/ton produced)	Emissions Before Control (ton/yr)	Type of control	Control Efficiency (%)	Emissions After Control (ton/yr)	Emissions After Limits & Control (ton/yr)	Emissions After Limits & Control (ton/yr)	
Castings Cooling Disa #2 (2000) Source of Criteria Pollutant Factors: FIRE 6.01 SCC# 3-04-003-25	10.0	PM	1.40	61.32	Baghouse D	99.900%	0.061	21.000	0.042	
		PM-10	1.40	61.32	Baghouse D	99.900%	0.061	30.000	0.042	
		SO2	0.00	0.00			0.000	0.000	0.000	
		NOx	0.00	0.00			0.000	0.000	0.000	
		VOC	0.00	0.00			0.000	0.000	0.000	
		CO	---	0.00			0.000	0.000	0.000	
		Lead	---	0.00		Baghouse D	99.900%	0.000	0.0000	0.000
		Total HAPs						0.000	0.000	0.000

Baghouse D is limited to 21.0 tons of PM and 30 tons of PM-10 per year by limited emission rate of 7.00 and 10.0 lbs/hr of PM and PM-10, respectively with 6,000 hours of operation per year

Allowable Emissions:

The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than 30 tons per hour:

$$P = 10 \text{ tons/hr}$$

$$\text{limit} = 4.1 \times (10^{0.67}) = 19.2 \text{ lb/hr (allowable)}$$

with potential:

$$0.1 \text{ tons/yr} \times 2000 \text{ lb/ton} / 8760 \text{ hr/yr} = 0.014 \text{ lb/hr (will comply)}$$

Process:	Rate (tons iron/hr)	Pollutant	Emission Factor (lb/ton produced)	Emissions Before Control (ton/yr)	Type of control	Control Efficiency (%)	Emissions After Control (ton/yr)	Limited Throughput 37,300 tons/year
Aisco Rotary Drum (1982) Shakeout Source of Criteria Pollutant Factors: FIRE 6.01 SCC# 3-04-003-31 AP-42 Ch. 12.10 Fifth edition 1995	10.0	PM	3.20	140.16	Scrubber C	81.00%	26.63	11.34
		PM-10	2.24	98.11	Scrubber C	81.00%	18.64	11.34
		SO2	0.00	0.00			0.00	0.00
		NOx	0.00	0.00			0.00	0.00
		VOC	0.60	26.28			26.28	11.19
		CO	---	0.00			0.00	0.0000
		chromium	0.00122	0.05344	Scrubber C	81.00%	0.0102	0.0043
		cobalt	0.00010	0.00438	Scrubber C	81.00%	0.0008	0.0004
		nickel	0.00214	0.09373	Scrubber C	81.00%	0.0178	0.0076
		arsenic	0.00042	0.01840	Scrubber C	81.00%	0.0035	0.0015
		cadmium	0.00019	0.00832	Scrubber C	81.00%	0.0016	0.0007
		selenium	0.00003	0.00131	Scrubber C	81.00%	0.0002	0.0001
		Lead	0.01232	0.53962	Scrubber C	81.00%	0.1025	0.0437
		Total HAPs						0.137

Elected Limit

The AP-42 VOC emission of 1.2 lbs/ton has been split in half between the two in-series shakeout operations since there is a fixed amount of VOC which can be released

Allowable Emissions:

The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than 30 tons per hour:

Allowable based on Sand + Metal (60+10)

$$P = 70 \text{ tons/hr}$$

$$\text{limit} = 55 \times (70^{0.11 - 40}) = 47.8 \text{ lb/hr (allowable)}$$

with potential:

$$26.6 \text{ tons/yr} \times 2000 \text{ lb/ton} / 8760 \text{ hr/yr} = 6.08 \text{ lb/hr (will comply)}$$

Atlas Foundry Company, Inc.
 Factory and Henderson Avenues, Marion, Indiana 46952

F 053-27072-0002 Limited Throughput
 37,300 tons/year Limited Hours
 6,000

Process:	Rate (tons iron/hr)	Pollutant	Emission Factor (lb/ton produced)	Emissions Before Control (ton/yr)	Type of control	Control Efficiency (%)	Emissions After Control (ton/yr)	Emissions After Limits & Control (ton/yr)	Emissions After Limits & Control (ton/yr)	
Didion Rotary Media Drum (1999) <i>Source of Criteria</i> <i>Pollutant Factors:</i> <i>FIRE 6.01</i> <i>SCC# 3-04-003-31</i> <i>AP-42 Ch. 12.10</i> <i>Fifth edition 1995</i>	10.0	PM	3.20	140.16	Baghouse D	99.900%	0.1402	21.000	0.096	
		PM-10	2.24	98.11	Baghouse D	99.900%	0.0981	30.000	0.067	
		SO2	0.00	0.00				0.0000000	0.00	0.000
		NOx	0.00	0.00				0.0000000	0.00	0.000
		VOC	0.60	26.28				26.2800000	11.19	18.000
		CO	---	0.00				0.0000000	0.000000	0.00000
		chromium	0.00122	0.05344	Baghouse D	99.900%	0.0000534	0.000023	0.00004	0.00004
		cobalt	0.00010	0.00438	Baghouse D	99.900%	0.0000044	0.000002	0.00000	0.00000
		nickel	0.00214	0.09373	Baghouse D	99.900%	0.0000937	0.000040	0.00006	0.00006
		arsenic	0.00042	0.01840	Baghouse D	99.900%	0.0000184	0.000008	0.00001	0.00001
		cadmium	0.00019	0.00832	Baghouse D	99.900%	0.0000083	0.000004	0.00001	0.00001
		selenium	0.00003	0.00131	Baghouse D	99.900%	0.0000013	0.000001	0.00000	0.00000
		Lead	0.01232	0.53962	Baghouse D	99.900%	0.0005396	0.000230	0.00037	0.00037
		Total HAPs							0.00072	0.00031

The AP-42 VOC emission of 1.2 lbs/ton has been split in half between the two in-series shakeout operations since there is a fixed amount of VOC which can be released
 Baghouse D is limited to 21.0 tons of PM and 30 tons of PM-10 per year by limited emission rate of 7.00 and 10.0 lbs/hr of PM and PM-10, respectively with 6,000 hours of operation per year

Allowable Emissions:

The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than 30 tons per hour:

Allowable based on Sand + Metal (0.2+10)

P= 10.2 tons/hr

limit = 4.1 x (10.2 ^0.67) = 19.4 lb/hr (allowable)

with potential:

0.1 tons/yr x 2000 lb/ton / 8760 hr/yr = 0.032 lb/hr (will comply)

Process:	Rate (tons iron/hr)	Pollutant	Emission Factor (lb/ton produced)	Emissions Before Control (ton/yr)	Type of control	Control Efficiency (%)	Emissions After Control (ton/yr)	Emissions After Limits & Control (ton/yr)	Emissions After Limits & Control (ton/yr)		
Two (2) Shot Blasters (Atlas 1963, Peru 1982) <i>Source of Criteria</i> <i>Pollutant Factors:</i> <i>FIRE 6.01</i> <i>SCC# 3-04-003-31</i> <i>AP-42 Ch. 12.10</i>	10.0	PM	17.00	744.60	Baghouse D	99.900%	0.745	21.000	0.510		
		PM-10	1.70	74.46	Baghouse D	99.900%	0.074	30.000	0.051		
		SO2	0.00	0.00				0.000	0.000	0.000	
		NOx	0.00	0.00				0.000	0.000	0.000	
		VOC	0.00	0.00				0.000	0.000	0.000	
		CO	---	0.00				0.000	0.000	0.000	
		arsenic	0.00221	0.09680	Baghouse D	99.900%	0.0001	0.00004	0.00007	0.00007	
		cadmium	0.00102	0.04468	Baghouse D	99.900%	0.0000	0.00002	0.00003	0.00003	
		selenium	0.00017	0.00745	Baghouse D	99.900%	0.0000	0.00000	0.00001	0.00001	
		Lead	0.00450	0.19710	Baghouse D	99.900%	0.0002	0.0001	0.00014	0.00014	
		Total HAPs							0.0003	0.0001	0.0002

Shotblaster @ 5 TPH each

Baghouse D is limited to 21.0 tons of PM and 30 tons of PM-10 per year by limited emission rate of 7.00 and 10.0 lbs/hr of PM and PM-10, respectively with 6,000 hours of operation per year

Allowable Emissions:

The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than 30 tons per hour:

P= 10 tons/hr each

limit = 4.1 x (10 ^0.67) = 19.2 lb/hr (allowable)

with potential:

0.7 tons/yr x 2000 lb/ton / 8760 hr/yr = 0.170 lb/hr (will comply)

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Limited Throughput	Limited Hours
37,300 tons/year	6,000

Process:	Rate (tons iron/hr)	Pollutant	Emission Factor (lb/ton produced)	Emissions Before Control (ton/yr)	Type of control	Control Efficiency (%)	Emissions After Control (ton/yr)	Emissions After Limits & Control (ton/yr)	Emissions After Limits & Control (ton/yr)		
Mesh Belt Shotblast (1999) <i>Source of Criteria</i> <i>Pollutant Factors:</i> FIRE 6.01 SCC# 3-04-003-31 AP-42 Ch. 12.10	5.0	PM	17.00	372.30	Baghouse D	99.900%	0.372	21.000	0.255		
		PM-10	1.70	37.23	Baghouse D	99.900%	0.037	30.000	0.026		
		SO2	0.00	0.00			0.000	0.0000	0.000		
		NOx	0.00	0.00			0.000	0.0000	0.000		
		VOC	0.00	0.00			0.000	0.0000	0.000		
		CO	---	0.00			0.000	0.0000	0.000		
		arsenic	0.0022	0.048	Baghouse D	99.900%	0.000048	0.000041	0.000033		
		cadmium	0.0010	0.022	Baghouse D	99.900%	0.000022	0.000019	0.000015		
		selenium	0.0002	0.00	Baghouse D	99.900%	0.000004	0.000003	0.000003		
		Lead	0.0045	0.099	Baghouse D	99.900%	0.000099	0.000084	0.000068		
		Total HAPs							0.000173	0.000147	0.000119

Baghouse D is limited to 21.0 tons of PM and 30 tons of PM-10 per year by limited emission rate of 7.00 and 10.0 lbs/hr of PM and PM-10, respectively with 6,000 hours of operation per year

Allowable Emissions:

The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than 30 tons per hour:

$$P = 5 \text{ tons/hr}$$

$$\text{limit} = 4.1 \times (5^{0.67}) = 12.1 \text{ lb/hr (allowable)}$$

with potential:
 0.37 tons/yr x 2000 lb/ton / 8760 hr/yr = 0.085 lb/hr (will comply)

Process:	Rate (tons iron/hr)	Pollutant	Emission Factor (lb/ton produced)	Emissions Before Control (ton/yr)	Type of control	Control Efficiency (%)	Emissions After Control (ton/yr)		
Continuous Shotblast (2004) <i>Source of Criteria</i> <i>Pollutant Factors:</i> FIRE 6.01 SCC# 3-04-003-31 AP-42 Ch. 12.10	10.0	PM	17.00	744.6	Baghouse A	98.239%	13.112		
		PM-10	1.70	74.5	Baghouse A	82.400%	13.105		
		SO2	0.00	0.00			0.000		
		NOx	0.00	0.00			0.000		
		VOC	0.00	0.00			0.000		
		CO	---	0.00			0.000		
		arsenic	0.00221	0.09680	Baghouse A	98.239%	0.002		
		cadmium	0.00102	0.04468	Baghouse A	98.239%	0.0008		
		selenium	0.00017	0.00745	Baghouse A	98.239%	0.0001		
		Lead	0.00450	0.19710	Baghouse A	98.239%	0.0035		
		Total HAPs							0.006

**Baghouse A
 Total
 13.14
 13.14**

Allowable Emissions:

The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than 30 tons per hour:

$$P = 10 \text{ tons/hr}$$

$$\text{limit} = 4.1 \times (10^{0.67}) = 19.2 \text{ lb/hr (allowable)}$$

with potential:
 13.1 tons/yr x 2000 lb/ton / 8760 hr/yr = 2.99 lb/hr (will comply)

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Process:	Rate (tons iron/hr)	Pollutant	Emission Factor (lb/ton produced)	Emissions Before Control (ton/yr)	Type of control	Control Efficiency (%)	Emissions After Control (ton/yr)		
3 Stand Grinders (1993, 1993, 1994) Source of Criteria Pollutant Factors: FIRE 6.01 SCC# 3-04-003-60 AP-42 Ch. 12.10	8.0	PM	0.01	0.350	Baghouse A	98.239%	0.0062		
		PM-10	0.0045	0.158	Baghouse A	82.400%	0.0278		
		SO2	0.00	0.00			0.000		
		NOx	0.00	0.00			0.000		
		VOC	0.00	0.00			0.000		
		CO	---	0.00			0.000		
		arsenic	0.00221	0.07744	Baghouse A	98.239%	0.001		
		cadmium	0.00102	0.03574	Baghouse A	98.239%	0.001		
		selenium	0.00017	0.00596	Baghouse A	98.239%	0.0001		
		Lead	0.00450	0.15768	Baghouse A	98.239%	0.003		
		Total HAPs							0.005

Baghouse A
Total
13.14
13.14

Allowable Emissions:

The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than 30 tons per hour:

$$P = 8 \text{ tons/hr}$$

$$\text{limit} = 4.1 \times (8^{0.67}) = 16.5 \text{ lb/hr (allowable)}$$

with potential:
0.006 tons/yr x 2000 lb/ton / 8760 hr/yr = 0.001 lb/hr (will comply)

Process:	Rate (tons iron/hr)	Pollutant	Emission Factor (lb/ton produced)	Emissions Before Control (ton/yr)	Type of control	Control Efficiency (%)	Emissions After Control (ton/yr)		
1 Belt Sander (2002) Source of Criteria Pollutant Factors: FIRE 6.01 SCC# 3-04-003-60 AP-42 Ch. 12.10	2.0	PM	0.01	0.088	Baghouse D	99.900%	21.000		
		PM-10	0.0045	0.039	Baghouse D	99.900%	30.000		
		SO2	0.00	0.00		0.00%	0.000000		
		NOx	0.00	0.00		0.00%	0.000000		
		VOC	0.00	0.00		0.00%	0.000000		
		CO	---	0.00		0.00%	0.000000		
		arsenic	0.00221	0.01936	Baghouse D	99.900%	0.000194		
		cadmium	0.00102	0.00894	Baghouse D	99.900%	0.000089		
		selenium	0.00017	0.00149	Baghouse D	99.900%	0.000015		
		Lead	0.00450	0.03942	Baghouse D	99.900%	0.0000394		
		Total HAPs							0.000069

Baghouse D
Total
Total

Limited Hours 6,000
Emissions After Limits & Control (ton/yr)
0.00006
0.00003
0.000
0.000
0.000
0.000
0.000013
0.000006
0.000001
0.000027
0.000047

Baghouse D is limited to 21.0 tons of PM and 30 tons of PM-10 per year by limited emission rate of 7.00 and 10.0 lbs/hr of PM and PM-10, respectively with 6,000 hours of operation per year

Allowable Emissions:

The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than 30 tons per hour:

$$P = 2 \text{ tons/hr}$$

$$\text{limit} = 4.1 \times (2^{0.67}) = 6.52 \text{ lb/hr (allowable)}$$

with potential:
21.00 tons/yr x 2000 lb/ton / 8760 hr/yr = 4.79 lb/hr (will comply)

Process:	Rate (tons sand/hr)	Pollutant	Emission Factor (lb/ton produced)	Emissions Before Control (ton/yr)	Type of control	Control Efficiency (%)	Emissions After Control (ton/yr)
9 Shell Core Machines (7 - 1960, 2- 1983) Source of VOC Emission Factor: AIRS US EPA 450-90-003 and Form R Reporting of Binder Chemicals Used in Foundries, 1998 VOC = Formaldehyde VOC = 0.00001 pounds of formaldehyde per pound of sand = 0.02 pounds per ton of sand PM and PM10 emissions accounted for in sand handling	1.00	PM	0.00	0.00	none	0.00%	0.00
		PM-10	0.00	0.00	none	0.00%	0.00
		SO2	0.00	0.00	none	0.00%	0.00
		NOx	0.00	0.00	none	0.00%	0.00
		VOC	0.0200	0.088	none	0.00%	0.088
		CO	---	0.00	none	0.00%	0.00
		Lead	---	0.00	none	0.00%	0.00
Total HAPs							0.088

Process:
 Two (2) Isocore Core Machines (1985) @ 1,500 lbs/hr = 0.75 tons of cores/hr
 Resins PM and PM10 emissions accounted for in sand handling

1.5% binder (resin) content
 Resin usage = 0.015 *1500= 22.5 lbs of resin per hour
 0.05 pounds of VOC per pound of resin 1.125 lbs of VOC per hour

Catalyst
 2 pounds per hour of 100% VOC catalyst added
 Assume all catalyst = amine gas = TEA
 Total VOC 3.13 lbs of VOC per hour
 Atlas Requested: 3.50 lbs of VOC per hour
 HAP/TEA 8.76 tons/yr

Total 15.3 tons of VOC/yr

Process:	Rate (tons sand/hr)	Pollutant	Emission Factor (lb/ton)	Emissions Before Control (ton/yr)	Type of control	Control Efficiency (%)	Emissions After Control (ton/yr)	Potential Throughput 569400 tons/year	Limited Hours 6,000
Sand Handling Disa #1 (1982) Source of Criteria	65	PM	3.6	1024.9	Baghouse D	99.900%	1.025	21.000	0.702
		PM-10	0.54	153.7	Baghouse D	99.900%	0.154	30.000	0.105
Pollutant Factors: FIRE 6.23 EPA SCC# 3-04-003-50									

Sand throughput based on May 5, 2004 stack test
 Baghouse D is limited to 21.0 tons of PM and 30 tons of PM-10 per year by limited emission rate of 7.00 and 10.0 lbs/hr of PM and PM-10, respectively with 6,000 hours of operation per year
 Allowable Emissions:

The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates greater than 30 tons per hour:

P= 65 tons/hr

limit = $55 \times (65^{0.11}) - 40 = 47.1 \text{ lb/hr}$ (allowable)

with potential:
 $1.0 \text{ tons/yr} \times 2000 \text{ lb/ton} / 8760 \text{ hr/yr} = 0.234 \text{ lb/hr}$ (will comply)

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Process:	Rate (tons sand/hr)	Pollutant	Emission Factor (lb/ton)	Emissions Before Control (ton/yr)	Type of control	Control Efficiency (%)	Emissions After Control (ton/yr)	Emissions After Limits & Control (ton/yr)	Emissions After Limits & Control (ton/yr)	Potential Throughput 569400 tons/year	Limited Hours 6,000
Sand Handling Disa #2 (2000)	65	PM	3.6	1024.9	Baghouse D	99.900%	1.025	21.000	0.702		
Source of Criteria		PM-10	0.54	153.7	Baghouse D	99.900%	0.154	30.000	0.105		
Pollutant Factors:											
FIRE 6.23											
EPA SCC# 3-04-003-50											

Sand throughput based on May 5, 2004 stack test

Baghouse D is limited to 21.0 tons of PM and 30 tons of PM-10 per year by limited emission rate of 7.00 and 10.0 lbs/hr of PM and PM-10, respectively with 6,000 hours of operation per year

Allowable Emissions:

The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates greater than 30 tons per hour:

$$P = 65 \text{ tons/hr}$$

$$\text{limit} = 55 \times (65^{0.11}) - 40 = 47.1 \text{ lb/hr (allowable)}$$

with potential:

$$1.0 \text{ tons/yr} \times 2000 \text{ lb/ton} / 8760 \text{ hr/yr} = 0.234 \text{ lb/hr (will comply)}$$

On June 30, 2004, Atlas Foundry Company, Inc. agree to not to treat any iron with the magnesium treatment station and therefore, there will be no emissions from this process in the future.

Process:	Rate (tons iron/hr)	Pollutant	Emission Factor (lb/ton produced)	Emissions Before Control (ton/yr)	Type of control	Control Efficiency (%)	Emissions After Control (ton/yr)	Emissions After Limits & Control (ton/yr)	Limited Throughput 0 tons/year
Magnesium Treatment (2000)	0	PM	1.80	0.00	Sigmat Process	95.00%	0.00	0.000	
Source of Criteria		PM-10	1.80	0.00	Sigmat Process	95.00%	0.00	0.000	
Pollutant Factors:		SO2	0.00	0.00			0.00	0.000	
FIRE 6.01		NOx	0.00	0.00			0.00	0.000	
SCC# 3-04-003-21		VOC	0.01	0.00			0.000	0.000	
AP-42 Ch 12.10		CO	0.00	0.00			0.000	0.000	
Fifth edition 1995		Lead	0.04	0.00	Sigmat Process	95.00%	0.000	0.000	
		Total HAPs					0.000	0.000	

Allowable Emissions:

The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than 30 tons per hour:

$$P = 0 \text{ tons/hr}$$

$$\text{limit} = 4.1 \times (0^{0.67}) = 0.0 \text{ lb/hr (allowable)}$$

with potential:

$$0.0 \text{ tons/yr} \times 2000 \text{ lb/ton} / 8760 \text{ hr/yr} = 0.000 \text{ lb/hr (will comply)}$$

Methodology:

Potential Emissions before controls = Rate (units/hr) x Ef(lbs/unit) x 8760 hrs/yr / 2000 lbs/hr

Potential Emissions after controls = (1-efficiency/100) x Ebc

1 lb = 2000 tons

Process:	Rate (tons sand/hr)	Pollutant	Emission Factor (lb/ton)	Emissions Before Control (ton/yr)	Type of control	Control Efficiency (%)	Emissions After Control (ton/yr)	Emissions After Limits & Control (ton/yr)
Core Sand System	0.75	PM	3.6	11.8	Filter	95.0%	0.591	
Source of Criteria		PM-10	0.54	1.8	Filter	95.0%	0.591	
Pollutant Factors:								
FIRE 6.23								
EPA SCC# 3-04-003-50								

elected

Allowable Emissions:

The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates greater than 30 tons per hour:

$$P = 0.75 \text{ tons/hr}$$

$$\text{limit} = 4.1 \times (0.75^{0.67}) = 3.38 \text{ lb/hr (allowable)}$$

with potential:

$$0.591 \text{ tons/yr} \times 2000 \text{ lb/ton} / 8760 \text{ hr/yr} = 0.135 \text{ lb/hr (will comply)}$$

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Unpaved Roads

$$\frac{3.0 \text{ trips/hr} \times 0.100 \text{ miles/roundtrip} \times 8760 \text{ hrs/yr}}{2628.0 \text{ miles per year}}$$

For PM

$$E_f = k \left[\frac{s}{12} \right]^{0.7} \left[\frac{W}{3} \right]^b \left[\frac{365-p}{365} \right]$$
 5.38
 4.9
 4.8
 0.45
 39
 125

For PM-10

$$E_f = k \left[\frac{s}{12} \right]^{0.9} \left[\frac{W}{3} \right]^b \left[\frac{365-p}{365} \right]$$
 1.37 lb/mile
 where k = 1.5 for PM-10) (k=4.9 for PM-30 or TSP)
 s = 4.8 mean % silt content of unpaved roads
 b = 0.45 (b also = 0.45 for PM-30 or TSP)
 W = 39 tons average vehicle weight
 p = 125 254mm of precipitation (See Figure 13.2.2-1)

5.38 lb/mi x 2628 mi/yr = PM **7.07 tons/yr**
 2000 lb/ton

1.37 lb/mi x 2628 mi/yr = PM-10 **1.80 tons/yr**
 2000 lb/ton

Reflecting melt limit of 30,000 tons per year, PM **2.75 tons/yr**
 PM-10 **0.70 tons/yr**

Other Insignificant Activities Actual Emissions Calculated by Atlas Foundry as per correspondence received December 26, 2001

	PM	PM-10	SO2	NOx	VOC	CO	Total HAPs
Back-up Gasoline Generator	0.000001	0.000001	0.0000012	0.0000229	0.00004265	0.00088	0.00005915
Grinding and Machining	2.41	2.41	0	0	0	0	0
Mold Release Agents	0	0	0	0	0.005175	0	0.005175
Degreasing Operations	0	0	0	0	0.0201	0	0.000402
Natural Gas @ 4.509 mmBtu/hr	0.038	0.15	0.012	1.98	0.109	1.66	0.037
Subtotal Other Insignificant	2.45	2.56	0.012	1.98	0.134	1.66	0.043

Emergency Diesel Generator (2004)

400.0 Output Horsepower 200000.0 HP-Hrs/yr

Emission Factor in lb/hp-hr	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Potential Emission in tons/yr	0.220	0.220	0.205	3.10	0.251	0.668

Methodology

Potential Throughput (hp-hr/yr) = hp * 500 hr/yr
 Use a conversion factor of 7,000 Btu per hp-hr to convert from horsepower to Btu/hr, unless the source gives you a source-specific brake-specific fuel consumption. (AP- Emission Factors are from AP42 (Supplement B 10/96), Table 3.3-2
 Emission (tons/yr) = [Heat input rate (MMBtu/hr) x Emission Factor (lb/MMBtu)] * 8760 hr/yr / (2,000 lb/ton)
 Emission (tons/yr) = [Potential Throughput (hp-hr/yr) x Emission Factor (lb/hp-hr)] / (2,000 lb/ton)

*PM emission factors are assumed to be equivalent to PM10 emission factors. No information was given regarding which method was used to determine the factor or the fraction of PM10 which is condensable.

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Proposed summary of Emissions Before Controls

Emission Unit	PM	PM-10	SO2	NOx	VOC	CO	Total HAPs
Scrap & Charge Handling (1996/2000)	23.1	13.9	0.000	0.000	0.000	0.000	0.119
Melting - 2 Electric	34.7	33.1	0.000	0.000	0.000	0.000	2.535
Pouring/Casting Disa #1 & #2 (1982 & 2000)	122.6	28.9	1.75	0.876	12.3	0.000	25.735
Castings Cooling Disa #1 (1982)	61.3	61.3	0.000	0.000	0.000	0.000	0.000
Pouring/Casting Disa #1 & #2 (1982 & 2000)	122.6	28.9	0.000	0.000	0.000	0.000	0.944
Castings Cooling Disa #2 (2000)	61.3	61.3	0.000	0.000	0.000	0.000	0.000
Aisco Rotary Drum (1982)	140	98.1	0.000	0.000	26.28	0.000	0.719
Didion Rotary Media Drum (1999)	140	98.1	0.000	0.000	26.28	0.000	0.719
Two (2) Shot Blasters (Atlas 1963, Peru 1982)	745	74.5	0.000	0.000	0.000	0.000	0.346
Mesh Belt Shotblast (1999)	372	37.2	0.000	0.000	0.000	0.000	0.173
Continuous Shotblast (2004)	745	74.5	0.000	0.000	0.000	0.000	0.346
3 Stand Grinders (1993, 1993, 1994)	0.350	0.158	0.000	0.000	0.000	0.000	0.277
1 Belt Sander (2002)	0.088	0.039	0.000	0.000	0.000	0.000	0.069
9 Shell Core Machines (7 - 1960, 2- 1983)	0.000	0.000	0.000	0.000	0.088	0.000	0.088
Two (2) Isocure Core Machines (1985)	0.000	0.000	0.000	0.000	15.33	0.000	8.76
Sand Handling Disa #1 (1982)	1024.9	153.7	0.000	0.000	0.000	0.000	0.000
Sand Handling Disa #2 (2000)	1024.9	153.7	0.000	0.000	0.000	0.000	0.000
Magnesium Treatment (2000)	0.0	0.0	0.000	0.000	0.000	0.000	0.00
Core Sand System	11.8	1.77	0.000	0.000	0.000	0.000	0.000
Unpaved Roads	7.07	1.80	0.000	0.000	0.000	0.000	0.000
Emergency Diesel Generator (2004)	0.220	0.220	0.205	3.10	0.251	0.668	0.000
Other Insignificant Activities	2.45	2.56	0.012	1.98	0.134	1.66	0.043
Total	4639	924	1.97	5.96	80.6	2.33	40.9

Proposed Summary of Emissions After Controls

Emission Unit	PM	*PM-10	SO2	NOx	VOC	CO	Total HAPs
Scrap & Charge Handling (1996/2000)	2.31	1.39	0.000	0.000	0.000	0.000	0.0119
Melting - 2 Electric	3.47	3.31	0.000	0.000	0.000	0.000	0.2535
Pouring/Casting Disa #1 & #2 (1982 & 2000)	122.640	28.908	1.752	0.876	12.26	0.000	25.7347
Castings Cooling Disa #1 (1982)	0.061	0.061	0.000	0.000	0.000	0.000	0.0000
Pouring/Casting Disa #1 & #2 (1982 & 2000)	0.123	0.029	0.000	0.000	0.00	0.000	0.0009
Castings Cooling Disa #2 (2000)	0.061	0.061	0.000	0.000	0.000	0.000	0.0000
Aisco Rotary Drum (1982)	26.6	18.6	0.000	0.000	26.28	0.000	0.1366
Didion Rotary Media Drum (1999)	0.140	0.098	0.000	0.000	26.280	0.000	0.0007
Two (2) Shot Blasters (Atlas 1963, Peru 1982)	0.745	0.074	0.000	0.000	0.000	0.000	0.0003
Mesh Belt Shotblast (1999)	0.372	0.037	0.000	0.000	0.000	0.000	0.0002
Continuous Shotblast (2004)	13.11	13.10	0.000	0.000	0.000	0.000	0.0061
3 Stand Grinders (1993, 1993, 1994)	0.006	0.028	0.000	0.000	0.000	0.000	0.005
1 Belt Sander (2002)	21.000	30.000	0.000	0.000	0.000	0.000	0.00007
9 Shell Core Machines (7 - 1960, 2- 1983)	0.00	0.00	0.000	0.000	0.088	0.000	0.088
Two (2) Isocure Core Machines (1985)	0.00	0.00	0.000	0.000	15.33	0.000	8.76
Sand Handling Disa #1 (1982)	1.025	0.154	0.000	0.000	0.000	0.000	0.0000
Sand Handling Disa #2 (2000)	1.025	0.154	0.000	0.000	0.000	0.000	0.0000
Magnesium Treatment (2000)	0.00	0.00	0.000	0.000	0.000	0.000	0.0000
Core Sand System	0.591	0.591	0.000	0.000	0.000	0.000	0.0000
Unpaved Roads	7.07	1.80	0.000	0.000	0.000	0.000	0.0000
Emergency Diesel Generator (2004)	0.220	0.220	0.205	3.10	0.251	0.668	0.000
Other Insignificant Activities	2.451	2.563	0.012	1.980	0.134	1.661	0.043
Total	203.1	101.2	1.97	5.96	80.6	2.33	35.0

*Limit shall be applied

Proposed Summary of Emissions After Limited Throughput of 37,300 tons/yr and Controls (tons per year)

Emission Unit	PM	PM-10	SO2	NOx	VOC	CO	Total HAPs
Scrap & Charge Handling (1996/2000)	1.12	0.67	0.000	0.000	0.000	0.000	0.0057
Melting - 2 Electric	2.80	5.60	0.000	0.000	0.000	0.000	0.0868
Pouring/Casting Disa #1 & 2 (1982 & 2000)	26.11	6.15	0.373	0.187	2.611	0.000	5.4789
Castings Cooling Disa #1 (1982)	21.00	30.00	0.000	0.000	0.000	0.000	0.0000
Pouring/Casting Disa #1 & #2 (1982 & 2000)	21.00	30.00	0.000	0.000	0.000	0.000	0.0002
Castings Cooling Disa #2 (2000)	21.00	30.00	0.000	0.000	0.000	0.000	0.0000
Aisco Rotary Drum (1982)	11.34	11.34	0.000	0.000	11.190	0.000	0.1366
Didion Rotary Media Drum (1999)	21.00	30.00	0.000	0.000	18.000	0.000	0.0007
Two (2) Shot Blasters (Atlas 1963, Peru 1982)	21.00	30.00	0.000	0.000	0.000	0.000	0.0001
Mesh Belt Shotblast (1999)	21.00	30.00	0.000	0.000	0.000	0.000	0.0001
Continuous Shotblast (2004)	13.14	13.14	0.000	0.000	0.000	0.000	0.0061
3 Stand Grinders (1993, 1993, 1994)	0.006	0.028	0.000	0.000	0.000	0.000	0.0049
1 Belt Sander (2002)	21.000	30.000	0.000	0.000	0.000	0.000	0.00007
9 Shell Core Machines (7 - 1960, 2- 1983)	0.000	0.000	0.000	0.000	0.088	0.000	0.088
Two (2) Isocure Core Machines (1985)	0.000	0.000	0.000	0.000	15.3	0.000	8.76
Sand Handling Disa #1 (1982)	21.00	30.00	0.000	0.000	0.000	0.000	0.0000
Sand Handling Disa #2 (2000)	21.00	30.00	0.000	0.000	0.000	0.000	0.0000
Magnesium Treatment (2000)	0.00	0.00	0.000	0.000	0.000	0.000	0.0000
Core Sand System	0.591	0.591	0.000	0.000	0.000	0.000	0.0000
Unpaved Roads	2.75	0.701	0.000	0.000	0.000	0.000	0.0000
Emergency Diesel Generator (2004)	0.220	0.220	0.205	3.10	0.251	0.668	0.000
Other Insignificant Activities	2.451	2.563	0.012	1.980	0.134	1.661	0.043
Total	81.5	71.0	0.590	5.27	47.6	2.33	14.6

Note Baghouse D controlling several emission units is limited to a total of 21.0 TPY of PM and 30.0 TPY of PM-10 (see Page 13)

Baghouse A

Proposed Summary of Emissions After Limited Throughput of 37,300 tons/era and Controls (tons per year)

Emission Unit	PM	PM-10	SO2	NOx	VOC	CO	Total HAPs
Continuous Shotblast (2004)	13.1124	13.1050	0.0000	0.0000	0.0000	0.0000	0.0000
3 Stand Grinders (1993, 1993, 1994)	0.0062	0.0278	0.0000	0.0000	0.0000	0.0000	0.0049
Total	13.14	13.14	0.00	0.000	0.0000	0.0000	0.005

Baghouse D

Proposed Summary of Emissions After Limited Throughput of 37,300 tons/yr and Controls (tons per year)

Emission Unit	PM	PM-10
Castings Cooling Disa #1 (1982)	21.00	30.00
Pouring/Casting Disa #1 & #2 (1982 & 2000)	21.00	30.00
Castings Cooling Disa #2 (2000)	21.00	30.00
Didion Rotary Media Drum (1999)	21.00	30.00
Sand Handling Disa #1 (1982)	21.00	30.00
Sand Handling Disa #2 (2000)	21.00	30.00
Two (2) Shot Blasters (Atlas 1963, Peru 1982)	21.00	30.00
Mesh Belt Shotblast (1999)	21.00	30.00
1 Belt Sander (2002)	21.00	30.00
Total	21.00	30.00

Baghouse D total limited to 21.0 tons per year of PM and 30.0 tons per year of PM-10

Baghouse E

Proposed Summary of Emissions After Limited Throughput of 37,300 tons/yr and Controls (tons per year)

Emission Unit	PM	PM-10	SO2	NOx	VOC	CO	Total HAPs
Scrap & Charge Handling (1996/2000)	1.119	0.671	0.000	0.000	0.000	0.000	0.0057
Melting - 2 Electric	2.798	5.595	0.000	0.000	0.000	0.000	0.0868
Total	3.92	6.27	0.000	0.000	0.00	0.000	0.093

Scrubber C

Proposed Summary of Emissions After Limited Throughput of 37,300 tons/yr and Controls (tons per year)

Emission Unit	PM	PM-10	SO2	NOx	VOC	CO	Total HAPs
Aisco Rotary Drum (1982)	11.34	11.34	0.000	0.000	11.190	0.000	0.0582
Total	11.34	11.34	0.000	0.000	11.19	0.000	0.058

**Summary of HAPs (TPY)
 Before Controls**

	Charge Handling	Electric Induction	Uncontrolled Pouring Casting Disa 1 and 2	Disa Aisco Rotary Drum	Didion Rotary Media Drum	2 Shot blasters Atlas & Peru	Mesh Belt Shot Blast	Continuous Shotblast	Controlled Pouring Casting Disa 1 and 2
Chromium	0.0089	0.0089	0.0701	0.0534	0.0534	0.0000	0.0000	0.0000	0.0701
Cobalt	0.0008	0.0008	0.0057	0.0044	0.0044	0.0000	0.0000	0.0000	0.0057
Nickel	0.0154	0.0154	0.1231	0.0937	0.0937	0.0000	0.0000	0.0000	0.1231
Arsenic	0.0031	0.0031	0.0241	0.0184	0.0184	0.0968	0.0484	0.0968	0.0241
Cadmium	0.0015	0.0015	0.0110	0.0083	0.0083	0.0447	0.0223	0.0447	0.0110
Manganese	0.0000	0.8672	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Selenium	0.0004	0.0004	0.0018	0.0013	0.0013	0.0074	0.0037	0.0074	0.0018
Lead	0.0887	1.6381	0.7082	0.5396	0.5396	0.1971	0.0986	0.1971	0.7082
Organic HAPs (TEA & Formaldehyde)	0.0000	0.0000	24.7908	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		2.5354	25.7347	0.7192	0.7192	0.3460	0.1730	0.3460	0.9439

**Before Controls
 Continued**

	3 Stand Grinders	1 Stand Grinder	9 Shell Core Machines	2 Isocure Machines	Disa 1 Sand Handling	Disa 2 Sand Handling	Magnesium Treatment	Subtotals
Chromium	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.265
Cobalt	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.022
Nickel	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.464
Arsenic	0.0774	0.0194	0.0000	0.0000	0.0000	0.0000	0.0000	0.430
Cadmium	0.0357	0.0089	0.0000	0.0000	0.0000	0.0000	0.0000	0.198
Manganese	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.867
Selenium	0.0060	0.0015	0.0000	0.0000	0.0000	0.0000	0.0000	0.033
Lead	0.1577	0.0394	0.0000	0.0000	0.0000	0.0000	0.0000	4.912
Organic HAPs (TEA & Formaldehyde)	0.0000	0.0000	0.0876	8.7600	0.0000	0.0000	0.0000	33.638
Total	0.2768	0.0692	0.0876	8.7600	0.0000	0.0000	0.0000	40.8

**Summary of HAPs (TPY)
 After Controls**

	Charge Handling	Electric Induction	Uncontrolled Pouring Casting Disa 1 and 2	Disa Aisco Rotary Drum	Didion Rotary Media Drum	2 Shot Blasters Atlas & Peru	Mesh Belt Shot Blast	Continuous Shotblast	Controlled Pouring Casting Disa 1 and 2
Chromium	0.0009	0.0009	0.07008	0.0102	0.0001	0.0000	0.0000	0.0000	0.0001
Cobalt	0.0001	0.0001	0.00569	0.0008	0.0000	0.0000	0.0000	0.0000	0.0000
Nickel	0.0015	0.0015	0.12308	0.0178	0.0001	0.0000	0.0000	0.0000	0.0001
Arsenic	0.0003	0.0003	0.02409	0.0035	0.0000	0.0001	0.0000	0.0017	0.0000
Cadmium	0.0002	0.0002	0.01095	0.0016	0.0000	0.0000	0.0000	0.0008	0.0000
Manganese	0.0000	0.0867	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Selenium	0.0000	0.0000	0.0018	0.0002	0.0000	0.0000	0.0000	0.0001	0.0000
Lead	0.0089	0.1638	0.7082	0.1025	0.0005	0.0002	0.0001	0.0035	0.0007
Organic HAPs (TEA & Formaldehyde)	0.0000	0.0000	24.7908	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0119	0.2535	25.7347	0.1366	0.0007	0.0003	0.0002	0.0061	0.0009

**After Controls
 Continued**

	3 Stand Grinders	1 Stand Grinder	9 Shell Core Machines	2 Isocure Machines	Disa 1 Sand Handling	Disa 2 Sand Handling	Magnesium Treatment	Subtotals
Chromium	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.082
Cobalt	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.007
Nickel	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.144
Arsenic	0.0014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.031
Cadmium	0.0006	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.014
Manganese	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.087
Selenium	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.002
Lead	0.0028	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.99
Organic HAPs (TEA & Formaldehyde)	0.0000	0.0000	0.0876	8.7600	0.0000	0.0000	0.0000	33.64
Total	0.0049	0.0001	0.0876	8.7600	0.0000	0.0000	0.0000	35.0

**Summary of HAPs (TPY)
 After Controls & Limits**

	Charge Handling	Electric Induction	Uncontrolled Pouring Casting Disa 1 and 2	Disa Aisco Rotary Drum	Didion Rotary Media Drum	2 Shot blasters Atlas & Peru	Mesh Belt Shot Blast	Continuous Shotblast	Controlled Pouring Casting Disa 1 and 2
Chromium	0.0004	0.0004	0.0149	0.0043	0.0000	0.0000	0.0000	0.0000	0.0000
Cobalt	0.0000	0.0000	0.0012	0.0004	0.0000	0.0000	0.0000	0.0000	0.0000
Nickel	0.0007	0.0007	0.0262	0.0076	0.0000	0.0000	0.0000	0.0000	0.0000
Arsenic	0.0001	0.0001	0.0051	0.0015	0.0000	0.0000	0.0000	0.0017	0.0000
Cadmium	0.0001	0.0001	0.0023	0.0007	0.0000	0.0000	0.0000	0.0008	0.0000
Manganese	0.0000	0.0420	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Selenium	0.0000	0.0000	0.0004	0.0001	0.0000	0.0000	0.0000	0.0001	0.0000
Lead	0.0043	0.0434	0.1508	0.0437	0.0002	0.0001	0.0001	0.0035	0.0002
Organic HAPs (TEA & Formaldehyde)	0.0000	0.0000	5.2780	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0057	0.0868	5.4789	0.0582	0.0003	0.0001	0.0001	0.0061	0.0002

**After Controls & Limits
 Continued**

	3 Stand Grinders	1 Stand Grinder	9 Shell Core Machines	2 Isocure Machines	Disa 1 Sand Handling	Disa 2 Sand Handling	Magnesium Treatment	Subtotals
Chromium	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.020
Cobalt	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.002
Nickel	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.035
Arsenic	0.0014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.010
Cadmium	0.0006	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.005
Manganese	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.042
Selenium	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.001
Lead	0.0028	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.249
Organic HAPs (TEA & Formaldehyde)	0.0000	0.0000	0.0876	8.7600	0.0000	0.0000	0.0000	14.126
Total	0.0049	0.0001	0.0876	8.7600	0.0000	0.0000	0.0000	14.489

**TSD Addendum Appendix A: Emission Calculations
Grey Iron Foundry Emissions**

TSD Appendix A Page 16 of 16

**Company Name: Atlas Foundry Company, Inc.
Address City IN Zip: Factory and Henderson Avenues
Marion, Indiana 46952
FESOP: F 053-27072-0002
Reviewer: S. Prabha**

Metal Melt Rate tons/yr	Limited Metal Melt Rate tons/yr	* CO Emission Factor lbs/ton	CO Emission tons/yr	Limited CO Emission tons/yr
40,000	37,300	4.88	97.6	91.012

* The emission factor of 4.88 pounds of CO per ton of iron poured is based on the stack test results dated May 8, 2007. The captured CO is primarily emitted through Baghouse D. This emission factor accommodates an additional 2.33 tons of CO emitted per year from the miscellaneous combustion sources and corresponds to a melt rate of 40,000 of iron per hour.

Methodology:

Uncontrolled Emissions (tons/yr) = [Emission Rate (lb/ton)* Metal melt rate (tons/yr)]* (1/2000) tons/lbs