



Joseph E. Kernan  
Governor

Lori F. Kaplan  
Commissioner

July 6, 2004

100 North Senate Avenue  
P.O. Box 6015  
Indianapolis, Indiana 46206-6015  
(317) 232-8603  
(800) 451-6027  
www.in.gov/idem

TO: Interested Parties / Applicant

RE: Atlas Foundry Company, Inc. / F 053-12834-00002

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

### Notice of Decision: Approval - Effective Immediately

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

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

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

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

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

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

Enclosures  
FNPER.dot 9/16/03



Joseph E. Kernan  
Governor

Lori F. Kaplan  
Commissioner

100 North Senate Avenue  
P. O. Box 6015  
Indianapolis, Indiana 46206-6015  
(317) 232-8603  
(800) 451-6027  
www.IN.gov/idem

## FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) 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. Noncompliance with any provision of this permit, except any provision specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.**

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-8 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. This permit also addresses new source review requirements and is intended to fulfill the new source review procedures and permit revision requirements pursuant to 326 IAC 2-8-11.1, applicable to those conditions.

Operation Permit No.: F 053-12834-00002	
Issued by: Original signed by Paul Dubenetzky Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: July 6, 2004  Expiration Date: July 6, 2009

## TABLE OF CONTENTS

<b>SECTION A</b>	<b>SOURCE SUMMARY</b> .....	6
A.1	General Information [326 IAC 2-8-3(b)]	
A.2	Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]	
A.3	Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-8-3(c)(3)(l)]	
A.4	FESOP Applicability [326 IAC 2-8-2]	
A.5	Prior Permits Superseded [326 IAC 2-1.1-9.5]	
<b>SECTION B</b>	<b>GENERAL CONDITIONS</b> .....	9
B.1	Permit No Defense [IC 13]	
B.2	Definitions [326 IAC 2-8-1]	
B.3	Permit Term [326 IAC 2-8-4(2)] [326 IAC 2-1.1-9.5]	
B.4	Enforceability [326 IAC 2-8-6]	
B.5	Termination of Right to Operate [326 IAC 2-8-9] [326 IAC 2-8-3 (h)]	
B.6	Severability [326 IAC 2-8-4(4)]	
B.7	Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]	
B.8	Duty to Provide Information [326 IAC 2-8-4(5)(E)]	
B.9	Compliance Order Issuance [326 IAC 2-8-5(b)]	
B.10	Certification [326 IAC 2-8-3(d)] [326 IAC 2-8-4(3)(C)(i)] [326 IAC 2-8-5(1)]	
B.11	Annual Compliance Certification [326 IAC 2-8-5(a)(1)]	
B.12	Preventive Maintenance Plan [326 IAC 1-6-3] [326 IAC 2-8-4(9)] [326 IAC 2-8-5(a)(1)]	
B.13	Emergency Provisions [326 IAC 2-8-12]	
B.14	Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)]	
B.15	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]	
B.16	Permit Renewal [326 IAC 2-8-3(h)]	
B.17	Permit Amendment or Revision [326 IAC 2-8-10] [326 IAC 2-8-11.1]	
B.18	Operational Flexibility [326 IAC 2-8-15] [326 IAC 2-8-11.1]	
B.19	Permit Revision Requirement [326 IAC 2-8-11.1]	
B.20	Inspection and Entry [326 IAC 2-8-5(a)(2)] [IC 13-14-2-2] [IC 13-30-3-1] [IC 13-17-3-2]	
B.21	Transfer of Ownership or Operational Control [326 IAC 2-8-10]	
B.22	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]	
B.23	Advanced Source Modification Approval [326 IAC 2-8-4(11)] [326 IAC 2-1.1-9]	
<b>SECTION C</b>	<b>SOURCE OPERATION CONDITIONS</b> .....	18
	<b>Emission Limitations and Standards [326 IAC 2-8-4(1)]</b>	
C.1	Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) pounds per hour [40 CFR 52 Subpart P] [326 IAC 6-3-2]	
C.2	Overall Source Limit [326 IAC 2-8]	
C.3	Opacity [326 IAC 5-1]	
C.4	Open Burning [326 IAC 4-1] [IC 13-17-9]	
C.5	Incineration [326 IAC 4-2] [326 IAC 9-1-2(3)]	
C.6	Fugitive Dust Emissions [326 IAC 6-4]	
C.7	Operation of Equipment [326 IAC 2-8-5(a)(4)]	
C.8	Stack Height [326 IAC 1-7]	
C.9	Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]	
	<b>Testing Requirements [326 IAC 2-8-4(3)]</b>	
C.10	Performance Testing [326 IAC 3-6]	
	<b>Compliance Requirements [326 IAC 2-1.1-11]</b>	
C.11	Compliance Requirements [326 IAC 2-1.1-11]	

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

- C.12 Compliance Monitoring [326 IAC 2-8-4(3)] [326 IAC 2-8-5(a)(1)]
- C.13 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]
- C.14 Pressure Gauge and Other Instrument Specifications [326 IAC 2-1.1-11]  
[326 IAC 2-8-4(3)] [326 IAC 2-8-5(1)]

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

- C.15 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]
- C.16 Compliance Response Plan - Preparation, Implementation, Records, and Reports  
[326 IAC 2-8-4] [326 IAC 2-8-5]
- C.17 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4]  
[326 IAC 2-8-5]

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

- C.18 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]
- C.19 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

**Stratospheric Ozone Protection**

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

**SECTION D.1 FACILITY OPERATION CONDITIONS: Charge Handling & Melting Operations (Baghouse E) . . . . . 25**

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

- D.1.1 PM and PM<sub>10</sub> Limitations [326 IAC 2-2] [326 IAC 2-8-4]
- D.1.2 Particulate [326 IAC 6-3-2]
- D.1.3 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

**Compliance Determination Requirements**

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

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

- D.1.5 Particulate Control
- D.1.6 Visible Emissions Notations
- D.1.7 Parametric Monitoring
- D.1.8 Baghouse Inspections
- D.1.9 Broken or Failed Bag Detection

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

- D.1.10 Record Keeping Requirements
- D.1.11 Reporting Requirements

**SECTION D.2 FACILITY OPERATION CONDITIONS: Shakeout, Pouring, Casting, Cooling, Sand Handling, Shot Blasting & Grinding Operations (Baghouse D and Scrubber C) . . . 29**

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

- D.2.1 PM and PM<sub>10</sub> Limitations [326 IAC 2-2] [326 IAC 2-8-4]
- D.2.2 Particulate [326 IAC 6-3-2]
- D.2.3 VOC Limitation [326 IAC 8-1-6]
- D.2.4 HAP Limitations [326 IAC 2-8-4]
- D.2.5 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

**Compliance Determination Requirements**

- D.2.6 Testing Requirements [326 IAC 2-8-5(a)(1),(4)] [326 IAC 2-1.1-11]

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

- D.2.7 Particulate Control
- D.2.8 Visible Emissions Notations
- D.2.9 Parametric Monitoring
- D.2.10 Baghouse Inspections
- D.2.11 Broken or Failed Bag Detection
- D.2.12 Scrubber Inspections
- D.2.13 Scrubber Failure

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

- D.2.14 Record Keeping Requirements
- D.2.15 Reporting Requirements

**SECTION D.3 FACILITY OPERATION CONDITIONS: Grinding & Shotblasting Operations . . . . . 35**

**General Construction Conditions**

- D.3.1 Permit No Defense

**Effective Date of the Permit**

- D.3.2 Effective Date of the Permit [IC13-15-5-3]
- D.3.3 Modification to Construction Conditions [326 IAC 2]

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

- D.3.4 PM and PM<sub>10</sub> Limitations [326 IAC 2-2] [326 IAC 2-8-4]
- D.3.5 Particulate [326 IAC 6-3-2]
- D.3.6 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

**Compliance Determination Requirements**

- D.3.7 Testing Requirements [326 IAC 2-8-5(a)(1),(4)] [326 IAC 2-1.1-11]

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

- D.3.8 Particulate Control
- D.3.9 Visible Emissions Notations
- D.3.10 Parametric Monitoring
- D.3.11 Baghouse Inspections
- D.3.12 Broken or Failed Bag Detection

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

- D.3.13 Record Keeping Requirements

**SECTION D.4 FACILITY OPERATION CONDITIONS: Core Making Operations . . . . . 39**

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

- D.4.1 Volatile Organic Compounds (VOCs) [326 IAC 8-1-6]
- D.4.2 Hazardous Air Pollutants (HAPs) [326 IAC 2-8-4]

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

- D.4.3 Record Keeping Requirements
- D.4.4 Reporting Requirements

**SECTION D.5 FACILITY CONDITIONS: Insignificant Activities** ..... 40

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

- D.5.1 Particulate [326 IAC 6-3-2]
- D.5.2 Volatile Organic Compounds (VOC) [326 IAC 8-3-3]
- D.5.3 Volatile Organic Compounds (VOC) [326 IAC 8-3-6]

**Certification** ..... 44

**Emergency Occurrence Report** ..... 45

**FESOP Quarterly Reports** ..... 47

**Quarterly Deviation and Compliance Monitoring Report** ..... 52

## 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.

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

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

---

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

- (a) 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 scrubber, known as wet scrubber 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, 50% 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, 50% 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) 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.
- (n) One (1) belt sander, equipped with a baghouse, known as baghouse D, installed in 2002, capacity: 2.0 tons of iron per hour.
- (o) 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 (28 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.
- (p) One (1) shell (phenolic hot box) core system, consisting of nine (9) shell core machines, two (2) sand conveyors, and two (2) sand silos; seven (7) shell core machines installed in 1960 and two (2) shell core machines installed in 1983, capacity: 28 tons of sand for each silo and 1.0 ton of cores per hour, total.
- (q) 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.

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

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

- (a) Natural gas-fired combustion units, rated at a total of 4.509 million British thermal units per hour.
- (b) Storage tanks with capacities less than 1,000 gallons.
- (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) Grinding and machining operations (326 IAC 6-3-2).

- (h) Mold release agents using low volatile products.
- (i) One (1) Isocure sand mixer and shell sand handling (326 IAC 6-3-2).
- (j) Combustion source flame safety purging on startup.
- (k) Refractory storage not requiring air pollution control equipment.
- (l) 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).
- (m) Forced and induced draft cooling tower system not regulated under a NESHAP.
- (n) Heat exchanger, cleaning and repair.
- (o) A laboratory as defined in 326 IAC 2-7-1(21)(D).
- (p) Any operation using aqueous solutions containing less than 1 percent by weight of VOCs excluding HAPs.
- (q) 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).

A.5 Prior Permits Superseded [326 IAC 2-1.1-9.5]

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

## SECTION B GENERAL CONDITIONS

### B.1 Permit No Defense [IC 13]

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

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

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

### B.3 Permit Term [326 IAC 2-8-4(2)] [326 IAC 2-1.1-9.5]

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

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

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

### B.5 Termination of Right to Operate [326 IAC 2-8-9] [326 IAC 2-8-3(h)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-8-3(h) and 326 IAC 2-8-9.

### B.6 Severability [326 IAC 2-8-4(4)]

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

### B.7 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]

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

### B.8 Duty to 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 the "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.9 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.10 Certification [326 IAC 2-8-3(d)] [326 IAC 2-8-4(3)(C)(i)] [326 IAC 2-8-5(1)]

(a) Where specifically designated by this permit or required by an applicable requirement, any

application form, report, or compliance certification submitted shall contain certification by an authorized individual of truth, accuracy, and completeness. This certification, shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification.
- (c) An authorized individual is defined at 326 IAC 2-1.1-1(1).

B.11 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 in letter form no later than July 1 of each year to:

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

- (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, IDEM, OAQ, may require to determine the compliance status of the source.

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

B.12 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) The Permittee shall implement the PMPs, including any required record keeping, as necessary to ensure that failure to implement a PMP does not cause or contribute to an exceedance of any limitation on emissions or potential to emit.
- (c) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMP does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (d) 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.13 Emergency Provisions [326 IAC 2-8-12]

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation, except as provided in 326 IAC 2-8-12.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describes the following:
  - (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
  - (2) The permitted facility was at the time being properly operated;
  - (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
  - (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, 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 No.: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section)  
or,  
Telephone No.: 317-233-5674 (ask for Compliance Section)  
Facsimile No.: 317-233-5967

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

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

Indianapolis, Indiana 46206-6015

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

The notice fulfills the requirement of 326 IAC 2-8-4(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 the "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) 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) Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

B.14 Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)]

- (a) Deviations from any permit requirements (for emergencies see Section B - Emergency

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

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

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. A deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does need to be included in this report.

The Quarterly Deviation and Compliance Monitoring Report does require the certification by the "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.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-8-4(5)(C)] [326 IAC 2-8-7(a)] [326 IAC 2-8-8]**

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a FESOP modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-8-4(5)(C)] The notification by the Permittee does require the certification by the "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.16 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 the "authorized individual" as defined by 326 IAC 2-1.1-1(1).



Request for renewal shall be submitted to:

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

(b) Timely Submittal of Permit Renewal [326 IAC 2-8-3]

(1) A timely renewal application is one that is:

(A) Submitted at least nine (9) months prior to the date of the expiration of this permit; and

(B) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

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

(c) Right to Operate After Application for Renewal [326 IAC 2-8-9]

If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-8 until IDEM, 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 needed to process the application.

B.17 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  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

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

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

(d) No permit amendment or modification is required for the addition, operation or removal of a nonroad engine, as defined in 40 CFR 89.2.

**B.18 Operational Flexibility [326 IAC 2-8-15] [326 IAC 2-8-11.1]**

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

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

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

and

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

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

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

Such records shall consist of all information required to be submitted to IDEM, 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 increases and decreases in emissions in the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(c).
- (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.

**B.19 Permit Revision 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.20 Inspection and Entry [326 IAC 2-8-5(a)(2)] [IC 13-14-2-2] [IC 13-30-3-1] [IC 13-17-3-2]**

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the

information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a 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.21 Transfer of Ownership or Operational Control [326 IAC 2-8-10]

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

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

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

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

B.22 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 317-233-4320 (ask for OAQ, Billing, Licensing, and Training Section (BLT)), to determine the appropriate permit fee.

B.23 Advanced Source Modification Approval [326 IAC 2-8-4(11)] [326 IAC 2-1.1-9]

- 
- (a) The requirements to obtain a permit revision under 326 IAC 2-8-11.1 are satisfied by this permit for the proposed emission units, control equipment and 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.

## SECTION C

## SOURCE OPERATION CONDITIONS

<b>Entire Source</b>
----------------------

### Emissions 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 [40 CFR 52 Subpart P] [326 IAC 6-3-2]**

- (a) Pursuant to 40 CFR 52 Subpart P, particulate matter emissions from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than one hundred (100) pounds per hour shall not exceed 0.551 pounds per hour.
- (b) Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than one hundred (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. This limitation shall also make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable;
  - (2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and
  - (3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.
- (b) The potential to emit particulate matter (PM) from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period. This limitation shall make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.
- (c) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided 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(3)]

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

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

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

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

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

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

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

- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

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

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

- (e) **Procedures for Asbestos Emission Control**  
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1 emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) **Demolition and renovation**  
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).
- (g) **Indiana Accredited Asbestos Inspector**  
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Accredited Asbestos inspector is not federally enforceable.

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

#### **C.10 Performance Testing [326 IAC 3-6]**

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

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

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

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "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 the "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.11 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.12 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 upon issuance of this permit. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment.

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

#### **C.13 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.14 Pressure Gauge and Other Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)] [326 IAC 2-8-5(1)]**

- (a) Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ( $\pm 2\%$ ) of full scale reading.
- (b) Whenever a condition in this permit requires the measurement of a temperature, or flow rate, the instrument employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ( $\pm 2\%$ ) of full scale reading.
- (c) The Preventive Maintenance Plan for the pH meter shall include calibration using known standards. The frequency of calibration shall be adjusted such that the typical error found at calibration is less than one (1) pH point.
- (d) The Permittee may request the IDEM, OAQ approve the use of a pressure gauge or other instrument that does not meet the above specifications provided the Permittee can demonstrate an alternative pressure gauge or other instrument specification will adequately ensure compliance with permit conditions requiring the measurement of pressure drop or other parameters.



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

**C.15 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]**

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

**C.16 Compliance Response Plan - Preparation, Implementation, Records, and Reports [326 IAC 2-8-4] [326 IAC 2-8-5]**

(a) The Permittee is required to prepare a Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. A CRP shall be submitted to IDEM, OAQ upon request. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee, supplemented from time to time by the Permittee, maintained on site, and is comprised of:

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

(b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:

- (1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan; or
- (2) If none of the reasonable response steps listed in the Compliance Response Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.
- (3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, and it will be ten (10) days or more until the unit or device will be shut down, then the Permittee shall promptly notify the IDEM, OAQ of the expected date of the shut down. The notification shall also include status of the applicable compliance monitoring parameter with respect to normal, and the results of the response actions taken up to the time of notification.
- (4) Failure to take reasonable response steps shall be considered a deviation from the permit.

(c) The Permittee is not required to take any further response steps for any of the following reasons:

- (1) A false reading occurs due to the malfunction of the monitoring equipment and prompt action was taken to correct the monitoring equipment.
- (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied.

- (3) An automatic measurement was taken when the process was not operating.
- (4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.
- (d) When implementing reasonable steps in response to a compliance monitoring condition, if the Permittee determines that an exceedance of an emission limitation has occurred, the Permittee shall report such deviations pursuant to Section B-Deviations from Permit Requirements and Conditions.
- (e) The Permittee shall record all instances when, in accordance with Section D, response steps are taken. In the event of an emergency, the provisions of 326 IAC 2-8-12 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.
- (f) Except as otherwise provided by a rule or provided specifically in Section D, all monitoring as required in Section D shall be performed when the emission unit is operating, except for time necessary to perform quality assurance and maintenance activities.

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

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

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

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

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

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

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

- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This

report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

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

- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (e) Reporting periods are based on calendar years.

### **Stratospheric Ozone Protection**

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

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

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

## SECTION D.1 FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-8-4(10)]: 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.
- (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 and PM<sub>10</sub> Limitations [326 IAC 2-2] [326 IAC 2-8-4]

- (a) The total amount of metal throughput to the two (2) electric induction furnaces shall not exceed 52,800 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 PM<sub>10</sub> 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) Compliance with the above limits renders the requirements of 326 IAC 2-2 not applicable.
- (e) Compliance with the limits in (a) and (c) also satisfies the requirements of 326 IAC 2-8-4 for the entire source.

#### 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]

By August 28, 2006 in order to demonstrate compliance with Conditions D.1.1 and D.1.2, the Permittee shall perform PM and PM<sub>10</sub> testing of baghouse E associated with the charge handling and melting operations utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM<sub>10</sub> includes filterable and condensable PM<sub>10</sub>. Testing shall be conducted in accordance with Section C- Performance Testing.

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

### 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.

### D.1.6 Visible Emissions Notations

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

### D.1.7 Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouse E used in conjunction with the electric induction furnaces and charge handling systems, at least once per shift 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- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan -Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

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

An inspection shall be performed each calendar quarter of all bags controlling the electric induction furnaces and charge handling systems. Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.

#### D.1.9 Broken or Failed Bag Detection

In the event that bag failure has been observed:

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

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

#### D.1.10 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 records of visible emission notations of the stack exhaust E once per shift.
- (c) To document compliance with Condition D.1.7, the Permittee shall maintain records once per shift of the total static pressure drop during normal operation.
- (d) To document compliance with Condition D.1.8, the Permittee shall maintain records of the results of the inspections required under Condition D.1.8.
- (e) To document compliance with Condition D.1.3, the Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan.
- (f) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.1.11 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 the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

## SECTION D.2

## FACILITY OPERATION CONDITIONS

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

- (c) One (1) Aisco rotary drum shakeout operation, equipped with a wet scrubber, known as wet scrubber 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, 50% 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, 50% 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.
- (n) One (1) belt sander, equipped with a baghouse, known as baghouse D, installed in 2002, capacity: 2.0 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.2.1 PM and PM<sub>10</sub> Limitations [326 IAC 2-2] [326 IAC 2-8-4]**

- (a) The total PM emission rate from baghouse D shall not exceed a total of 7.00 pounds per hour.
- (b) The total PM<sub>10</sub> emission rate from baghouse D shall not exceed a total of 10.0 pounds per hour.
- (c) Baghouse D and 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
- (d) The PM emission rate from scrubber C used in conjunction with the Aisco rotary drum shakeout operation shall not exceed 0.608 pounds per ton of metal.
- (e) The PM<sub>10</sub> emission rate from scrubber C used in conjunction with the Aisco rotary drum shakeout operation shall not exceed a total of 0.608 pounds per ton of metal.
- (f) Compliance with the above limits renders the requirements of 326 IAC 2-2 not applicable.
- (g) Compliance with the limits in (b) and (e) also satisfies the requirements of 326 IAC 2-8-4 for the entire source.

#### 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 scrubber 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 58.4 pounds per hour when operating at a total process weight rate of 198.5 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]

- (a) The amount of metal throughput to the Disa #1 line and the Disa #2 line shall not exceed 37,300 tons per twelve (12) consecutive month period, each, 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.
- (c) 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.

#### 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 this limit satisfies the requirements of 326 IAC 2-8-4 for a single and the combination of HAPs.

#### D.2.5 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.2.6 Testing Requirements [326 IAC 2-8-5(a)(1),(4)] [326 IAC 2-1.1-11]

To demonstrate compliance with Conditions D.2.1 and D.2.2, a compliance stack test of PM and PM<sub>10</sub> 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 and the one (1) belt sander shall be performed by May 5, 2009 utilizing methods approved by the Commissioner. PM<sub>10</sub> includes filterable and condensable PM<sub>10</sub>. This test shall be repeated no less than once every five (5) years from the date of this valid compliance demonstration.

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

#### D.2.7 Particulate Control

- (a) In order to comply with Conditions D.2.1 and D.2.2, scrubber 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.

#### D.2.8 Visible Emissions Notations

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

#### D.2.9 Parametric Monitoring

- (a) The Permittee shall record the total static pressure drop and the scrubbing liquid (water) flow rate from the scrubber controlling the Aisco rotary drum shakeout operation at least once per shift when this process is in operation. When for any one reading, the pressure drop across the scrubber C is below a minimum of 1.5 inches of water and/or the flow rate for the scrubbing liquid is less than a minimum of 180 gallons of water per minute or a pressure drop minimum and flow rate established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading or flow rate that is below the above mentioned minimum is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.
- (b) The Permittee shall record the total static pressure drop across the baghouse D used in conjunction with the emission units listed in Condition D.2.1(c) at least once per shift 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 - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other 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.2.10 Baghouse Inspections

An inspection shall be performed each calendar quarter of all bags controlling the emission units listed in Condition D.2.1(c). Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.

#### D.2.11 Broken or Failed Bag Detection

In the event that bag failure has been observed:

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

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

#### D.2.12 Scrubber Inspections

---

An inspection shall be performed each calendar quarter of the scrubber controlling the Aisco rotary drum shakeout operation. Inspections required by this condition shall not be performed in consecutive months. All defective scrubber parts shall be replaced.

#### D.2.13 Scrubber Failure

---

In the event that a scrubber 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 - Compliance Response Plan - Preparation, Implementation, Records, and Reports, 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.2.14 Record Keeping Requirements

---

- (a) To document compliance with Condition D.2.1(c), the Permittee shall maintain records of the number of hours that baghouse D and 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 Condition D.2.8, the Permittee shall maintain records of visible emission notations of the stack exhausts C and D once per shift.
- (d) To document compliance with Condition D.2.9(a), the Permittee shall maintain records once per shift of the total static pressure drop and the scrubbing liquid (water) flow rate during normal operation.
- (e) To document compliance with Condition D.2.9(b), the Permittee shall maintain records once per shift of the total static pressure drop during normal operation.
- (f) To document compliance with Conditions D.2.10 and D.2.12, the Permittee shall maintain records of the results of the inspections required under Conditions D.2.10 and D.2.12.
- (g) To document compliance with Condition D.2.5, the Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan.
- (h) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.2.15 Reporting Requirements

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

### SECTION D.3

### FACILITY OPERATION CONDITIONS

<b>Facility Description [326 IAC 2-8-4(10)]:</b>	<b>Grinding &amp; Shotblasting Operations</b>
(m)	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.
(q)	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.)	

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1 AND 326 IAC 2-8-11.1, WITH CONDITIONS LISTED BELOW.

#### Construction Conditions

##### General Construction Conditions

###### D.3.1 Permit No Defense

This permit to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

##### Effective Date of the Permit

###### D.3.2 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this section of this permit becomes effective upon its issuance.

###### D.3.3 Modification to Construction Conditions [326 IAC 2]

All requirements of these construction conditions shall remain in effect unless modified in a manner consistent with procedures established for revisions pursuant to 326 IAC 2.

##### Operation Conditions

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

###### D.3.4 PM and PM<sub>10</sub> Limitations [326 IAC 2-2] [326 IAC 2-8-4]

- (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 PM<sub>10</sub> 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) Compliance with the above limits renders the requirements of 326 IAC 2-2 not applicable.
- (d) Compliance with the limit in (b) also satisfies the requirements of 326 IAC 2-8-4 for the entire source.

###### D.3.5 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.3.6 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.3.7 Testing Requirements [326 IAC 2-8-5(a)(1),(4)] [326 IAC 2-1.1-11]

Within 180 days of the installation of the proposed baghouse A and the continuous blast steel shotblaster in order to demonstrate compliance with Conditions D.3.4(d) and (e) and Condition D.3.5, the Permittee shall perform PM and PM<sub>10</sub> testing of baghouse A associated with the three (3) stand grinders and the continuous blast steel shotblaster utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM<sub>10</sub> includes filterable and condensable PM<sub>10</sub>. Testing shall be conducted in accordance with Section C- Performance Testing.

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

#### D.3.8 Particulate Control

In order to comply with Conditions D.3.4 and D.3.5, baghouse A for particulate control shall be in operation and control emissions from the three (3) stand grinders and the continuous blast steel shotblaster at all times that these facilities are in operation.

#### D.3.9 Visible Emissions Notations

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



#### D.3.10 Parametric Monitoring

The Permittee shall record the total static 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 shift when any of the three (3) stand grinders and/or the continuous blast steel shotblaster is 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- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan -Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other 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.3.11 Baghouse Inspections

An inspection shall be performed each calendar quarter of all bags controlling the three (3) stand grinders and the continuous blast steel shotblaster. Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.

#### D.3.12 Broken or Failed Bag Detection

In the event that bag failure has been observed:

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

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

#### D.3.13 Record Keeping Requirements

- (a) To document compliance with Condition D.3.9, the Permittee shall maintain records of visible emission notations of the stack exhaust B once per shift.
- (b) To document compliance with Condition D.3.10, the Permittee shall maintain records once

per shift of the total static pressure drop during normal operation.

- (c) To document compliance with Condition D.3.11, the Permittee shall maintain records of the results of the inspections required under Condition D.3.11.
- (d) To document compliance with Condition D.3.6, the Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan.
- (e) 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

- (p) 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 (28 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.
- (q) One (1) shell (phenolic hot box) core system, consisting of nine (9) shell core machines, two (2) sand conveyors, and two (2) sand silos; seven (7) shell core machines installed in 1960 and two (2) shell core machines installed in 1983, 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, 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 this limit satisfies the requirements of 326 IAC 2-8-4.

### Compliance Determination Requirements

There are no applicable compliance determination conditions for these emission units.

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

There are no applicable compliance monitoring conditions for these emission units.

### 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 the "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

- (g) Grinding and machining operations (326 IAC 6-3-2).
- (i) One (1) Isocure sand mixer and shell sand handling (326 IAC 6-3-2).
- (l) 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 8-3-3]

Pursuant to 326 IAC 8-3-3 (Open Top Vapor Degreasing Operations) for open top vapor degreasing operations constructed after January 1, 1980, the Permittee shall:

- (a) equip the open top vapor degreaser with a cover that can be opened and closed easily without disturbing the vapor zone;
- (b) keep the cover closed at all times except when processing workloads through the degreaser;
- (c) minimize solvent carry-out by:
  - (1) Racking parts to allow complete drainage;
  - (2) Moving parts in and out of the degreaser at less than eleven (11) feet per minute;
  - (3) Degreasing the workload in the vapor zone at least thirty (30) seconds or until condensation ceases;
  - (4) Tipping out any pools of solvent on the cleaned parts before removal;
  - (5) Allowing parts to dry within the degreaser for at least fifteen (15) seconds or until visually dry;
- (d) not degrease porous or absorbent materials, such as cloth, leather, wood or rope;
- (e) not occupy more than half of the degreaser's open top area with the workload;

- (f) not load the degreaser such that the vapor level drops more than fifty percent (50%) of the vapor depth when the workload is removed;
- (g) never spray above the vapor level;
- (h) repair solvent leaks immediately, or shut down the degreaser;
- (i) store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, such that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere;
- (j) not use workplace fans near the degreaser opening;
- (k) not allow visually detectable water in the solvent exiting the water separator; and
- (l) provide a permanent, conspicuous label summarizing the operating requirements.

#### D.5.3 Volatile Organic Compounds (VOC) [326 IAC 8-3-6]

Pursuant to 326 IAC 8-3-6 (Open Top Vapor Degreaser Operation and Control Requirements), for open top vapor degreasing operations with an air to solvent interface of ten and eight-tenths (10.8) square feet or greater and constructed after July 1, 1990,

- (a) The Permittee shall ensure that the following control equipment requirements are met:
  - (1) Equip the degreaser with a cover that can be opened and closed easily without disturbing the vapor zone;
  - (2) Equip the degreaser with the following switches:
    - (A) A condenser flow switch and thermostat which shuts off sump heat if condenser coolant stops circulating or becomes too warm.
    - (B) A spray safety switch shuts off spray pump if the vapor level drops more than four (4) inches.
  - (3) Equip the degreaser with a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
  - (4) Equip the degreaser with one (1) of the following control devices:
    - (A) A freeboard ratio of seventy-five hundredths (0.75) or greater and a powdered cover if the degreaser opening is greater than ten and eight-tenths (10.8) square feet; or
    - (B) A refrigerated chiller; or
    - (C) An enclosed design in which the cover opens only when the article is actually entering or exiting the degreaser; or
    - (D) A carbon adsorption system with ventilation which, with the cover open, achieves a ventilation rate of greater than or equal to fifty (50) cubic feet per minute per square foot of air to vapor interface area and an average of less than twenty-five parts per million of solvent is exhausted over one (1) complete adsorption cycle; or



- (E) Other systems of demonstrated equivalent or better control as those outlined in (A) through (D). Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) The Permittee shall ensure that the following operating requirements are met:
- (1) Keep the cover closed at all times except when processing workloads through the degreaser;
  - (2) Minimize solvent carryout emissions by:
    - (A) racking articles to allow complete drainage;
    - (B) moving articles in and out of the degreaser at less than eleven feet per minute;
    - (C) degreasing the workload in the vapor zone at least thirty (30) seconds or until condensation ceases;
    - (D) tipping out any pools of solvent on the cleaned articles before removal; and
    - (E) allowing articles to dry within the degreaser for at least fifteen (15) seconds or until visually dry;
  - (3) Prohibit the entrance into the degreaser of porous or absorbent materials such as, but not limited to, cloth, leather, wood or rope;
  - (4) Prohibit occupation of more than one half (½) of the degreaser's open top area with the workload;
  - (5) Prohibit the loading of the degreaser to the point where the vapor level would drop more than four (4) inches when the workload is removed;
  - (6) Prohibit solvent spraying above the vapor level;
  - (7) Repair solvent leaks immediately or shut down the degreaser if leaks cannot be repaired immediately;
  - (8) Store waste solvent only in covered containers and prohibit the disposal transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent (by weight) could evaporate;
  - (9) Prohibit the exhaust ventilation rate from exceeding sixty-five cubic feet per minute per square foot of degreaser open area unless a greater ventilation rate is necessary to meet Occupational Safety and Health Administration (OSHA) requirements;
  - (10) Prohibit the use of workplace fans near the degreaser opening;
  - (11) Prohibit visually detectable water in the solvent exiting the water separator.

### **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.

**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, Indiana 46952  
FESOP No.: F 053-12834-00002

**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:

Phone:

Date:

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

**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, Indiana 46952  
FESOP No.: F 053-12834-00002

**This form consists of 2 pages**

**Page 1 of 2**

- 9** This is an emergency as defined in 326 IAC 2-7-1(12)
- The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and
  - The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-5967), and follow the other requirements of 326 IAC 2-7-16

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 <sub>10</sub> , SO <sub>2</sub> , VOC, NO <sub>x</sub> , CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: \_\_\_\_\_

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

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

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

A certification is not required for this report.

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

**FESOP Quarterly Report**

Source Name: 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 053-12834-00002  
 Facilities: Two (2) electric induction furnaces and two (2) charge handling systems  
 Parameter: Amount of metal throughput  
 Limit: Total of 52,800 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 PM and PM<sub>10</sub> 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.

YEAR: \_\_\_\_\_

Month	Total Metal Throughput (tons)	Total Metal Throughput (tons)	Total Metal Throughput (tons)
	This Month	Previous 11 Months	12 Month Total

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

Submitted by: \_\_\_\_\_

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

Signature: \_\_\_\_\_

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

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

Attach a signed certification to complete this report.

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

**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 053-12834-00002  
Facility: Baghouse D  
Parameter: Hours of Operation  
Limit: 6,000 hours per twelve (12) consecutive month period with compliance determined at the end of each month.

YEAR: \_\_\_\_\_

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

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

Submitted by: \_\_\_\_\_

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

Signature: \_\_\_\_\_

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

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

Attach a signed certification to complete this report.

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

**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 053-12834-00002  
 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 and the belt sander  
 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

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

Submitted by: \_\_\_\_\_

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

Signature: \_\_\_\_\_

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

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

Attach a signed certification to complete this report.

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

**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 053-12834-00002  
 Facilities: Disa #1 and the Disa #2 pouring, cooling and shakeout operations  
 Parameter: Amount of metal throughput  
 Limit: 37,300 tons per twelve (12) consecutive month period for each Disa line with compliance determined at the end of each month, equivalent to total pouring, cooling and shakeout VOC emissions of less than twenty-five (25) tons per year for each line.

YEAR: \_\_\_\_\_

Month	Total Metal Throughput (tons)		Total Metal Throughput (tons)		Total Metal Throughput (tons)	
	This Month		Previous 11 Months		12 Month Total	
	Disa #1	Disa #2	Disa #1	Disa #2	Disa #1	Disa #2

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

Submitted by: \_\_\_\_\_

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

Signature: \_\_\_\_\_

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

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

Attach a signed certification to complete this report.

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

**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 053-12834-00002  
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

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

Submitted by: \_\_\_\_\_

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

Signature: \_\_\_\_\_

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

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

Attach a signed certification to complete this report.

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

**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, Indiana 46952  
FESOP No.: F 053-12834-00002

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

Page 1 of 2

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

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

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

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

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

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

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

Attach a signed certification to complete this report.

Indiana Department of Environmental Management  
Office of Air Quality

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

**Source Background and Description**

**Source Name:** Atlas Foundry Company, Inc.  
**Source Location:** Factory and Henderson Avenues, Marion, Indiana 46952  
**County:** Grant  
**SIC Code:** 3321  
**Operation Permit No.:** F 053-12834-00002  
**Permit Reviewer:** Frank P. Castelli

The Office of Air Quality (OAQ) has reviewed FESOP renewal and new source review applications from Atlas Foundry Company, Inc. relating to the operation of a gray and ductile iron foundry and the proposed construction of a continuous blast shotblaster and an emergency generator. The particulate emissions from the new shotblaster will be controlled by a new baghouse, to be known as baghouse A. This new baghouse will replace the existing baghouse A and is also proposed to control the particulate emissions from the three (3) stand grinders installed in 1993 (2) and in 1994.

Atlas Foundry Company, Inc. was issued FESOP 053-5716-00002, on December 9, 1996.

This permit contains provisions intended to satisfy the requirements of the construction permit rules.

**Permitted Emission Units and Pollution Control Equipment**

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

- (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) Disa Aisco rotary drum shakeout operation, equipped with a wet scrubber, known as wet scrubber 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, 50% 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: 60 tons of sand per hour.
- (g) One (1) Disa #2 pouring/casting line, 50% 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: 60 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) One (1) ductile iron magnesium treatment station, with emissions controlled by the Sigmat process, installed in 2000, capacity: 8.8 tons of iron per hour.
- (n) 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.
- (o) One (1) stand grinder, equipped with a baghouse, known as baghouse D, installed in 2002, capacity: 2.0 tons of iron per hour.
- (p) 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 (28 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.
- (q) One (1) shell (phenolic hot box) core system, consisting of nine (9) shell core machines, two (2) sand conveyors, and two (2) sand silos; seven (7) shell core machines installed in 1960 and two (2) shell core machines installed in 1983, capacity: 28 tons of sand for each silo and 1.0 ton of cores per hour, total.

Note: The potential-to-emit of the stand grinder, constructed in 2002 is less than five (5) tons per year of PM and PM<sub>10</sub>. Therefore, this facility did not require a permit revision.

### **Unpermitted Emission Units and Pollution Control Equipment**

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

### **New Emission Units and Pollution Control Equipment Receiving Prior Approval**

The application includes information relating to the prior approval for the construction and operation of the following equipment pursuant to 326 IAC 2-8-4(11):

- (r) 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.
- (s) One (1) diesel fired emergency generator rated at 400 output horsepower, not to exceed five hundred (500) hours of operation per year (deemed an insignificant activity).

### **Permitted Emission Units and Pollution Control Equipment But Never Constructed**

- (t) Three (3) stand grinders, equipped with a baghouse, known as baghouse A, permitted by SPR 053-11473-00002, issued on January 24, 2000.

### **Permitted Emission Units and Pollution Control Equipment Removed From Service**

- (u) Two (2) cupolas were removed in 1985 and 1996.
- (v) One (1) 16 x 20 molding line was removed in 1999.
- (w) One (1) 26 x 20 line was removed in 1982, consisting of pouring, cooling, shakeout of castings and sand handling, including ten (10) squeezers.
- (x) One (1) blast cabinet was removed in 1982.

### **Insignificant Activities**

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

- (a) Natural gas-fired combustion units, rated at a total of 4.509 million British thermal units per hour.
- (b) Storage tanks with capacities less than 1,000 gallons.
- (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) Grinding and machining operations (326 IAC 6-3-2).
- (h) Mold release agents using low volatile products.
- (i) One (1) Isocure sand mixer and shell sand handling (326 IAC 6-3-2).
- (j) Combustion source flame safety purging on startup.

- (k) Refractory storage not requiring air pollution control equipment.
- (l) 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).
- (m) Forced and induced draft cooling tower system not regulated under a NESHAP.
- (n) Heat exchanger, cleaning and repair.
- (o) A laboratory as defined in 326 IAC 2-7-1(21)(D).
- (p) Any operation using aqueous solutions containing less than 1 percent by weight of VOCs excluding HAPs.

### Existing Approvals

The source has been operating under the previous FESOP 053-5716-00002, issued on December 9, 1996, and the following amendments and revisions:

- (a) AAF 053-9496-00002, issued on April 29, 1998;
- (b) MPR 053-10365-00002, issued on February 10, 1999;
- (c) SPR 053-10956-00002, issued on September 7, 1999;
- (d) SPR 053-11281-00002, issued on November 3, 1999; and
- (e) SPR 053-11473-00002, issued on January 24, 2000.

All conditions from previous approvals were incorporated into this FESOP except the following:

- (a) FESOP 053-5716-00002, issued on December 9, 1996;
  - (1) Condition D.4.1 stated that the PM emissions from the castings shakeout process, sand handling, pouring casting and casting cooling are limited to 7.78, 6.95, 13.89 and 6.94 pounds per hour, respectively, to show compliance with 326 IAC 6-3-2.

Reason not incorporated:

The existing allowable hourly PM emission rates were truncated. The new PM emission rates are the calculated allowable PM emission rates pursuant to 326 IAC 6-3-2 and are not truncated.

- (2) Condition D.4.2 stated throughput and PM<sub>10</sub> hourly limits for the 16 x 20 line.

Reason not incorporated:

The 20 x 16 line has been removed from service.

- (3) Condition D.4.4 stated pressure and liquid flow rate ranges for scrubber D.

Reason not incorporated:

Scrubber D has been removed from service.

- (4) Condition D.5.1 stated 326 IAC 6-3-2 limit for the three (3) stand grinders of 0.01 pounds of PM per hour and 0.006 pounds of PM<sub>10</sub> per hour, respectively.

Reason not incorporated:

The existing allowable hourly PM emission rate was truncated. These emission units with a potential of less than 0.551 pounds per hour are exempt from 326 IAC 6-3-2 pursuant to 326 IAC 6-3-1(b)(14). The PM<sub>10</sub> emission rates have been revised in the proposed permit but still render the requirements of 326 IAC 2-7 not applicable.

- (5) Condition D.5.3 required parametric monitoring for baghouse A servicing the stand grinders once per shift.

Reason not incorporated:

The three (3) stand grinders are now exempt from 326 IAC 6-3-2 pursuant to 326 IAC 6-3-1(b)(14) and there are no other emission limits on the operation of these three (3) stand grinders.

- (6) Condition D.5.4 required visible notations for baghouse A servicing the stand grinders once per shift.

Reason not incorporated:

The three (3) stand grinders are now exempt from 326 IAC 6-3-2 pursuant to 326 IAC 6-3-1(b)(14). There are no other emission limits on the operation of these three (3) stand grinders.

- (b) 1<sup>st</sup> SRF 053-10956-00002, issued on September 7, 1999;

- (1) Condition D.3.1 stated that the PM limit pursuant to 326 IAC 6-3-2 for the Disa Aisco drum shall not exceed 5.35 pounds per hour.

Reason not incorporated:

The existing allowable hourly PM emission rate was truncated. The new PM emission rate is the calculated allowable PM emission rate pursuant to 326 IAC 6-3-2 and is not truncated.

- (2) Condition D.3.2 stated PM<sub>10</sub> limit for Disa Aisco shakeout process shall not exceed 3.75 pounds per hour to render the requirement of 326 IAC 2-2 and 326 IAC 2-7 not applicable.

Reason not incorporated:

The PM<sub>10</sub> emission limits have been revised in the proposed permit but still render the requirements of 326 IAC 2-2 and 326 IAC 2-7 not applicable.

- (3) Condition D.4.1 stated that pursuant to 326 IAC 6-3-2 PM shall not exceed 0.832 pounds per hour for the castings shakeout process, 6.95 pounds per hour for the sand handing process, 11.25 pounds per hour for the manual pouring casting process and 6.94 pounds per hour from the casting cooling process.

Reason not incorporated:

The existing allowable hourly PM emission rates were truncated. The new PM emission rates are the calculated allowable PM emission rates pursuant to 326 IAC 6-3-2 and are not truncated.

(c) 2<sup>nd</sup> SRF 053-11281-00002, issued on November 3, 1999;

- (1) Condition D.4.1 stated that pursuant to 326 IAC 6-3-2, PM shall not exceed 0.832 pounds per hour for the castings shakeout process, 6.95 pounds per hour for the sand handling process, 11.25 pounds per hour for the manual pouring casting process, 6.94 pounds per hour from the casting cooling process and 5.48 pounds per hour for the mesh belt shot blast machine and total PM from baghouse D shall not exceed 31.5 pounds per hour.

Reason not incorporated:

The existing allowable hourly PM emission rate were truncated. The new PM emission rates are the calculated allowable PM emission rates pursuant to 326 IAC 6-3-2 and are not truncated.

- (2) Condition D.4.2 stated throughput for the manual 16 x 20 line and PM<sub>10</sub> hourly limits for baghouse D shall not exceed 9.62 pounds per hour.

Reason not incorporated:

The 20 x 16 line has been removed from service and the PM<sub>10</sub> limit for baghouse D has been revised, but still renders the requirements of 326 IAC 2-7 not applicable.

(d) 3<sup>rd</sup> SPR 053-11473-00002 issued on January 24, 2000;

- (1) Condition D.1.1 stated that pursuant to 326 IAC 6-3-2 PM shall not exceed 0.6 pounds per hour for scrap, charge handling or melting processes and 0.1 pounds per ton.

Reason not incorporated:

The existing allowable hourly PM emission rate was truncated. The new PM emission rate is the calculated allowable PM emission rate pursuant to 326 IAC 6-3-2 and is not truncated.

- (2) Condition D.1.2 stated a metal throughput limit of 5,497 tons per month to the furnaces and PM<sub>10</sub> limits of 0.86 pounds per hour for the melting process and 0.36 pounds per hour for the scrap and charge handling process.

Reason not incorporated:

The throughput limit has been revised to render the requirements of 326 IAC 2-2 not applicable, the limit has been written as a twelve (12) consecutive month period and the pound per hour PM<sub>10</sub> limit has been revised but still renders the requirements of 326 IAC 2-2 and 326 IAC 2-7 not applicable.

- (3) Condition D.2.1 stated that the PM<sub>10</sub> emissions from the shot blasting operation shall not exceed 17.65 pounds per hour to make PM<sub>10</sub> emissions for the entire source

less than 8.25 tons per month and make the requirements of 326 IAC 2-2 not applicable.

Reason not incorporated:

The PM<sub>10</sub> emission limit has been revised but still renders the requirements of 326 IAC 2-2 and 326 IAC 2-7 not applicable.

- (4) Condition D.3.1 stated PM limit pursuant to 326 IAC 6-3-2 for the Disa Aisco drum shall not exceed 5.35 pounds per hour.

Reason not incorporated:

The existing allowable hourly PM emission rate was truncated. The new PM emission rate is the calculated allowable PM emission rate pursuant to 326 IAC 6-3-2 and is not truncated.

- (5) Condition D.3.2 stated PM<sub>10</sub> limit for Disa Aisco shakeout process shall not exceed 3.75 pounds per hour to render the requirement of 326 IAC 2-2 and 326 IAC 2-7 not applicable.

Reason not incorporated:

The PM<sub>10</sub> emission limit has been revised in the proposed permit but still renders the requirements of 326 IAC 2-7 not applicable.

- (6) Condition D.4.1 stated that pursuant to 326 IAC 6-3-2 PM shall not exceed 5.48 pounds per hour for the mesh belt shot blast machine and total PM from baghouse D shall not exceed 53.5 pounds per hour.

Reason not incorporated:

The existing allowable hourly PM emission rate was truncated. The new PM emission rate is the calculated allowable PM emission rate pursuant to 326 IAC 6-3-2 and is not truncated. The overall baghouse D PM limit has been revised but still renders the requirements of 326 IAC 2-2 not applicable. In addition, since the mesh belt shot blast machine is now controlled by baghouse B, the overall baghouse B PM limit has been revised.

- (7) Condition D.4.2 stated pursuant to 326 IAC 2-8 (FESOP) and 326 IAC 2-2 (Prevention of Significant Deterioration), the following conditions shall apply:

- (A) The baghouse controlling the Disa #1 and #2 pouring/casting, Disa #1 and #2 castings cooling, Disa #1 and #2 sand handling operations, rotary media drum shakeout process, and the mesh belt shotblaster shall operate at all times that the any of these processes is in operation.

- (B) The PM<sub>10</sub> emissions from the baghouse D shall not exceed 24.52 pounds per hour.
- (C) The sand throughput to the sand handling processes shall not exceed 38,325 tons per month.
- (D) The amount of ductile iron produced shall not exceed 833 tons per month.

These limits are necessary to limit the total source wide PM<sub>10</sub> emissions to 8.25 tons per month. Compliance with this condition will render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) 326 IAC 2-7 (Part 70 Permits), not applicable.

Reason not incorporated:

The PM<sub>10</sub> emission limit for baghouse D has been revised but still renders the requirements of 326 IAC 2-7 not applicable. The sand throughput limit has been eliminated. The ductile iron produced limit has been changed from a fixed month to a twelve (12) consecutive month period limit to allow flexibility.

- (8) Condition D.5.1 stated 326 IAC 6-3-2 limit for the six (6) stand grinders of 0.01 pounds of PM per hour.

Reason not incorporated:

The existing allowable hourly PM emission rate was truncated. There are now only four (4) stand grinders and these emission units with a potential of less than 0.551 pounds per hour are exempt from 326 IAC 6-3-2 pursuant to 326 IAC 6-3-1(b)(14). The three (3) proposed grinders were not installed.

- (9) Condition D.5.2 contained a limit of 0.006 pounds of PM<sub>10</sub> per hour that made the requirements of 326 IAC 2-2 not applicable for the six (6) stand grinders.

Reason not incorporated:

The PM<sub>10</sub> emission rates has been revised in the proposed permit for the four (4) stand grinders but still render the requirements 326 IAC 2-2 and 326 IAC 2-7 not applicable. The three (3) proposed grinders were not installed.

- (10) Condition D.5.3 required parametric monitoring for baghouse A servicing the stand grinders once per shift.

Reason not incorporated:

The three (3) stand grinders are now exempt from 326 IAC 6-3-2 pursuant to 326 IAC 6-3-1(b)(14). There are no other emission limits on the operation of these three (3) stand grinders. The three (3) proposed grinders were not installed.

- (11) Condition D.5.4 required visible notations for baghouse A servicing the stand grinders once per shift.

Reason not incorporated:

The three (3) stand grinders are now exempt from 326 IAC 6-3-2 pursuant to 326 IAC 6-3-1(b)(14). There are no other emission limits on the operation of these three (3) stand grinders. The three (3) proposed grinders were not installed.

- (12) Condition D.6.1 that stated that the usage of triethylamine shall be limited to 1.50 tons per month. This emission limit is necessary to limit the source wide emissions of any single HAP to 0.75 tons per month and source wide emissions of any combination of HAPs to 2.00 tons per month. Compliance with this condition will render the requirements of 326 IAC 2-7 (Part 70 Permits), not applicable.

Reason not incorporated:

This condition has been replaced by a twelve (12) consecutive month period limit of less than ten (10.0) tons per year since all of the triethylamine applied is emitted.

The following terms and conditions from previous approvals have been determined to be no longer applicable, and, therefore, are not incorporated into this permit:

- (a) FESOP 053-5716-00002, issued on December 9, 1996;

Condition D.3.2 stated that the PM<sub>10</sub> emissions from the wet scrubber controlling the Disa pouring, cooling and castings, shakeout, and sand handling processes are limited to 13.51 pounds per hour to make PM<sub>10</sub> emissions for the entire source less than 8.25 per month.

Reason not incorporated:

The scrubber no longer controls these processes and the PM<sub>10</sub> emission limits have been revised but still render the requirements of 326 IAC 2-7 not applicable.

- (b) 1<sup>st</sup> MMF 053-10365-00002, issued on February 10, 1999;

- (1) Condition D.4.1 stated that the wet scrubber should operate at all times that the manual or Disa sand handling or Disa pouring cooling or manual castings shakeout process is in operation. Pursuant to 326 IAC 6-3-2, PM shall not exceed 7.78 pounds per hour for the castings shakeout process, 6.95 pounds per hour for the sand handling process, 11.25 pounds per hour for the manual pouring casting process and 6.94 pounds per hour from the casting cooling process.

Reason not incorporated:

The wet scrubber is no longer associated with these processes. The existing allowable hourly PM emission rate was truncated. The new PM emission rate is the calculated allowable PM emission rate pursuant to 326 IAC 6-3-2 and is not truncated.

- (2) Condition D.4.2 stated throughput for the manual 16 x 20 line and PM<sub>10</sub> hourly limits for baghouse D.

Reason not incorporated:

The 20 x 16 line has been removed from service and the PM<sub>10</sub> limit for baghouse D has been revised.

- (c) 1<sup>st</sup> SRF 053-10956-00002, issued on September 7, 1999;

Condition D.4.2 contained a metal throughput limit of 1,163 tons per month for the manual 16 x 20 line and a 14.2 pound per hour PM<sub>10</sub> limit for baghouse D.

Reason not incorporated:

The 20 x 16 line has been removed from service and the PM<sub>10</sub> limit for baghouse D has been revised but still renders the requirements of 326 IAC 2-7 not applicable.

- (d) All construction conditions from all previous permits.

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

### **Air Pollution Control Justification as an Integral Part of the Process**

The company has submitted the following justification such that the baghouse B be considered as an integral part of the shotblasting operation:

The old baghouse B was claimed to be integral to the process and treated as integral in F 053-5716-00002, issued on December 9, 1996 because it serves a primary purposes other than pollution control. The suction from the baghouse was used to separate the sand and dust from the shot as the blast operated. Without the baghouse, these materials would not have separated, in essence all blasting would have been done with sand instead of steel shot. From an economic standpoint the blasts' operating components would have worn out twice as fast and the castings would have come out dirty requiring additional blast time.

Since old baghouse B has been removed from service and the shotblasters were switched from baghouse B to baghouse D on February 5, 2001 via an operational flexibility notification submitted to IDEM on January 22, 2001 baghouse B is not integral to any process. In addition, baghouse D which is controlling the Peru and Atlas shotblasters would not be considered integral because it is a shared baghouse with many other processes and it is still possible to operate the shotblasters without this baghouse.

IDEM, OAQ has evaluated the justifications and determined that the old and new baghouse B and/or baghouse D will not be considered as an integral part of the shotblasters. Therefore, the permitting level will be determined using the potential to emit before the baghouses.

### **Enforcement Issue**

There are no enforcement actions pending.

### **Recommendation**

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

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

An administratively complete FESOP renewal application for the purposes of this review was

received on October 10, 2000 and a new source review application was received on December 3, 2003. Additional information was received on December 26, 2001 as well as on April 8, 2002, June 17, 2002, February 18, 2004, March 1, 2004, March 10, 2004 and March 25, 2004.

There was no notice of completeness letter mailed to the source.

### Emission Calculations

See pages 1 - 15 of Appendix A of this document for detailed emissions calculations. The emission calculations supporting the new source review are shown on pages 6 and 10 of 15.

### Potential To Emit of Revision

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

This table reflects the PTE before controls for the addition of the proposed continuous shot blast and the emergency generator. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	745
PM <sub>10</sub>	74.7
SO <sub>2</sub>	0.205
VOC	0.251
CO	0.668
NO <sub>x</sub>	3.10

### Justification for Revision

The FESOP is being revised through a FESOP Significant Permit Revision. This revision is being performed pursuant to 326 IAC 2-8-11.1(f)(1) for a significant revision since the potential to emit PM and PM<sub>10</sub> from the proposed new continuous shot blast and emergency generator exceeds twenty five (25) tons per year.

### Source Status

This existing source is a minor stationary source because all attainment regulated pollutants are limited to emission rates of less than one hundred (100) tons per year and it is one of the 28 listed source categories.

**Potential to Emit of Revision After Issuance**

The table below summarizes the potential to emit, reflecting all limits, of the proposed emission units after controls. The control equipment is considered federally enforceable only after issuance of this FESOP revision. The emissions are for the proposed continuous shot blast and the proposed emergency generator.

<b>Pollutant</b>	<b>PM (tons/yr)</b>	<b>PM<sub>10</sub> (tons/yr)</b>	<b>SO<sub>2</sub> (tons/yr)</b>	<b>VOC (tons/yr)</b>	<b>CO (tons/yr)</b>	<b>NO<sub>x</sub> (tons/yr)</b>
Proposed Revision Continuous Shot Blast	13.1	13.1	-	-	-	-
Proposed Revision Emergency Generator	0.220	0.220	0.205	0.251	0.668	3.10
Total Proposed Revision Emissions	13.3	13.3	0.205	0.251	0.668	3.10
PSD Threshold Level	100	100	100	100	100	100

This revision to an existing minor stationary source, which is one of the 28 listed source categories, is not major because the emissions increases are less than the PSD threshold levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

This revision to the existing FESOP will not change the FESOP status of the stationary source because the emissions from the entire source will still be limited to less than the Part 70 major source thresholds.

**Potential To Emit of the Entire Source**

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

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

<b>Pollutant</b>	<b>Potential To Emit (tons/year)</b>
PM	4,551
PM <sub>10</sub>	970
SO <sub>2</sub>	1.97
VOC	80.8
CO	2.33

<b>Pollutant</b>	<b>Potential To Emit (tons/year)</b>
NO <sub>x</sub>	5.96

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

<b>HAPs</b>	<b>Potential To Emit (tons/year)</b>
TEA	8.76
Lead	6.55
Chromium Compounds	0.265
Cobalt Compounds	0.022
Nickel Compounds	0.464
Arsenic Compounds	0.430
Cadmium Compounds	0.198
Selenium Compounds	0.033
Benzene	0.00004
Dichlorobenzene	0.00002
Formaldehyde	0.001
Hexane	0.036
Toluene	0.00007
Manganese Compounds	0.867
Total Organic HAPs Pouring/Cooling & Shakeout	24.8
<b>TOTAL</b>	<b>42.5</b>

- (a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of PM<sub>10</sub> and VOC is equal to or greater than one hundred (100) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.
- (b) The unrestricted potential emissions of any single HAP is equal to or greater than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-1.1-1(16)) of a combination HAPs is greater than or equal to twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.
- (c) Fugitive Emissions

Since this type of operation is one of the twenty-eight (28) listed source categories under 326 IAC 2-2 the fugitive emissions are counted toward determination of PSD and Emission Offset applicability.

- (d) This source, otherwise required to obtain a Title V permit, has agreed to accept a permit with federally enforceable limits that restrict its PTE to below the Title V emission levels. Therefore, this source will be issued a Federally Enforceable State Operating Permit (FESOP), pursuant to 326 IAC 2-8.

**Actual Emissions**

No previous emission data has been received from the source.

**Potential to Emit After Issuance**

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

Note that emissions were limited by a combination of pound per hour limits for certain control device outlets and pound per ton limits combined with the 60,000 ton per year melt limit. All pound per hour limits must assume the full 8,760 hours per year to calculate the annual equivalent emissions.

Process/Emission Unit - Control	Potential to Emit After Issuance (tons/year)						
	PM	PM <sub>10</sub>	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs
Melting - 2 Electric Induction Furnaces - Baghouse E (1996)	4.50	9.00	-	-	-	-	0.140
Scrap & Charge Handling - Baghouse E (1996/2000)	1.80	1.08	-	-	-	-	0.009
Magnesium Treatment - Sigmat Process (2000)	2.70	2.70	-	0.150	-	-	0.064
Pouring/Casting Disa - #1 & #2 Uncontrolled 50% portion only #1 & 2 (1982 and 2000)	42.0	9.90	0.600	Combined Pouring & Shakeout 40.2 (less than 25.0 each Disa line)	-	0.300	Combined Pouring & Shakeout 8.51
<b>Baghouse D:</b> Disa #1 and #2 50% portion of Pouring, Cooling, Didion Shakeout, Disa 1 & 2 Sand Handling, Shot Blasting (Peru, Atlas and Mesh belt) and One (1) Stand Grinder	6.57	8.76	-		-	-	
Disa Aisco Rotary Drum Shakeout - Scrubber C (1982) <sup>2</sup>	18.2	18.2	-		-	-	
<b>Baghouse A:</b> Existing Three (3) Stand Grinders & Proposed Continuous Shot Blast	13.1	13.1	-	-	-	-	0.011

Process/Emission Unit - Control	Potential to Emit After Issuance (tons/year)						
	PM	PM <sub>10</sub>	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs
Cold Core Box (2 Isocure) and Nine (9) Phenolic Hotbox Shell Core Machines	-	-	-	15.3	-	-	8.85
Core Sand System	0.591	0.591	-	-	-	-	-
Emergency Generator @ 500 Hours	0.220	0.220	0.205	0.251	0.668	3.10	-
Unpaved Roads	2.75	0.700	-	-	-	-	-
Other Insignificant Activities: Natural Gas Combustion, Degreaser, Backup Gasoline Generator, Machining & Grinding	2.45	2.56	0.012	0.134	1.66	1.98	0.043
Total PTE After Issuance	95.0	66.9	0.817	56.2	2.33	5.38	Single Less Than 10 Total Less Than 25

This source which is one of the 28 listed source categories was an existing major PSD source pursuant to 326 IAC 2-2 on the August 7, 1977 applicability date of the PSD rules because the potential to emit CO from the two (2) existing cupolas exceeded one hundred (100) tons per year. The cupolas have since been removed and Atlas Foundry has requested that all criteria pollutants, including PM, be limited to less than one hundred (100) tons per year. Therefore, this FESOP source will be a minor source pursuant to the PSD rules 326 IAC 2-2.

The entire source will not exceed a total of 60,000 tons of metal melted per year in order to comply with the requirements of 326 IAC 2-8-4 for PM<sub>10</sub> and to make this source a minor PSD source pursuant to 326 IAC 2-2 for PM. In addition, each of the two (2) Disa pouring lines will be limited to 37,300 tons of metal per year to assure that the total VOC emissions from each line are less than twenty-five (25) tons per year.

### County Attainment Status

The source is located in Grant County.

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

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Grant County has been designated as attainment or unclassifiable for ozone.
- (b) Grant County has been classified as attainment or unclassifiable for all remaining criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

### Federal Rule Applicability

- (a) There are still no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) applicable to this source.
- (b) The insignificant activities (degreasing operations) are not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs), Subpart T (40 CFR 63.460 - 469) since halogenated HAP solvents used do not have a concentration of greater than five percent (5%) by weight.
- (c) This source is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production, 326 IAC 14, (40 CFR Part 63.1500, Subpart RRR) because the source is a gray iron foundry that melts iron and does not engaged in secondary aluminum processing.
- (d) This source is not subject to the National Emissions Standards for Hazardous Air Pollutants for Iron and Steel Foundries (40 CFR Part 63.7700, Subpart EEEEE and 326 IAC 20). Note the core making emission units at this source are not subject to 40 CFR 63, Subpart EEEEE since although the catalysts/resins contain triethylamine (TEA) this source is not a major source of HAPs.

### State Rule Applicability - Entire Source

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, which is one of the 28 listed source categories, was a major PSD source for PM, PM<sub>10</sub>, SO<sub>2</sub>, and CO because the potential to emit each of these criteria pollutants exceeded one hundred (100)

tons per year. Atlas Foundry Company, Inc. was designated a major PSD source for PM in the original FESOP that did not undergo PSD review.

This source will now become a minor source pursuant to this rule with the issuance of this FESOP renewal because all criteria pollutants, including PM, are being limited to less than one hundred (100) tons per year.

#### 326 IAC 2-6 (Emission Reporting)

This source is not subject to 326 IAC 2-6 (Emission Reporting), because the potential to emit of PM<sub>10</sub> is limited to less than one hundred (100) tons per year.

#### 326 IAC 2-8-4 (FESOP)

Pursuant to this rule:

- (a) the amount of PM<sub>10</sub> will be limited to less than one hundred (100) tons per year.
- (b) the total usage of a single HAP from amine gas catalysts in the Isocure (phenolic urethane cold box) core-system shall be limited to less than ten (10) tons per twelve (12) consecutive month period with compliance determined at the end of each month. This usage limit is necessary to limit the source-wide emissions of any single HAP to ten (10) tons per twelve (12) consecutive month period and source-wide emissions of any combination of HAPs to twenty-five (25) tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with these conditions will render the requirements of 326 IAC 2-7 (Part 70 Permit) not applicable.

#### 326 IAC 5-1 (Opacity Limitations)

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

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

#### **State Rule Applicability - Individual Facilities**

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

The following PM emission limitations are required to make this a minor source pursuant to this rule. These PM limits will assure that the potential to emit from the entire source, which is one of the 28 major source categories, will be limited to less than one hundred (100) tons per year. These PM limits, combined with the PM<sub>10</sub> limits described in the 326 IAC 2-8-4 (FESOP) section, will limit all criteria pollutants to less than one hundred (100) tons per year.

- (a) Baghouse A

The existing baghouse A controls the PM emissions from the three (3) stand grinders. The proposed new baghouse A will continue to control the PM emissions from the three (3) stand grinders and will also control the PM emissions from the proposed continuous blast steel shotblaster. The PM emissions from both the existing and the proposed new baghouse A will be limited to 3.00 pounds per hour which is equivalent to 13.14 tons per year.

(b) Scrubber C

The PM emissions from the Disa Aisco rotary drum shakeout operation are controlled by scrubber C. These PM emissions will be limited to 0.608 pounds per ton of metal produced. This factor was determined by taking the PM emission factor of 3.2 pounds per ton and controlling it by 81.0% ( $3.2 \text{ pounds per ton} \times (1 - 0.81) = 0.608 \text{ pounds per ton}$ ). This pound per ton limit, combined with a melt production limits of 60,000 tons per year results in limited PM emissions of 18.24 tons per year.

(c) Baghouse D

The PM emissions from the following emission units are controlled by baghouse D:

- (1) Disa #1 pouring/casting line (50% capture only)
- (2) Disa #1 casting cooling process
- (3) Disa #1 sand handling process
- (4) Disa #2 pouring/casting line (50% capture only)
- (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) stand grinder (2002)

The total PM emissions exhausted through baghouse D will be limited to 1.50 pounds per hour, equivalent to 6.57 tons per year.

(d) Baghouse E

The PM emissions from the two (2) electric induction furnaces are controlled by baghouse E. These PM emissions will be limited to 0.150 pounds per ton equivalent to 4.50 tons per year at a throughput limit of 60,000 tons of metal charged per year.

In addition, the PM emissions from the two (2) charge handling systems have been calculated by taking the uncontrolled AP-42 PM emission factor of 0.60 pounds per ton of metal charged controlled by 90%. These PM emissions will be limited to 0.060 pounds per ton equivalent to 1.80 tons per year at a throughput limit of 60,000 tons of metal charged per year.

Therefore, baghouse E will be limited to 0.210 pounds of metal per ton at a throughput limit of 60,000 tons of metal charged per year, equivalent to 6.30 tons of PM per year.

(e) Pouring Emissions

It is assumed that only 50.0% of the pouring PM emissions are captured and controlled by baghouse D. These emissions have been accounted for in the pound per hour limit for baghouse D. The remaining 50.0% of the pouring PM emissions have been calculated by using one half of the AP-42 emission factor of 2.80 pounds of PM per ton of metal poured (1.40 pounds of PM per ton) combined with the 60,000 ton per year melt limit. This is equivalent to 42.0 tons per year of PM.

(f) Core Sand System

The PM emissions from the core sand system (Isocure core-making line) have been determined by taking the uncontrolled sand handling AP-42 PM emission factor of 3.60 pounds of PM per ton of cores produced, controlling that by 95.0% for the cold sand silo filter or 0.180 pounds of PM per ton of cores produced, and combining that with the annual potential to produce cores of 6,570 tons per year (0.75 tons per hour x 8,760 hours per year). This is equivalent to 0.591 tons per year of PM emissions.

(g) Ductile Iron Magnesium Treatment Station

The PM emissions from the ductile iron treatment have been determined by taking the uncontrolled emission factor of 1.8 pounds of PM per ton of ductile iron treated, controlling it by 95.0% yielding a controlled emission factor of 0.090 pounds per ton and combining that with the 60,000 ton per year melt limit. This results in a potential to emit PM of 2.70 tons per year.

326 IAC 2-8-4 (FESOP)

(a) PM<sub>10</sub>

The following PM<sub>10</sub> limits will assure that the potential to emit from the entire source will be limited to less than one hundred (100) tons per year, and also make the source minor pursuant to 326 IAC 2-2 for PM<sub>10</sub>.

(1) Baghouse A

The existing baghouse A controls the PM emissions from the three (3) stand grinders. The proposed new baghouse A will continue to control the PM<sub>10</sub> emissions from the three (3) stand grinders and will also control the PM<sub>10</sub> emissions from the proposed continuous blast steel shotblaster. The PM<sub>10</sub> emissions from both the existing and the proposed new baghouse A will be limited to 3.00 pounds per hour which is equivalent to 13.14 tons per year.

(2) Scrubber C

The PM<sub>10</sub> emissions from the Disa Aisco rotary drum shakeout operation are controlled by scrubber C. These PM<sub>10</sub> emissions will be limited to 0.608 pounds per ton of metal produced. This factor was determined by taking the PM emission factor of 3.2 pounds per ton and controlling it by 81.0% (3.2 pounds per ton x (1-0.81) = 0.608 pounds per ton. This pound per ton limit, combined with a melt production limits of 60,000 tons per year results in limited PM<sub>10</sub> emissions of 18.24 tons per

year.

(3) Baghouse D

The PM<sub>10</sub> emissions from the following emission units are controlled by baghouse D:

- (A) Disa #1 pouring/casting line (50% capture only)
- (B) Disa #1 casting cooling process
- (C) Disa #1 sand handling process
- (D) Disa #2 pouring/casting line (50% capture only)
- (E) Disa #2 casting cooling process
- (F) Disa #2 sand handling process
- (G) Didion rotary media shakeout drum
- (H) Atlas and Peru shotblast operations
- (I) Mesh belt shotblast machine
- (J) One (1) stand grinder (2002)

The total PM<sub>10</sub> emissions exhausted through baghouse D will be limited to 2.00 pounds per hour, equivalent to 8.76 tons per year.

(4) Baghouse E

The PM<sub>10</sub> emissions from the two (2) electric induction furnaces are controlled by baghouse E. These PM emissions will be limited to 0.300 pounds per ton equivalent to 9.00 tons per year at a throughput limit of 60,000 tons of metal charged per year.

In addition, the PM<sub>10</sub> emissions from the two (2) charge handling systems have been calculated by taking the uncontrolled AP-42 PM<sub>10</sub> emission factor of 0.36 pounds per ton of metal charged controlled by 90%. These PM emissions will be limited to 0.036 pounds per ton equivalent to 1.08 tons per year at a throughput limit of 60,000 tons of metal charged per year.

Therefore, baghouse E will be limited to 0.336 pounds of metal per ton at a throughput limit of 60,000 tons of metal charged per year, equivalent to 10.08 tons of PM per year.

(5) Pouring Emissions

It is assumed that only 50.0% of the pouring PM<sub>10</sub> emissions are captured and controlled by baghouse D. These emissions have been accounted for in the pound per hour limit for baghouse D. The remaining 50.0% of the pouring PM<sub>10</sub> emissions have been calculated by using one half of the Fires v.5.0 emission factor of 0.66 pounds of PM<sub>10</sub> per ton of metal poured (0.33 pounds of PM<sub>10</sub> per ton) combined with the 60,000 ton per year melt limit. This is equivalent to 9.90 tons per year of PM<sub>10</sub>.

(6) Core Sand System

The PM<sub>10</sub> emissions from the core sand system (Isocure core-making line) have been determined by taking the uncontrolled sand handling AP-42 PM emission factor of 3.60 pounds of PM per ton of cores produced, controlling that by 95.0% for the cold sand silo filter or 0.180 pounds of PM<sub>10</sub> per ton of cores produced, and combining that with the annual potential to produce cores of 6,570 tons per year (0.75 tons per hour x 8,760 hours per year). This is equivalent to 0.591 tons per year of PM<sub>10</sub> emissions.

(7) Ductile Iron Magnesium Treatment Station

The PM<sub>10</sub> emissions from the ductile iron treatment have been determined by taking the uncontrolled emission factor of 1.8 pounds of PM<sub>10</sub> per ton of ductile iron treated, controlling it by 95.0% yielding a controlled emission factor of 0.090 pounds per ton and combining that with the 60,000 ton per year melt limit. This results in a potential to emit PM<sub>10</sub> of 2.70 tons per year.

(b) HAPs

It has been conservatively assumed that all of the amine gas consumed in the Isocure cold core boxes is TEA. The total potential amine gas used in the Isocure core-making operation is 2.0 pounds per hour. This is equivalent to a potential to emit TEA of 8.76 tons per year.

In addition, the 60,000 ton per year plant-wide melt throughput limits the source wide single HAP emission rate to less than then (10) tons per year and the potential to emit the total combination of HAPs to less than twenty five (25) tons per year. Therefore, this source complies with the requirements of 326 IAC 2-8-4.

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

The particulate from the following facilities shall not exceed the pound per hour emission rate when operating at the stated process weight rate in tons per hour listed in the following table. These limitations are based upon the following:

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

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

or

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand

(60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40$$

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

<b>Emission Unit</b>	<b>Process Weight Rate</b> (tons per hour)	<b>Particulate Emission Rate</b> (pounds per hour)	<b>Potential PM Emission Rate After Control</b> (pounds per hour)
Scrap and Charge Handling (Baghouse E)	8.80 total	17.6 total	0.528
Two (2) Electric Induction Furnaces (Baghouse E)	8.80 total	17.6 total	0.792
Disa #1 Pouring/Casting (Baghouse D)	10.0	19.2	14.0
Disa #1 Castings Cooling (Baghouse D)	10.0	19.2	0.014
Disa Aisco Rotary Drum Shakeout (Scrubber C)	70.0	47.8	6.08
Disa #1 Sand Handling (Baghouse D)	60.0	46.3	0.216
Disa #2 Pouring/Casting (Baghouse D)	10.0	19.2	14.0
Disa #2 Castings Cooling (Baghouse D)	10.0	19.2	0.014
Disa #2 Sand Handling (Baghouse D)	60.0	46.3	0.216
Didion Rotary Media Shakeout Drum (Baghouse D)	10.2	19.4	0.032
Ductile Iron Magnesium Treatment (Sigmat Process)	8.80	17.6	0.792
Atlas and Peru Shotblasters (Baghouse D)	10.0 total	19.2 total	0.170 total
Mesh Shotblaster (Baghouse D)	5.0	12.1	0.085
Continuous Steel Shot Blast (Baghouse A)	10.0	19.2	2.99
Baghouse A	18.0	28.4	3.00

<b>Emission Unit</b>	<b>Process Weight Rate (tons per hour)</b>	<b>Particulate Emission Rate (pounds per hour)</b>	<b>Potential PM Emission Rate After Control (pounds per hour)</b>
Scrubber C	70.0	47.8	6.08
Baghouse D	188.5	57.9	28.7
Baghouse E	17.6	28.0	1.32
Sigmat Process	8.80	17.6	0.792

The baghouses A and D shall be in operation at all times that the associated listed facilities are in operation, in order to comply with these limits.

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

(a) Core Making

This rule applies to new facilities as of January 1, 1980. Since the potential VOC emissions from the two (2) Isocure core machines constructed in 1985 and the two (2) Shell core machines (only two (2) of the nine (9) were constructed in 1983) are each less than twenty-five (25) tons per year, the requirements of 326 IAC 8-1-6 do not apply to these 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 constructed in 1985 or the two (2) Shell core machines constructed in 1983 shall obtain prior approval from IDEM, OAQ.

(b) Pouring and Shakeout Operations

This rule applies to new facilities as of January 1, 1980. Since the potential VOC emissions from each of the two (2) shakeout operations are greater than twenty-five (25) tons per year.

The AP-42 VOC emission factors of 0.14 pounds per ton of metal for pouring and 1.20 pounds per ton of metal for shakeout have been added together to yield a total emission factor of 1.34 pounds of VOC per ton of metal poured, including both shakeouts. For the entire plant this is equivalent to potential total VOC emissions of 40.2 tons per year with the plant-wide melt limit of 60,000 tons per year (1.34 pounds per ton X 60,000 per year X 1 ton/2000 pounds = 40.2 tons per year). The Disa #1 line was constructed in 1982, while the Disa #2 line was constructed in 2000.

To insure that both Disa pouring lines are limited to VOC emissions of less than twenty five (25) tons per year, the metal throughput to each of the Disa lines has been limited to 37,300 tons per year. The 37,300 ton per year pouring limit for each of the Disa #1 and the Disa #2 lines is equivalent to VOC emissions of less than twenty five (25) tons per year for each line (37,300 tons per year x 1.34 total pounds of VOC per ton of metal poured (including shakeout) = 24.99 tons of VOC per year). Therefore, the Disa #1 and the Disa #2 pouring/cooling and shakeout lines are not subject to the requirements of this rule.

**State Rule Applicability - Insignificant Activities**

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

- (a) The insignificant grinding and machining activity operations are exempt from the requirements of 326 IAC 6-3-2 pursuant to 326 IAC 6-3-1(b)(14) since the potential to emit PM is less than 0.551 pounds per hour.
- (b) The surface coating operation associated with the insignificant activity of any operation using aqueous solutions containing less than one (1%) percent by weight of VOCs excluding HAPs is exempt from the requirements of 326 IAC 6-3-2 because pursuant to 326 IAC 6-3-1(b)(5) since the surface coating is accomplished via dip coating.

326 IAC 8-3-3 (Volatile Organic Compounds (VOC))

Pursuant to 326 IAC 8-3-3 (Open Top Vapor Degreasing Operations) for open top vapor degreasing operations constructed after January 1, 1980, the owner or operator shall:

- (a) equip the open top vapor degreaser with a cover that can be opened and closed easily without disturbing the vapor zone;
- (b) keep the cover closed at all times except when processing workloads through the degreaser;
- (c) minimize solvent carry-out by:
  - (1) racking parts to allow complete drainage;
  - (2) moving parts in and out of the degreaser at less than eleven (11) feet per minute;
  - (3) degreasing the workload in the vapor zone at least thirty (30) seconds or until condensation ceases;
  - (4) tipping out any pools of solvent on the cleaned parts before removal;
  - (5) allowing parts to dry within the degreaser for at least fifteen (15) seconds or until visually dry;
- (d) not degrease porous or absorbent materials, such as cloth, leather, wood or rope;
- (e) not occupy more than half of the degreaser's open top area with the workload;
- (f) not load the degreaser such that the vapor level drops more than fifty percent (50%) of the vapor depth when the workload is removed;
- (g) never spray above the vapor level;
- (h) repair solvent leaks immediately, or shut down the degreaser;
- (i) store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, such that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere;
- (j) not use workplace fans near the degreaser opening;
- (k) not allow visually detectable water in the solvent exiting the water separator; and

- (l) provide a permanent, conspicuous label summarizing the operating requirements.

326 IAC 8-3-6 (Volatile Organic Compounds (VOC))

Pursuant to 326 IAC 8-3-6 (Open Top Vapor Degreaser Operation and Control Requirements), the owner or operator of open top vapor degreasing operations with an air to solvent interface of ten and eight-tenths (10.8) square feet or greater and constructed after January 1, 1990, shall ensure that the following requirements are met:

- (a) The Permittee shall ensure that the following control equipment requirements are met:
  - (1) Equip the degreaser with a cover that can be opened and closed easily without disturbing the vapor zone;
  - (2) Equip the degreaser with the following switches:
    - (A) A condenser flow switch and thermostat which shuts off sump heat if condenser coolant stops circulating or becomes too warm.
    - (B) A spray safety switch shuts off spray pump if the vapor level drops more than four (4) inches.
  - (3) Equip the degreaser with a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
  - (4) Equip the degreaser with one (1) of the following control devices:
    - (A) A freeboard ratio of seventy-five hundredths (0.75) or greater and a powdered cover if the degreaser opening is greater than ten and eight-tenths (10.8) square feet; or
    - (B) A refrigerated chiller; or
    - (C) An enclosed design in which the cover opens only when the article is actually entering or exiting the degreaser; or
    - (D) A carbon adsorption system with ventilation which, with the cover open, achieves a ventilation rate of greater than or equal to fifty (50) cubic feet per minute per square foot of air to vapor interface area and an average of less than twenty-five parts per million of solvent is exhausted over one (1) complete adsorption cycle; or
    - (E) Other systems of demonstrated equivalent or better control as those outlined in (A) through (D). Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) The Permittee shall ensure that the following operating requirements are met:
  - (1) Keep the cover closed at all times except when processing workloads through the degreaser;
  - (2) Minimize solvent carryout emissions by:
    - (A) racking articles to allow complete drainage;

- (B) moving articles in and out of the degreaser at less than eleven feet per minute;
  - (C) degreasing the workload in the vapor zone at least thirty (30) seconds or until condensation ceases;
  - (D) tipping out any pools of solvent on the cleaned articles before removal; and
  - (E) allowing articles to dry within the degreaser for at least fifteen (15) seconds or until visually dry;
- (3) Prohibit the entrance into the degreaser of porous or absorbent materials such as, but not limited to, cloth, leather, wood or rope;
  - (4) Prohibit occupation of more than one half ( $\frac{1}{2}$ ) of the degreaser's open top area with the workload;
  - (5) Prohibit the loading of the degreaser to the point where the vapor level would drop more than four (4) inches when the workload is removed;
  - (6) Prohibit solvent spraying above the vapor level;
  - (7) Repair solvent leaks immediately or shut down the degreaser if leaks cannot be repaired immediately;
  - (8) Store waste solvent only in covered containers and prohibit the disposal transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent (by weight) could evaporate;
  - (9) Prohibit the exhaust ventilation rate from exceeding sixty-five cubic feet per minute per square foot of degreaser open area unless a greater ventilation rate is necessary to meet Occupational Safety and Health Administration (OSHA) requirements;
  - (10) Prohibit the use of workplace fans near the degreaser opening;
  - (11) Prohibit visually detectable water in the solvent exiting the water separator.

### Testing Requirements

All testing requirements from previous approvals were incorporated into this FESOP.

- (a) Previous stack tests to comply with this requirement were conducted on:
  - (1) PM stack testing of the scrap and charge handling, as well as electric induction furnaces exhausted through baghouse E, was conducted on December 3, 1996 and showed compliance with the 326 IAC 6-3-2 allowable PM emission rate of 17.6 pounds per hour by the measured rate of 0.327 pounds per hour.
  - (2) Baghouse D was stack tested for PM and PM<sub>10</sub> on June 4, 1999 and showed compliance with the PM limit of 32.92 pounds per hour and the PM<sub>10</sub> limit of 14.2 pounds per hour by the measured emission rates of 0.73 pounds of PM per hour and 0.89 pounds of PM<sub>10</sub> per hour.
  - (3) The electric induction furnace B, tested at 4.5 tons per hour, exhausted to baghouse

E, was again stack tested on August 29, 2001 and showed compliance with the limit of 0.10 pounds of PM per ton and the 326 IAC 2-8-4 PM<sub>10</sub> limit of 0.86 pounds per hour as the stack test results were 0.03 pounds of PM per ton and 0.26 pounds of PM<sub>10</sub> per hour.

(b) Proposed stack tests to show compliance with 326 IAC 6-3-2, 326 IAC 2-8-4 and to render the requirements of 326 IAC 2-2 not applicable are as follows:

- (1) To demonstrate compliance with 326 IAC 6-3-2, 326 IAC 2-8-4 and 326 IAC 2-2, a compliance stack test of PM and PM<sub>10</sub> for one (1) of the two (2) electric induction furnaces and the associate charge handling, equipped with baghouse E, shall be performed within five (5) from the last stack test of August 29, 2001, which is by August 28, 2006. This test shall be repeated no less than once every five (5) years from the date of this valid compliance demonstration. PM<sub>10</sub> includes filterable and condensible PM<sub>10</sub>.
- (2) Pursuant to SPR 053-11473-00002, issued on January 24, 2000, to demonstrate compliance with 326 IAC 2-8-4 and 326 IAC 2-2, a compliance stack test of PM and PM<sub>10</sub> 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 and the one (1) stand grinder shall be performed between January and June 2004 utilizing methods approved by the Commissioner. PM<sub>10</sub> includes filterable and condensible PM<sub>10</sub>. This test shall be repeated no less than once every five (5) years from the date of this valid compliance demonstration.
- (3) Within one hundred and eighty (180) days of the installation of the new baghouse A in order to demonstrate compliance with 326 IAC 6-3-2, 326 IAC 2-8-4 and 326 IAC 2-2, a compliance stack test of PM and PM<sub>10</sub> for baghouse A which controls the proposed continuous shot blast and the three (3) stand grinders is required utilizing methods approved by the Commissioner. PM<sub>10</sub> includes filterable and condensible PM<sub>10</sub>. This test shall be repeated no less than once every five (5) years from the date of this valid compliance demonstration.

(c) No stack tests proposed for Sigmat Process or Scrubber C

(1) Sigmat Process

Stack testing is not required for the Sigmat Process because the Sigmat box is not a piece of pollution control technology designed to control emissions from the ductile iron making equipment and therefore emissions are fugitive. It is the actual piece of equipment that physically alloys the gray iron into ductile iron. The stated control efficiency (obtained from the equipment manufacturer) has essentially been applied to the 1.80 pounds per ton PM and PM<sub>10</sub> emission factors, as these emission factors are based on the open-top pour-over method of ductile iron making. The Sigmat box utilizes a closed-top pour-over method, which greatly reduces the amount of magnesium evaporation. Any remaining emissions from the Sigmat box are uncontrolled and fugitive.

The IDEM inspector for Atlas Foundry Company, Inc. agrees that it is not possible to conduct a stack test on the Sigmat Process because the emissions are fugitive.

(2) Scrubber C

There are two (2) reasons for not requiring a stack test for the Disa Aisco rotary drum shakeout operation. First, Atlas Foundry Company, Inc. is claiming only an 81% control for the scrubber. The control efficiencies required to comply with the hourly PM and PM<sub>10</sub> emission limits, using standard AP-42 emission factors, are considerable lower than the stated control efficiencies.

Second, the inspector has verified that there has not been any problems with this emission unit during past inspections and surveillance.

### **Compliance Requirements**

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

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

All compliance requirements from previous approvals were incorporated into this FESOP except for the existing compliance monitoring conditions for baghouse A associated with the three (3) stand grinders. The existing baghouse A is proposed to be replaced by a new baghouse A. The compliance monitoring requirements applicable to this source are as follows:

(a) **Baghouse E**

The Permittee shall record the total static pressure drop across the baghouse E used in conjunction with the electric induction furnaces and the charge handling systems, at least once per shift when either of the furnaces or either of the charge handling systems is in operation. When for any one reading, the pressure drop across the baghouse E 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 - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

(b) **Baghouse D**

The Permittee shall record the total static pressure drop across the baghouse D used in conjunction with the Disa 1 and 2 pouring/casting, Disa 1 and 2 casting cooling, Disa 1 and 2 sand handling, the Peru and Atlas shotblasters, the mesh belt shot blast machine, the one (1) stand grinder and Didion rotary media drum shakeout at least once per shift when any of these facilities are in operation. When for any one reading, the pressure drop across the

baghouse D 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 - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

(c) Baghouse A

The Permittee shall record the total static pressure drop across the baghouses A and new A used in conjunction with the three (3) stand grinders alone or the three (3) stand grinders and the one (1) continuous blast steel shotblaster at least once per shift when any of these facilities are in operation. When for any one reading, the pressure drop across the baghouse A 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 - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

(d) Baghouses E, D, A and New A Inspections

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

In the event that bag failure has been observed:

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

emergency provisions of this permit (Section B - Emergency Provisions).

(e) Visible Emissions Baghouses E, D, A and New A

Visible emissions notations of the baghouses E, D, A and new A, stack exhausts E, D and A shall be performed during normal daylight operations once per shift. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for these units shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

(f) Scrubber C

(1) The Permittee shall record the total static pressure drop and the scrubbing liquid (water) flow rate from the scrubber controlling the Disa Aisco rotary drum shakeout operation at least once per shift when this process is in operation. When for any one reading, the pressure drop across the scrubber C is outside the normal range of 1.0 and 7.0 inches of water and the flow rate for scrubbing liquid shall be maintained at a minimum of 180 gallons of water per minute or a pressure drop range and flow rate established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

(2) An inspection shall be performed each calendar quarter of the scrubber controlling the Disa Aisco rotary drum shakeout operation. Inspections required by this condition shall not be performed in consecutive months. All defective scrubber parts shall be replaced.

(3) In the event that a scrubber 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).

(4) Visible Emissions

Visible emissions notations of the scrubber C stack exhaust C shall be performed during normal daylight operations once per shift. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down

time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for these units shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

These monitoring conditions are necessary because the baghouses and scrubber must operate properly to ensure compliance with 326 IAC 6-3, 326 IAC 2-2, 326 IAC 5-1 and 326 IAC 2-8.

### **Conclusion**

The construction and operation of this gray and ductile iron foundry shall be subject to the conditions of the attached proposed FESOP renewal No.: F 053-12834-00002.

## Indiana Department of Environmental Management Office of Air Quality

### Addendum to the Technical Support Document for Federally Enforceable State Operating Permit (FESOP) Renewal

**Source Name:** Atlas Foundry Company, Inc.  
**Source Location:** Factory and Henderson Avenues, Marion, Indiana 46952  
**County:** Grant  
**FESOP:** F 053-12834-00002  
**SIC Code:** 3321  
**Permit Reviewer:** Frank P. Castelli

On April 23, 2004, the Office of Air Quality (OAQ) had a notice published in the Marion Chronicle Tribune in Marion, Indiana, stating that Atlas Foundry Company, Inc. had applied for a Significant Permit Revision to their Federally Enforceable State Operating Permit (FESOP). This revision was included in the FESOP renewal to continue to operate a gray and ductile iron foundry. The notice also stated that OAQ proposed to issue a FESOP renewal for this operation and provided information on how the public could review the proposed FESOP renewal 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 FESOP renewal should be issued as proposed.

On May 25, 2004 John Haney of Atlas Foundry Company, Inc. submitted comments on the proposed FESOP renewal. The comments are as follows: The permit language, if changed, has deleted language as ~~strikeouts~~ and new language **bolded**.

#### Comments 1, 2 and 3:

Please remove the word "Disa" from the description in Section A.2(c) and Section D.2. In addition, replace the words "stand grinder" with "belt sander" in Section A.2(o) and Section D.2 and move A.2(s) to the insignificant activities in Section A.3.

#### Responses 1, 2 and 3:

Condition A.2(c) and A.2(o) and Section D.2 have been revised to implement the above requests and A.2(s) has been added to Condition A.3.

In addition, as result of an option given to Atlas Foundry Company, Inc. by IDEM, OAQ regarding the magnesium treatment station (Condition A.2(m)), the Permittee has requested in a telephone conversation with John Haney of Atlas Foundry Company, Inc. on June 30 to remove this emission unit and all related conditions in Section D.3 and the report form from the proposed permit. If the source desires to treat iron by the magnesium treatment station in the future, Atlas Foundry will need to obtain approval from IDEM, OAQ prior to making the change.

Furthermore, IDEM, OAQ has revised the source's description of the sand handling capacity from 60 tons per hour to 65.0 tons per hour. The revision was brought to the forefront by the May 5, 2004 stack test of baghouse D at which time the average sand throughput was recorded as 64.49 tons of sand per hour. This change has been implemented in Conditions A.2(f) and A.2(i) and Section D.2. Also the allowable PM emission rate in Condition D.2.2(b) for baghouse D has been revised due to the increase in process weight rate of 10 tons per hour from 188.5 to 198.5 tons per hour 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:

- (c) One (1) ~~Disa~~ Aisco rotary drum shakeout operation, equipped with a wet scrubber, known as wet scrubber C, installed in 1982, exhausted through Stack C, capacity: 10 tons of iron and 60 tons of sand 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~~ 60 tons of sand 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~~ 60 tons of sand per hour.
- ~~(m) One (1) ductile iron magnesium treatment station, with emissions controlled by the Sigmat process, installed in 2000, capacity: 8.8 tons of iron per hour.~~
- ~~(ma)~~ 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.
- ~~(ne)~~ One (1) ~~stand grinder~~ **belt sander**, equipped with a baghouse, known as baghouse D, installed in 2002, capacity: 2.0 tons of iron per hour.
- ~~(op)~~ 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 (28 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.
- ~~(pq)~~ One (1) shell (phenolic hot box) core system, consisting of nine (9) shell core machines, two (2) sand conveyors, and two (2) sand silos; seven (7) shell core machines installed in 1960 and two (2) shell core machines installed in 1983, capacity: 28 tons of sand for each silo and 1.0 ton of cores per hour, total.
- ~~(qf)~~ 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.
- ~~(s) One (1) diesel fired emergency generator rated at 400 output horsepower, not to exceed five hundred (500) hours of operation per year (deemed an insignificant activity).~~

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):

- (q) One (1) diesel fired emergency generator rated at 400 output horsepower, not to exceed five hundred (500) hours of operation per year.**

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 & Scrubber C)

- (c) One (1) ~~Disa~~ Aisco rotary drum shakeout operation, equipped with a wet scrubber, known as wet scrubber C, installed in 1982, exhausted through Stack C, capacity: 10 tons of iron and 60 tons of sand 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~~ 60 tons of sand 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~~ 60 tons of sand per hour.
- ~~(ne)~~ One (1) ~~stand grinder~~ **belt sander**, equipped with a baghouse, known as baghouse D, installed in 2002, capacity: 2.0 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.)

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 scrubber C used in conjunction with the ~~Disa~~ 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 ~~58.4~~ 57.9 pounds per hour when operating at a total process weight rate of ~~198.5~~ 188.5 tons per hour.

D.2.67 Particulate Control

- (a) In order to comply with Conditions D.2.1 and D.2.2, scrubber C for particulate control shall be in operation and control emissions from the ~~Disa~~ Aisco rotary drum shakeout operation at all times that this process is in operation.

D.2.124 Scrubber Inspections

An inspection shall be performed each calendar quarter of the scrubber controlling the ~~Disa~~ Aisco rotary drum shakeout operation. Inspections required by this condition shall not be performed in consecutive months. All defective scrubber parts shall be replaced.

SECTION D.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]: ~~Magnesium Treatment, Grinding & Shotblasting Operations (Sigmat Process & Baghouse A)~~

- ~~(m)~~ One (1) ductile iron magnesium treatment station, with emissions controlled by the Sigmat process, installed in 2000, capacity: 8.8 tons of iron per hour.
- ~~(ma)~~ 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.
- ~~(qf)~~ 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.3.4 PM and PM<sub>10</sub> Limitations [326 IAC 2-2] [326 IAC 2-8-4]

- ~~(a) The total amount of ductile iron treated at the magnesium treatment station shall not exceed 60,000 tons per twelve (12) consecutive month period.~~
- ~~(b) The PM emission rate from the ductile iron magnesium treatment station using the Sigmat process shall not exceed 0.090 pounds per ton of metal.~~
- ~~(c) The PM<sub>10</sub> emission rate from the ductile iron magnesium treatment station using the Sigmat process shall not exceed 0.090 pounds per ton of metal.~~
- (ad)** 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.
- (be)** The PM<sub>10</sub> 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.
- (cf)** Compliance with the above limits renders the requirements of 326 IAC 2-2 not applicable.
- (dg)** Compliance with the limits in **(a)**, ~~(c)~~ and **(be)** also satisfies the requirements of 326 IAC 2-8-4 for the entire source.

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

##### D.3.13 Record Keeping Requirements

- ~~(a) To document compliance with Condition D.3.4(a), the Permittee shall maintain records of the total ductile iron treated in the ductile iron magnesium treatment station using the Sigmat process on a monthly basis.~~
- (ab)** To document compliance with Condition D.3.9, the Permittee shall maintain records of visible emission notations of the stack exhaust B once per shift.
- (be)** To document compliance with Condition D.3.10, the Permittee shall maintain records once per shift of the total static pressure drop during normal operation.
- (cd)** To document compliance with Condition D.3.11, the Permittee shall maintain records of the results of the inspections required under Condition D.3.11.
- (de)** To document compliance with Condition D.3.6, the Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan.
- (ef)** All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

##### D.3.14 Reporting Requirements

~~A quarterly summary of the information to document compliance with Condition D.3.4(a) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification~~

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

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

~~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 053-12834-00002  
 Facilities: Magnesium treatment station  
 Parameter: Amount of ductile iron treated  
 Limit: Total of 60,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.~~

~~YEAR:~~

Month	Ductile Iron Treated (tons)	Ductile Iron Treated (tons)	Ductile Iron Treated (tons)
	This Month	Previous 11 Months	12 Month Total

~~9~~ — No deviation occurred in this quarter.

~~9~~ — Deviation/s occurred in this quarter.

Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

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

Signature: \_\_\_\_\_

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

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

Attach a signed certification to complete this report.

**Comment 4:**

Section C.2(a)(1): The limits in the permit also restrict PM emissions to less than 100 tons per year. As such, the phrase "except particulate matter (PM)" should be deleted from the first sentence of this section.

**Response 4:**

326 IAC 2-8 does not limit PM emissions to less than one hundred (100) tons per year and therefore, Condition C.2(a)(1) can not be revised to delete the phrase "except particulate matter". Condition C.2(b) has been added to address the fact that particulate matter is also limited under one hundred (100) tons per year. Condition C.2 has been revised as follows:

---

**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. This limitation shall also make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable;
- (2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and
- (3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.

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

(cb) 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.

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

**Comment 5:**

Section C.15, Emergency Reduction Plan: Since the limitations in the permit restrict emissions of all regulated pollutants to less than 100 tons per year, the requirement for an emergency reduction plan does not apply. This condition should be deleted from the permit.

**Response 5:**

Since the emissions of all regulated pollutants from this source have been limited to less than one hundred (100) tons per year, including particulate matter, Condition C.15 has been deleted as follows and all subsequent conditions in Section C have been re-numbered.

~~C.15 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]~~

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

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

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

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

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

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

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

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

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

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

**Comment 6:**

Section C.15, Emission Statement: Since the source is not a major source under the Title V rules, the requirement for an annual emission statement does not apply. This condition should be deleted from the permit.

**Response 6:**

The comment is intended to cite Condition C.19 and not Condition C.15. Condition C.19 has been deleted from the proposed permit since this source is not located in Lake or Porter County with the potential to emit greater than twenty-five (25) tons per year of NO<sub>x</sub>, does not emit five (5) tons per year or more of lead and does not require a Part 70 Operating Permit. Therefore, the requirements of 326 IAC 2-6 do not apply and Condition C.19 has been deleted. All subsequent conditions in Section C have been renumbered.

~~C.19 Emission Statement [326 IAC 2-6] [326 IAC 2-8-4(3)]~~

~~(a) The Permittee shall submit an emission statement certified pursuant to the requirements of~~

~~326 IAC 2-6. This statement must be received in accordance with the compliance schedule specified in 326 IAC 2-6-3 and must comply with the minimum requirements specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8). The statement must be submitted to:~~

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

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

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

**Comments 7 and 8:**

Section D.2: Please remove the word "Disa" from all descriptions of the equipment "Disa Aisco rotary drum".

Section D.2(o): Replace the words "stand grinder" with "belt sander".

**Responses 7 and 8:**

See Responses 1 and 2.

**Comments 9 and 10:**

Section D.2.1(c): Replace the words "stand grinder" with "belt sander".

PM/PM<sub>10</sub> emission limits: The PM and PM<sub>10</sub> emission limits along with the metal throughput restrictions limit emissions to less than 100 tons/year for PM and PM<sub>10</sub>. We would like to request certain modifications to the proposed limits that still ensure that emissions are less than 100 tons/year, but amend the specific limitations as specified below:

Section D.1.1 should be modified to limit metal throughput to 52,800 tons per 12-month period.

Section D.2.1 should be modified to increase the emission limit for baghouse D to 7 pounds/hour for PM and 10 pounds/hour for PM<sub>10</sub> and to limit the total hours of operation to 6,000 hours per year. This will also require that Section D.2.13 be amended to require records of monthly hours of operation and that Section D.2.14 be amended to require quarterly reports of monthly and 12-month hours of operation.

Section D.3.4 should be amended to lower the allowable annual ductile iron treatment to 5,000 tons/year instead of 60,000 tons.

These modifications result in overall facility limits equal to 92.9 tons/year for PM and 76.9 tons/year for PM<sub>10</sub>.

**Responses 9 and 10:**

In response to the request to reduce the metal throughput limit from 60,000 to 52,800 tons of metal

per year, increase the PM emission limit for baghouse D from 1.50 pounds per hour for 8,760 hours to 7.00 pounds per hour for 6,000 hours and increase the PM<sub>10</sub> emission limit for baghouse D from 2.00 pounds per hour for 8,760 hours to 10.0 pounds per hour for 6,000 hours, the emission calculations in Appendix A of the TSD have been revised in the attached Appendix A to this addendum.

Furthermore, the request to reduce the amount of ductile iron treated from 60,000 to 5,000 tons per year was withdrawn and the source has requested that the magnesium treatment station be deleted from the proposed permit (See Responses 1, 2 and 3).

The requested limits of 7.00 pounds of PM per hour and 10.0 pounds of PM<sub>10</sub> per hour have been incorporated with the revised limited metal throughput of 52,800 tons per year. The total hours that any emission unit associated with baghouse D as well as baghouse D is in operation shall be limited to 6,000 hours of operation per year. The PM emission limit for baghouse D of 7.00 pounds per hour for 6,000 hours per year of operation is equivalent to 21.0 tons per year. The PM<sub>10</sub> emission limit for baghouse D of 10.0 pounds per hour for 6,000 hours per year of operation is equivalent to 30.0 tons per year.

The potential to emit table from the Technical Support Document after controls and limits has been updated to reflect the aforementioned revisions.

Process/Emission Unit - Control	Potential to Emit After Issuance (tons/year)						
	PM	PM <sub>10</sub>	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs
Melting - 2 Electric Induction Furnaces - Baghouse E (1996)	4.50 <b>3.96</b>	9.00 <b>7.92</b>	-	-	-	-	0.140 <b>0.123</b>
Scrap & Charge Handling - Baghouse E (1996/2000)	4.80 <b>1.58</b>	4.08 <b>0.950</b>	-	-	-	-	0.009 <b>0.008</b>
<del>Magnesium Treatment - Sigmat Process (2000)</del>	<del>2.70</del>	<del>2.70</del>	-	<del>0.150</del>	-	-	<del>0.064</del>
Pouring/Casting Disa -#1 & #2 Uncontrolled 50% portion only #1 & 2 (1982 and 2000)	42.0 <b>37.0</b>	9.90 <b>8.71</b>	0.600 <b>0.528</b>	Combined Pouring & Shakeout 40.2 <b>37.5</b> (less than 25.0 each Disa line)	-	0.300 <b>0.264</b>	Combined Pouring & Shakeout 8.51 <b>7.90</b>
<b>Baghouse D:</b> Disa #1 and #2 50% portion of Pouring, Cooling, Didion Shakeout, Disa 1 & 2 Sand Handling, Shot Blasting (Peru, Atlas and Mesh belt) and One (1) Belt Sander	6.57 <b>21.0</b>	8.76 <b>30.0</b>	-		-	-	
Aisco Rotary Drum Shakeout - Scrubber C (1982) <sup>2</sup>	48.2 <b>16.1</b>	48.2 <b>16.1</b>	-	Combined Pouring & Shakeout 40.2 <b>37.5</b> (less than 25.0 each Disa line)	-	-	0.047 <b>0.082</b>
<b>Baghouse A:</b> Existing Three (3) Stand Grinders & Proposed Continuous Shot Blast	13.1	13.1	-	-	-	-	0.011

Process/Emission Unit - Control	Potential to Emit After Issuance (tons/year)						
	PM	PM <sub>10</sub>	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs
Cold Core Box (2 Isocure) and Nine (9) Phenolic Hotbox Shell Core Machines	-	-	-	<del>15.3</del> <b>15.4</b>	-	-	8.85
Core Sand System	0.591	0.591	-	-	-	-	-
Emergency Generator @ 500 Hours	0.220	0.220	0.205	0.251	0.668	3.10	-
Unpaved Roads	2.75	0.700	-	-	-	-	-
Other Insignificant Activities: Natural Gas Combustion, Degreaser, Backup Gasoline Generator, Machining & Grinding	2.45	2.56	0.012	0.134	1.66	1.98	0.043
Total PTE After Issuance	<del>95.0</del> <b>98.7</b>	<del>66.9</del> <b>80.9</b>	<del>0.817</del> <b>0.745</b>	<del>56.2</del> <b>53.3</b>	2.33	<del>5.38</del> <b>5.34</b>	Single Less Than 10 Total Less Than 25

Therefore, in order to revise the throughput, limited hours of operation, PM and PM<sub>10</sub> emission limits, record keeping and reporting requirements, Conditions D.1.1(a), D.2.1(a), (b) and (c), D.2.13 (now D.2.14), D.2.14 (now D.2.15), and Quarterly Report Forms have been changed as follows:

**D.1.1 PM and PM<sub>10</sub> Limitations [326 IAC 2-2] [326 IAC 2-8-4]**

- (a) The total amount of metal throughput to the two (2) electric induction furnaces shall not exceed **52,800** ~~60,000~~ 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 PM<sub>10</sub> 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) Compliance with the above limits renders the requirements of 326 IAC 2-2 not applicable.
- (e) Compliance with the limits in (a) and (c) also satisfies the requirements of 326 IAC 2-8-4 for the entire source.

**D.2.1 PM and PM<sub>10</sub> Limitations [326 IAC 2-2] [326 IAC 2-8-4]**

- (a) The total PM emission rate from baghouse D shall not exceed a total of **7.00** ~~4.50~~ pounds per hour.
- (b) The total PM<sub>10</sub> emission rate from baghouse D shall not exceed a total of **10.0** ~~2.00~~ pounds per hour.
- (c) Baghouse D and 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 stand grinder (2002)**
- (d) The PM emission rate from scrubber C used in conjunction with the ~~Disa~~ Aisco rotary drum shakeout operation shall not exceed 0.608 pounds per ton of metal.
- (e) The PM<sub>10</sub> emission rate from scrubber C used in conjunction with the ~~Disa~~ Aisco rotary drum shakeout operation shall not exceed a total of 0.608 pounds per ton of metal.
- (f) Compliance with the above limits renders the requirements of 326 IAC 2-2 not applicable.
- (g) Compliance with the limits in (b) and (e) also satisfies the requirements of 326 IAC 2-8-4 for the entire source.

**D.2.143 Record Keeping Requirements**

- 
- (a) To document compliance with Condition D.2.1(c), the Permittee shall maintain records of the number of hours that baghouse D and the total hours that any emission unit controlled by baghouse D is in operation on a monthly basis.**
- (ba)** 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.
- (cb)** To document compliance with Condition D.2.87, the Permittee shall maintain records of visible emission notations of the stack exhausts C and D once per shift.
- (de)** To document compliance with Condition D.2.98(a), the Permittee shall maintain records once per shift of the total static pressure drop and the scrubbing liquid (water) flow rate during normal operation.
- (ed)** To document compliance with Condition D.2.98(b), the Permittee shall maintain records once per shift of the total static pressure drop during normal operation.
- (fe)** To document compliance with Conditions D.2.109 and D.2.1244, the Permittee shall maintain

records of the results of the inspections required under Conditions D.2.109 and D.2.1244.

- (gf) To document compliance with Condition D.2.54, the Permittee shall maintain records of any additional inspections prescribed by the Preventive Maintenance Plan.
- (hg) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.2.154 Reporting Requirements

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

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

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 053-12834-00002  
Facilities: Two (2) electric induction furnaces and two (2) charge handling systems  
Parameter: Amount of metal throughput  
Limit: Total of **52,800** ~~60,000~~ 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 PM and PM<sub>10</sub> 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.

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

**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 053-12834-00002  
**Facility:** Baghouse D  
**Parameter:** Hours of Operation  
**Limit:** 6,000 hours per twelve (12) consecutive month period with compliance determined at the end of each month.

**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 DATA SECTION**

**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 053-12834-00002  
**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 and the belt sander  
**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.

Upon further review, the OAQ has decided to make the following changes to the FESOP renewal. The permit language is changed to read as follows (deleted language appears as ~~strikeouts~~, new language is **bolded**):

**Change 1:**

Condition B.22 has been revised to correct the name of the section to contact regarding annual fee payments as shown below:

- B.22 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 317-233-4320 (ask for OAQ, ~~I/M & Billing Section~~ **Billing, Licensing, and Training Section (BLT)**), to determine the appropriate permit fee.

**Change 2:**

Condition C.14(b) has been revised to remove mention of the pH level since the pH level is addressed in Condition C.14(c).

- C.14 Pressure Gauge and Other Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)] [326 IAC 2-8-5(1)]**
- 
- (b) Whenever a condition in this permit requires the measurement of a temperature, ~~or flow rate, or pH level,~~ the instrument employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ( $\pm 2\%$ ) of full scale reading.
- (c) The Preventive Maintenance Plan for the pH meter shall include calibration using known standards. The frequency of calibration shall be adjusted such that the typical error found at calibration is less than one (1) pH point.

**Change 3:**

Condition D.2.4 has been added to the proposed permit in order to limit a organic HAPs to less than ten (10) tons per year from the Disa #1 and Disa #2 pouring/casting lines as well as the Didion shakeout. The emissions from the Disa #1 and Disa #2 pouring/casting lines are both fugitive and emitted from baghouse D. Limiting organic HAPs from these emission units to less than ten (10) tons per year combined with all HAPs from the other emission units and insignificant activities at the foundry ensures compliance with the twenty five (25) ton per year limit for the combination of HAPs.

- 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 this limit satisfies the requirements of 326 IAC 2-8-4 for a single and the combination of HAPs.**

**Change 4:**

Baghouse D was tested on May 5, 2004 during the 30-day public notice period for this proposed FESOP Renewal. The stack test results showed that the PM and PM<sub>10</sub> emissions from this baghouse comply with the PM and PM<sub>10</sub> emission limits proposed in the revised Conditions D.2.1(a) and (b). The average PM emission rate was 5.58 pounds per hour and all three (3) tests indicated PM emission rates were less than the 7.00 pounds per hour limit proposed in the permit. The average PM<sub>10</sub> emission rate tested was 7.51 pounds per hour and again all three (3) tests measured PM<sub>10</sub> emission rates less than the 10.0 pounds per hour limit proposed in the permit. Therefore, this baghouse will have to be repeated again prior to May 5, 2009. Condition D.2.5 (now D.2.6) has been revised as follows:

**D.2.65 Testing Requirements** [326 IAC 2-8-5(a)(1),(4)] [326 IAC 2-1.1-11]

~~Pursuant to SPR 053-11473-00002, issued on January 24, 2000, To demonstrate compliance with~~  
**Conditions D.2.1 and D.2.2** ~~326 IAC 2-8-4 and 326 IAC 2-2,~~ a compliance stack test of PM and PM<sub>10</sub> 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 and the one (1) ~~stand grinder~~ **belt sander** shall be performed ~~between January 2004 and June 2004~~ **by May 5, 2009** utilizing methods approved by the Commissioner. PM<sub>10</sub> includes filterable and condensable PM<sub>10</sub>. This test shall be repeated no less than once every five (5) years from the date of this valid compliance demonstration.

**Change 5:**

Condition D.2.8 (now D.2.9) which states the total static pressure drop for the scrubber controlling the Aisco rotary drum shakeout operation has been revised from a range of 1.0 to 7.0 inches of water to a minimum of 1.5 inches of water. This minimum pressure drop will assure that the scrubber is operating normally. The change is as follows:

**D.2.8 Parametric Monitoring**

- (a) The Permittee shall record the total static pressure drop and the scrubbing liquid (water) flow rate from the scrubber controlling the ~~Disa~~ Aisco rotary drum shakeout operation at least once per shift when this process is in operation. When for any one reading, the pressure drop across the scrubber C is ~~outside the normal range~~ **below a minimum of 1.5** ~~of 1.0 and 7.0 inches of water and/or the flow rate for the scrubbing liquid shall be maintained is less than~~ a minimum of 180 gallons of water per minute or a pressure drop range and flow rate established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading **or flow rate** that is ~~outside~~ **below** the above mentioned ~~range-minimum~~ is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.
- (b) The Permittee shall record the total static pressure drop across the baghouse D used in conjunction with the emission units listed in Condition D.2.1(c) at least once per shift when any of these facilities ~~are~~ **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 - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instruments Specifications, of this permit, shall be subject to approval by

IDEM, OAQ, and shall be calibrated at least once every six (6) months.

**Change 6:**

Condition D.4.2 has been revised to limit the amount of TEA to less than ten (10) tons per twelve (12) consecutive month period with compliance determined at the end of each month. The associated record keeping of Condition D.4.3 has also been revised and Condition D.4.4 and a quarterly report form have been added as follows:

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

~~Any change or modification which would increase the potential to emit a single HAP from amine gas catalysts to more than ten (10) tons per year and/or the combination of HAPs to more than twenty-five (25) tons per year shall require prior approval from IDEM, OAQ.~~

**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.**

**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).**

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

**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 053-12834-00002  
**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.

**Emission Unit** \_\_\_\_\_ **YEAR:** \_\_\_\_\_

Month	TEA Usage (pounds)	TEA Usage (pounds)	TEA Usage (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.**

**TSD Addendum 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 053-12834**  
**Pit ID: 053-00002**  
**Reviewer: Frank P. Castelli**  
**Application Dates: October 10, 2000 and December 3, 2003 (NSR Application)**

\*\* Process Emissions \*\*

Limited Throughput  
52,800

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	1.58		
		PM-10	0.36	13.88	Baghouse E	90.00%	1.39	0.95		
		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	0.0006	
		cobalt	0.00002	0.00077		Baghouse E	90.00%	0.00008	0.0001	
		nickel	0.00040	0.01542		Baghouse E	90.00%	0.00154	0.0011	
		arsenic	0.00008	0.00308		Baghouse E	90.00%	0.00031	0.0002	
		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	0.0061	
		<b>Total HAPs</b>							<b>0.01187</b>	<b>0.00813</b>

**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:  

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

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	3.96	
		PM-10	0.86	33.15	Baghouse E	90.00%	3.31	7.92	
		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	0.0006	
		cobalt	0.00002	0.00077	Baghouse E	90.00%	0.00008	0.0001	
		nickel	0.00040	0.01542	Baghouse E	90.00%	0.00154	0.0011	
		arsenic	0.00008	0.00308	Baghouse E	90.00%	0.00031	0.0002	
		cadmium	0.00004	0.00154	Baghouse E	90.00%	0.00015	0.0001	
		manganese	0.02250	0.86724	Baghouse E	90.00%	0.08672	0.0594	
		selenium	0.00001	0.00039	Baghouse E	90.00%	0.00004	0.0000	
		Lead	0.04250	1.63812	Baghouse E	90.00%	0.16381	0.06146	
		Total HAPs							0.25

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 tons/hr

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

with potential:

$3.47 \text{ tons/yr} \times 2000 \text{ lb/ton} / 8760 \text{ hr/yr} = 0.792 \text{ lb/hr}$  (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 From Stack Tests (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)  <b>50% of the Pouring/Casting Emissions                      Are Uncontrolled for PM &amp; PM-10                      and Metallic HAPs</b>	20.0	PM	1.40	122.64		0.000%	122.64	36.960	
		PM-10	0.33	28.91		0.000%	28.908	8.712	
		SO2	0.02	1.752				1.752	0.528
		NOx	0.01	0.876				0.876	0.264
		VOC	0.14	12.26				12.26	3.70
		CO	0.00	0.00				0.00	0.000
		chromium	0.00080	0.0701		0.000%	0.0701	0.021	
		cobalt	0.00007	0.0057		0.000%	0.0057	0.002	
		nickel	0.00141	0.1231		0.000%	0.1231	0.037	
		arsenic	0.00028	0.0241		0.000%	0.0241	0.007	
		cadmium	0.00013	0.0110		0.000%	0.0110	0.003	
		selenium	0.00002	0.0018		0.000%	0.0018	0.001	
		Lead	0.00809	0.7082		0.000%	0.7082	0.2134	
		Organic HAPs	0.28300	24.7908		0.000%	24.8	7.47	
		Total HAPs							25.7

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 tons/hr

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

with potential:

$61.3 \text{ tons/yr} \times 2000 \text{ lb/ton} / 8760 \text{ hr/yr} = 14.0 \text{ lb/hr}$  (will comply)

Limited Throughput 52,800 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 #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	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:

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

Limited Throughput 52,800 tons/year	Limited Hours 6,000
---	------------------------

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		
		SO2	0.00	0.000				0.000	0.000	0.000	
		NOx	0.00	0.000				0.000	0.000	0.000	
		VOC	0.00	0.000				0.000	0.000	0.000	
		CO	---	0.000				0.000	0.000	0.000	
		chromium	0.00080	0.070	0.00007	0.00002	0.00005	0.00007	0.00002	0.00005	
		cobalt	0.00007	0.006	0.00001	0.00000	0.00000	0.00001	0.00000	0.00000	
		nickel	0.00141	0.123	0.00012	0.00004	0.00008	0.00012	0.00004	0.00008	
		arsenic	0.00028	0.024	0.00002	0.00001	0.00002	0.00002	0.00001	0.00002	
		cadmium	0.00013	0.011	0.00001	0.00000	0.00001	0.00001	0.00000	0.00001	
		selenium	0.00002	0.002	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
		Lead	0.00809	0.708	0.00071	0.00021	0.00049	0.00071	0.00021	0.00049	
		Total HAPs							0.001	0.0003	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:

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

Limited Thoughtput 52,800 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 tons/hr

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 Thoughtput 52,800 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	16.05		
		PM-10	2.24	98.11	Scrubber C	81.00%	18.64	16.05		
		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	15.84	
		CO	---	0.00				0.00	0.0000	
		chromium	0.00122	0.05344	Scrubber C	81.00%	0.0102	0.0061		
		cobalt	0.00010	0.00438	Scrubber C	81.00%	0.0008	0.0005		
		nickel	0.00214	0.09373	Scrubber C	81.00%	0.0178	0.0107		
		arsenic	0.00042	0.01840	Scrubber C	81.00%	0.0035	0.0021		
		cadmium	0.00019	0.00832	Scrubber C	81.00%	0.0016	0.0010		
		selenium	0.00003	0.00131	Scrubber C	81.00%	0.0002	0.0002		
		Lead	0.01232	0.53962	Scrubber C	81.00%	0.1025	0.0618		
		Total HAPs							0.137	0.082

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 tons/hr

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)

Limited Thoughtput 52,800 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)	
Didion Rotary Media Drum (1999) 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	Baghouse D	99.900%	0.1402	21.000	
		PM-10	2.24	98.11	Baghouse D	99.900%	0.0981	30.000	
		SO2	0.00	0.00				0.0000000	0.00
		NOx	0.00	0.00				0.0000000	0.00
		VOC	0.60	26.28				26.2800000	15.84
		CO	---	0.00				0.0000000	0.000000
		chromium	0.00122	0.05344		Baghouse D	99.900%	0.0000534	0.000032
		cobalt	0.00010	0.00438		Baghouse D	99.900%	0.0000044	0.000003
		nickel	0.00214	0.09373		Baghouse D	99.900%	0.0000937	0.000056
		arsenic	0.00042	0.01840		Baghouse D	99.900%	0.0000184	0.000011
		cadmium	0.00019	0.00832		Baghouse D	99.900%	0.0000083	0.000005
		selenium	0.00003	0.00131		Baghouse D	99.900%	0.0000013	0.000001
		Lead	0.01232	0.53962		Baghouse D	99.900%	0.0005396	0.000325
		Total HAPs						0.00072	0.00043
									0.00049

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)

$$P = 10.2 \text{ tons/hr}$$

$$\text{limit} = 4.1 \times (10.2^{0.67}) = 19.4 \text{ lb/hr (allowable)}$$

with potential:  
 0.1 tons/yr x 2000 lb/ton / 8760 hr/yr = 0.032 lb/hr (will comply)

Limited Thoughtput 52,800 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)	
Two (2) Shot Blasters (Atlas 1963, Peru 1982) Source of Criteria Pollutant Factors: FIRE 6.01 SCC# 3-04-003-31 AP-42 Ch. 12.10	10.0	PM	17.00	744.60	Baghouse D	99.900%	0.745	21.000	
		PM-10	1.70	74.46	Baghouse D	99.900%	0.074	30.000	
		SO2	0.00	0.00				0.000	0.000
		NOx	0.00	0.00				0.000	0.000
		VOC	0.00	0.00				0.000	0.000
		CO	---	0.00				0.000	0.000
		arsenic	0.00221	0.09680		Baghouse D	99.900%	0.0001	0.00006
		cadmium	0.00102	0.04468		Baghouse D	99.900%	0.0000	0.00003
		selenium	0.00017	0.00745		Baghouse D	99.900%	0.0000	0.00001
		Lead	0.00450	0.19710		Baghouse D	99.900%	0.0002	0.00014
		Total HAPs						0.0003	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:

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

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

with potential:  
 0.7 tons/yr x 2000 lb/ton / 8760 hr/yr = 0.170 lb/hr (will comply)

Limited Throughput 52,800 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)	
Mesh Belt Shotblast (1999) Source of Criteria Pollutant Factors: 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	0.000	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	0.0022	0.048		Baghouse D	99.900%	0.000048	0.000058	0.000033
		cadmium	0.0010	0.022		Baghouse D	99.900%	0.000022	0.000027	0.000015
		selenium	0.0002	0.00		Baghouse D	99.900%	0.000004	0.000004	0.000003
		Lead	0.0045	0.099		Baghouse D	99.900%	0.000099	0.000119	0.000068
		Total HAPs							0.000173	0.000209

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)	Baghouse A Total 13.14 13.14	
Continuous Shotblast (2004) Source of Criteria Pollutant Factors: 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

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)

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:  
 $0.006 \text{ tons/yr} \times 2000 \text{ lb/ton} / 8760 \text{ hr/yr} = 0.001 \text{ lb/hr (will comply)}$

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)		
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%	0.0000000	
		NOx	0.00	0.00			0.00%	0.0000000	
		VOC	0.00	0.00			0.00%	0.0000000	
		CO	---	0.00			0.00%	0.0000000	
		arsenic	0.00221	0.01936	Baghouse D	99.900%	0.0000194		
		cadmium	0.00102	0.00894	Baghouse D	99.900%	0.0000089		
		selenium	0.00017	0.00149	Baghouse D	99.900%	0.0000015		
		Lead	0.00450	0.03942	Baghouse D	99.900%	0.0000394		
		Total HAPs							0.000069

Baghouse D  
 Total  
 Total

Limited Hours	Emissions After Limits & Control (ton/yr)
6,000	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:  
 $21.00 \text{ tons/yr} \times 2000 \text{ lb/ton} / 8760 \text{ hr/yr} = 4.79 \text{ lb/hr (will comply)}$

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	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	
<b>VOC = 0.00001 pounds of formaldehyde per pound of sand = 0.02 pounds per ton of sand</b>							Total HAPs	0.088

PM and PM10 emissions accounted for in sand handling

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)
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  
 tons/yr**

**Total 15.3 tons of VOC/yr**

Potential Throughput 569400 tons/year	Limited Hours 6,000

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)
Sand Handling Disa #1 (1982) Source of Criteria Pollutant Factors: FIRE 6.23 EPA SCC# 3-04-003-50	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

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 x ( 65 ^0.11 ) - 40 = 47.1 lb/hr (allowable)

with potential:  
 1.0 tons/yr x 2000 lb/ton / 8760 hr/yr = 0.234 lb/hr (will comply)

Potential Throughput 569400 tons/year	Limited Hours 6,000
---	------------------------

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)
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.

Limited Throughput 0 tons/year
--------------------------------------

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)
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)
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							

electd

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:

$$0.591 \text{ tons/yr} \times 2000 \text{ lb/ton} / 8760 \text{ hr/yr} = 0.135 \text{ lb/hr (will comply)}$$

**Unpaved Roads**

$3.0$  trips/hr x  
 $0.100$  miles/roundtrip x  
 $8760$  hrs/yr =

$2628.0$  miles per year

**For PM**  
 $Ef = k * [(s/12)^{0.7}] * [(W/3)^b] * [(365-p)/365]$   
 5.38  
 4.9  
 4.8  
 0.45  
 39  
 125

**For PM-10**  
 $Ef = k * [(s/12)^{0.9}] * [(W/3)^b] * [(365-p)/365]$   
 = 1.37 lb/mile  
 where k = 1.5r for PM-10 (k=4.9 for PM-30 or TSP)  
 s = 4.8 mean % silt content of unpaved roads  
 b = 0.45 0 (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
	0.0022	0.0022	0.0021	0.0310	0.0025	0.0067
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-42, Footnote a, Table

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.

Summary of Emissions Before Controls (tons per year)

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) Isocore 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
<b>Total</b>	<b>4639</b>	<b>924</b>	<b>1.97</b>	<b>5.96</b>	<b>80.6</b>	<b>2.33</b>	<b>40.9</b>

Summary of Emissions After Controls (tons per year)

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) Isocore 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
<b>Total</b>	<b>203.1</b>	<b>101.2</b>	<b>1.97</b>	<b>5.96</b>	<b>80.6</b>	<b>2.33</b>	<b>35.0</b>

**Summary of Emissions After Limited Throughput and Controls (tons per year)**

Emission Unit	PM	PM-10	SO2	NOx	VOC	CO	Total HAPs
Scrap & Charge Handling (1996/2000)	1.58	0.95	0.000	0.000	0.000	0.000	0.0081
Melting - 2 Electric	3.96	7.92	0.000	0.000	0.000	0.000	0.1229
Pouring/Casting Disa #1 & 2 (1982 & 2000)	36.96	8.71	0.528	0.264	3.696	0.000	7.7557
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	0.0003
Castings Cooling Disa #2 (2000)	21.00	30.00	0.000	0.000	0.000	0.000	0.0000
Aisco Rotary Drum (1982)	16.05	16.05	0.000	0.000	15.840	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	0.0002
Mesh Belt Shotblast (1999)	21.00	30.00	0.000	0.000	0.000	0.000	0.0002
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
<b>Total</b>	<b>98.7</b>	<b>80.9</b>	<b>0.745</b>	<b>5.34</b>	<b>53.3</b>	<b>2.33</b>	<b>16.9</b>

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**

**Summary of Emissions After Limited Throughput 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
<b>Total</b>	<b>13.14</b>	<b>13.14</b>	<b>0.00</b>	<b>0.000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.005</b>

**Baghouse D**

**Summary of Emissions After Limited Throughput 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
<b>Total</b>	<b>21.00</b>	<b>30.00</b>

**Baghouse D total limited to 21.0 tons per year of PM and 30.0 tons per year of PM-10**

**Baghouse E**

**Summary of Emissions After Limited Throughput and Controls (tons per year)**

Emission Unit	PM	PM-10	SO2	NOx	VOC	CO	Total HAPs
Scrap & Charge Handling (1996/2000)	1.584	0.950	0.000	0.000	0.000	0.000	0.0081
Melting - 2 Electric	3.960	7.920	0.000	0.000	0.000	0.000	0.1229
<b>Total</b>	<b>5.54</b>	<b>8.87</b>	<b>0.000</b>	<b>0.000</b>	<b>0.00</b>	<b>0.000</b>	<b>0.131</b>

**Scrubber C**

**Summary of Emissions After Limited Throughput and Controls (tons per year)**

Emission Unit	PM	PM-10	SO2	NOx	VOC	CO	Total HAPs
Aisco Rotary Drum (1982)	16.05	16.05	0.000	0.000	15.840	0.000	0.0824
<b>Total</b>	<b>16.05</b>	<b>16.05</b>	<b>0.000</b>	<b>0.000</b>	<b>15.84</b>	<b>0.000</b>	<b>0.082</b>

**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
<b>Total</b>		<b>2.5354</b>	<b>25.7347</b>	<b>0.7192</b>	<b>0.7192</b>	<b>0.3460</b>	<b>0.1730</b>	<b>0.3460</b>	<b>0.9439</b>

**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	<b>0.265</b>
Cobalt	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	<b>0.022</b>
Nickel	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	<b>0.464</b>
Arsenic	0.0774	0.0194	0.0000	0.0000	0.0000	0.0000	0.0000	<b>0.430</b>
Cadmium	0.0357	0.0089	0.0000	0.0000	0.0000	0.0000	0.0000	<b>0.198</b>
Manganese	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	<b>0.867</b>
Selenium	0.0060	0.0015	0.0000	0.0000	0.0000	0.0000	0.0000	<b>0.033</b>
Lead	0.1577	0.0394	0.0000	0.0000	0.0000	0.0000	0.0000	<b>4.912</b>
Organic HAPs (TEA & Formaldehyde)	0.0000	0.0000	0.0876	8.7600	0.0000	0.0000	0.0000	<b>33.638</b>
<b>Total</b>	<b>0.2768</b>	<b>0.0692</b>	<b>0.0876</b>	<b>8.7600</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>40.8</b>

**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
<b>Total</b>	<b>0.0119</b>	<b>0.2535</b>	<b>25.7347</b>	<b>0.1366</b>	<b>0.0007</b>	<b>0.0003</b>	<b>0.0002</b>	<b>0.0061</b>	<b>0.0009</b>

**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	<b>0.082</b>
Cobalt	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	<b>0.007</b>
Nickel	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	<b>0.144</b>
Arsenic	0.0014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	<b>0.031</b>
Cadmium	0.0006	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	<b>0.014</b>
Manganese	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	<b>0.087</b>
Selenium	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	<b>0.002</b>
Lead	0.0028	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	<b>0.99</b>
Organic HAPs (TEA & Formaldehyde)	0.0000	0.0000	0.0876	8.7600	0.0000	0.0000	0.0000	<b>33.64</b>
<b>Total</b>	<b>0.0049</b>	<b>0.0001</b>	<b>0.0876</b>	<b>8.7600</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>35.0</b>

**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	0.0006	0.0006	0.0211	0.0061	0.0000	0.0000	0.0000	0.0000	0.0000
Cobalt	0.0001	0.0001	0.0017	0.0005	0.0000	0.0000	0.0000	0.0000	0.0000
Nickel	0.0011	0.0011	0.0371	0.0107	0.0001	0.0000	0.0000	0.0000	0.0000
Arsenic	0.0002	0.0002	0.0073	0.0021	0.0000	0.0001	0.0001	0.0017	0.0000
Cadmium	0.0001	0.0001	0.0033	0.0010	0.0000	0.0000	0.0000	0.0008	0.0000
Manganese	0.0000	0.0594	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Selenium	0.0000	0.0000	0.0005	0.0002	0.0000	0.0000	0.0000	0.0001	0.0000
Lead	0.0061	0.0615	0.2134	0.0618	0.0003	0.0001	0.0001	0.0035	0.0002
Organic HAPs (TEA & Formaldehyde)	0.0000	0.0000	7.4712	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0081</b>	<b>0.1229</b>	<b>7.7557</b>	<b>0.0824</b>	<b>0.0004</b>	<b>0.0002</b>	<b>0.0002</b>	<b>0.0061</b>	<b>0.0003</b>

**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	<b>0.029</b>
Cobalt	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	<b>0.002</b>
Nickel	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	<b>0.050</b>
Arsenic	0.0014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	<b>0.013</b>
Cadmium	0.0006	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	<b>0.006</b>
Manganese	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	<b>0.059</b>
Selenium	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	<b>0.001</b>
Lead	0.0028	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	<b>0.350</b>
Organic HAPs (TEA & Formaldehyde)	0.0000	0.0000	0.0876	8.7600	0.0000	0.0000	0.0000	<b>16.319</b>
<b>Total</b>	<b>0.0049</b>	<b>0.0001</b>	<b>0.0876</b>	<b>8.7600</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>16.829</b>