

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

**INDIANA DEPARTMENT OF ENVIRONMENTAL  
MANAGEMENT - OFFICE OF AIR QUALITY  
And  
VIGO COUNTY AIR POLLUTION CONTROL**

**Gartland Foundry Company  
330 Grant Street  
Terre Haute, Indiana 47802**

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

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

Operation Permit No.: F167-17828-00007	
Issued by: George M. Needham, Director Vigo County Air Pollution Control	Issuance Date: October 25, 2005 Expiration Date: October 25, 2010

**SECTION A SOURCE SUMMARY ..... 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)(I)]
- A.4 FESOP Applicability [326 IAC 2-8-2]
- A.5 Prior Permits Superseded [326 IAC 2-1.1-9.5]

**SECTION B GENERAL CONDITIONS ..... 10**

- 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)][IC13-14-2-2][IC 13-17-3-2][IC13-30-3-1]
- 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 Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][62 FR 8314]

**SECTION C SOURCE OPERATION CONDITIONS ..... 20**

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

- C.1 Overall Source Limit [326 IAC 2-8]
- C.2 Opacity [326 IAC 5-1]
- C.3 Open Burning [326 IAC 4-1][IC 13-17-9]
- C.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2(3)]
- C.5 Fugitive Dust Emissions [326 IAC 6-4]
- C.6 Operation of Equipment [326 IAC 2-8-5(a)(4)]
- C.7 Stack Height [326 IAC 1-7]
- C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61 Subpart M]

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

- C.9 Performance Testing [326 IAC 3-6]

**Compliance Requirements [326 IAC 2-1.1-11]**

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

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

- C.11 Compliance Monitoring [326 IAC 2-8-4(3)] [326 IAC 2-8-5(a)(1)]
- C.12 Monitoring Methods [326 IAC 3][40 CFR 60][40 CFR 63]

- C.13 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]**

- C.14 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]
- C.15 Compliance Response Plan -Preparation, Implementation, Records, and Reports  
[326 IAC 2-8-4][326 IAC 2-8-5]
- C.16 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.17 General Record Keeping Requirements [326 IAC 2-8-4(3)][326 IAC 2-8-5]
- C.18 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

**Stratospheric Ozone Protection**

- C.19 Compliance with 40 CFR 82 and 326 IAC 22-1

**SECTION D.1 FACILITY OPERATION CONDITIONS**

**Two (2) Electric Induction Furnaces (EU130 and EU140) ..... 28**

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

- D.1.1 Housekeeping
- D.1.2 Particulate Emissions [326 IAC 2-2] [326 IAC 2-8]
- D.1.3 Particulate Emissions [326 IAC 6-1-2]
- D.1.4 Hazardous Air Pollutant (HAP) Emissions [326 IAC 2-8]
- D.1.5 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

**Compliance Determination Requirements**

- D.1.6 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]
- D.1.7 Particulate Matter (PM)

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

- D.1.8 Visible Emissions Notations
- D.1.9 Parametric Monitoring
- D.1.10 Baghouse Inspections
- D.1.11 Broken or Failed Bag Detection

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

- D.1.12 Record Keeping Requirements
- D.1.13 Reporting Requirements

**SECTION D.2 FACILITY OPERATION CONDITIONS**

**Electrostatic spray booth ..... 32**

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

- D.2.1 Volatile Organic Compounds (VOC) [326 IAC 8-2-9] [326 IAC 2]
- D.2.2 Emission Minimization [326 IAC 8-2-9]
- D.2.3 Particulate Matter (PM) [326 IAC 6-1-2]
- D.2.4 PSD Minor Limit [326 IAC 2-2]
- D.2.5 Hazardous Air Pollutant (HAP) Limit [326 IAC 2-8]
- D.2.6 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

**Compliance Determination Requirements**

- D.2.7 Volatile Organic Compounds (VOC)
- D.2.8 Particulate Matter (PM)

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

D.2.9 Monitoring

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

D.2.10 Record Keeping Requirements

D.2.11 Reporting Requirements

**SECTION D.3 FACILITY OPERATION CONDITIONS**

**Various foundry operations ..... 35**

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

D.3.1 BH5 Emissions [326 IAC 2-2]

D.3.2 Particulate Matter Limitation (PM) [326 IAC 6-1-2]

D.3.3 PSD Minor Limit [326 IAC 2-2][326 IAC 2-8]

D.3.4 Hazardous Air Pollutant (HAP) Limit [326 IAC 2-8]

D.3.5 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

**Compliance Determination Requirements**

D.3.6 Particulate Matter (PM)

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

D.3.7 Visible Emissions Notations

D.3.8 Parametric Monitoring

D.3.9 Baghouse Inspections

D.3.10 Broken Bag or Failure Detection

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

D.3.11 Record Keeping Requirements

D.3.12 Reporting Requirements

**SECTION D.4 FACILITY OPERATION CONDITIONS –Magnesium Treatment, Pouring, Cooling ... 42**

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

D.4.1 Particulate [326 IAC 6-1-2]

D.4.2 PSD Minor Limit [326 IAC 2-2] [326 IAC 2-8]

D.4.3 Hazardous Air Pollutant (HAP) Emissions [326 IAC 2-8]

D.4.4 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

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

D.4.5 Record Keeping Requirements

D.4.6 Reporting Requirements

**SECTION D.5 FACILITY CONDITIONS**

**Isocure Core making systems ..... 44**

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

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

D.5.2 PSD Minor Limit [326 IAC 2-2][326 IAC 2-8]

D.5.3 Hazardous Air Pollutant (HAP) Emissions [326 IAC 2-8]

D.5.4 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

**Compliance Determination Requirements**

D.5.5 Triethylamine Control [326 IAC 2-2][40 CFR 52.21][326 IAC 2-4.1]

D.5.6 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

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

- D.5.7 Bin Vent Monitoring
- D.5.8 Acid Scrubber Monitoring

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

- D.5.9 Record Keeping Requirements
- D.5.10 Reporting Requirements

<b>Certification Form .....</b>	<b>48</b>
<b>Emergency Occurrence Form.....</b>	<b>49</b>
<b>Quarterly Report Form.....</b>	<b>51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, and 62</b>
<b>Quarterly Deviation and Compliance Monitoring Report Form .....</b>	<b>63</b>

## SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) and Vigo County Air Pollution Control (VCAPC). 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)]

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The Permittee owns and operates a stationary grey and ductile iron foundry for the manufacture of iron castings.

Authorized individual:	Mr. William Grimes, President
Source Address:	330 Grant Street, Terre Haute, Indiana 47802
Mailing Address:	PO Box 1564, Terre Haute, Indiana 47808
General Source Phone:	(812) 232-0226
SIC Code:	3321 (NAICS 331511)
Source Location Status:	Vigo County Basic nonattainment for ozone under the 8-hour standard Maintenance attainment for sulfur dioxide Attainment for all other criteria pollutants
Source Status:	Federally Enforceable State Operating Permit (FESOP) Minor Source, under PSD Rules Minor Source, under Emission Offset Rules Minor Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

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

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

- (a) Two (2) Electric Induction Furnaces as follows:
  - 1. EU130, consisting of induction furnace #3, constructed in 1995, with a maximum capacity of 5.0 tons of metal per hour, using Steelcraft baghouse (BH1) for control, and exhausting to stack SC-2.
  - 2. EU140, consisting of induction furnace #4, constructed in 1995, with a maximum capacity of 5.0 tons of metal per hour, using Steelcraft baghouse (BH1) for control, and exhausting to stack SC-2.
  
- (b) One (1) electrostatic spray booth, identified as prime paint line EU710, constructed in 1983, with a maximum capacity of 500 grey iron castings per hour, with dry filters for control of particulate matter overspray, and exhausting to stack SC-6.
  
- (c) Sand handling systems including:
  - 1. Sand Muller, identified as EU591, constructed in 1997, with a maximum capacity of 100 tons per hour, and sand conveyor, constructed in 1970, identified as EU592, using Hosakawa baghouse (BH5) for control, and exhausting to stack SC-5.
  - 2. Casting shakeout, identified as EU570, constructed in 2001, with a maximum capacity of 80 tons of sand per hour and 18 tons of metal per hour, using a Wheelabrator-88 baghouse (BH3) for control, and exhausting to stack SC-4.
  - 3. Mold making process including six (6) squeezer mold machines (EU520, constructed in 1902), three (3) rotolift mold machines (EU521, constructed in 1902), auto mold machine (EU530, constructed in 2000), and another auto mold

machine (EU531, constructed in 1993), utilizing no control, and exhausting to SU-INT6/7/8/13.

- (d) One (1) Scrap/Charge Handling operation for the electric induction furnaces, identified as EU120, constructed in 1995, with a maximum capacity of 19 tons of metal per hour, and exhausting as fugitive emissions FG-1.
- (e) Casting Finishing:
  - 1. One (1) Spin Blast, identified as EU610, constructed in 1986, with a maximum capacity of 5 tons per hour of metal castings, using Wheelabrator-35 baghouse (BH2) for control and exhausting to stack SC-7.
  - 2. One (1) Tumble Blast, identified as EU620, constructed in 1988, with a maximum capacity of 5 tons per hour of metal castings, using Hosakawa baghouse (BH5) for control and exhausting to stack SC-5.
  - 3. One (1) Tumbler, identified as EU630, constructed in 1989, with a maximum capacity of 1 ton per hour of metal castings using Hosakawa baghouse (BH5) for control and exhausting to stack SC-5.
  - 4. Four (4) Snag Grinders, identified as EU640(2 constructed in 1975, 1 in 1985, and 1 in 1991), each with a maximum capacity of 2 tons per hour of metal castings, using Hosakawa baghouse (BH5) for control and exhausting to stack SC-5.
  - 5. Six (6) self-contained finish grinders, identified as EU650, constructed in 1990, each with a maximum capacity of 2 tons per hour of metal castings, with downdraft tables using baffles for control and exhausting to general ventilation.
- (f) Core making systems including:
  - 1. Three (3) Shell Core Machines, identified as EU320, EU321, and EU322, constructed in 1979, each with a maximum capacity of 1 ton per hour of sand, utilizing no controls and exhausting to general ventilation;
  - 2. One (1) Oil Core Making Process, identified as EU410, constructed in 1902, utilizing a mixer and associated core boxes with a maximum capacity of 0.25 tons per hour of sand, utilizing no controls and exhausting to general ventilation; and
  - 3. Core Wash Process, identified as EU730, constructed in 1902, with a maximum capacity of 1 ton per hour of sand, utilizing no controls and exhausting to general ventilation.
- (g) Magnesium Treatment (Inoculation), with a maximum capacity of 10 tons of metal per hour, identified as EU150, constructed in 1986, utilizing a closed ladle, and exhausting to general ventilation.
- (h) Pouring, identified as EU540, constructed in 1902, with a maximum capacity of 19.2 tons of metal per hour total. Pouring operations are conducted on the floor, sinto molding line, and beardsley molding line. The maximum pouring capacity of the floor, sinto molding line, and beardsley molding line is 11.2, 5.0, and 3.0 tons per hour of metal, respectively.
- (i) Cooling, identified as EU550, constructed in 1902, with a maximum capacity of 19.2 tons of metal per hour total. Cooling operations are conducted on the floor, sinto molding line, and beardsley molding line. The maximum cooling capacity of the floor, sinto molding line, and beardsley molding line is 11.2, 5.0, and 3.0 tons per hour of metal, respectively.
- (j) Isocure Core making systems including:
  - 1. Isocure Core Machine, identified as EU 222, constructed in 1994, fed by mixer 2, with a maximum capacity of 0.525 tons of sand/resin mixture per hour, a

- maximum of 21 pounds of resin per hour, and a maximum of 3.15 pounds of TEA per hour, controlled by an acid scrubber, and exhausting to stack SC-8.
2. Cold Box (Isocure) Core Machine, identified as CBCM-1, constructed in 2003, fed by mixer 2, with a maximum capacity of 1 ton of sand/resin mixture per hour, a maximum of 40 pounds of resin per hour, and a maximum of 6 pounds of TEA per hour, controlled by an acid scrubber, and exhausting to stack SC-8.
  3. Cold Box (Isocure) Core Machine, identified as CBCM-2, constructed in 2003, fed by mixer 2, with a maximum capacity of 1 ton of sand/resin per hour, a maximum of 40 pounds of resin per hour, and a maximum of 6 pounds of TEA per hour, controlled by an acid scrubber, and exhausting to stack SC-8.
  4. Sand Mixer, identified as mixer 2, constructed in 2003, with a maximum capacity of 2.525 tons of sand/resin mixture per hour.
  5. Sand heater, constructed in 1978
  6. Sand Silo, with a maximum capacity of 165 tons of sand, loaded via pneumatic conveying system including an integral bin vent, utilizing no control.

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

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

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) BTU per hour.
- (b) Application of oils, greases, lubricants or other nonvolatile materials applied as temporary protective coatings.
- (c) The following equipment related to manufacturing activities not resulting in the emission of HAPs; brazing equipment, cutting torches, soldering equipment, welding equipment.
- (d) Closed loop heating and cooling systems.
- (e) Any operation using aqueous solutions containing less than 1% by weight of VOCs excluding HAPs.
- (f) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.
- (g) Heat exchanger cleaning and repair.
- (h) Paved and unpaved roads and parking lots with public access.
- (i) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations.
- (j) Filter or coalescer media change out.
- (k) Mold release agents using low volatile products (vapor pressure less than or equal to 2 kilopascals measured at 38 degrees C.
- (l) A laboratory as defined in 326 IAC 2-7-1(21)(D).

- (m) Other activities or categories not previously identified with emissions equal to or less than specific thresholds:
  - 1. Unit 780 - Storage Piles
  - 2. One (1) Turntable, identified as EU580, with a maximum capacity of 8.0 tons per hour of metal castings, using Hosakawa baghouse (BH5) for control, and exhausting to stack SC-5.

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) and Vigo County Air Pollution Control (VCAPC) for 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]**

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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]**

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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]**

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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]**

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- (a)      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, VCAPC, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.
  
- (b)      Unless otherwise stated, all terms and conditions in this permit that are local requirements, including any provisions designed to limit the source's potential to emit, are enforceable by Vigo County Air Pollution Control.

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

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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)]**

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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)]**

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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)]**

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- (a)      The Permittee shall furnish to IDEM, OAQ and VCAPC, within a reasonable time, any information that IDEM, OAQ and VCAPC, 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 and VCAPC, copies of records required to be kept by this permit.
  
- (b)      For information furnished by the Permittee to IDEM, OAQ or VCAPC, 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)]**

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IDEM, OAQ and VCAPC 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)]**

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

**B.11 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]**

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- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted 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  
Indianapolis, Indiana 46204

And

Vigo County Air Pollution Control  
103 South 3<sup>rd</sup> Street  
Terre Haute, Indiana 47807

- (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 and VCAPC, 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 and VCAPC, 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)]**

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- (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 and VCAPC, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ and VCAPC. IDEM, OAQ and VCAPC, 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]**

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- (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 and VCAPC, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

**IDEM**

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

**VCAPC**

Telephone No.: 812-462-3433  
Facsimile No.: 812-462-3447

- (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  
Indianapolis, Indiana 46204

And

Vigo County Air Pollution Control  
103 South 3<sup>rd</sup> Street,  
Terre Haute, Indiana 47807

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 and VCAPC, 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 and VCAPC, by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-8 and any other applicable rules.
- (g) Operations may continue during an emergency only if the following conditions are met:
  - (1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.
  - (2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:
    - (A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and
    - (B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

Any operations shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.
- (h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

B.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  
Indianapolis, Indiana 46204

And

Vigo County Air Pollution Control  
103 South 3<sup>rd</sup> Street  
Terre Haute, Indiana 47807

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

The Quarterly Deviation and Compliance Monitoring Report does require the certification by the "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]

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- (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 and VCAPC 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 and VCAPC, 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 and VCAPC, at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ and VCAPC, 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)]**

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- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and VCAPC 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  
Indianapolis, IN 46204

And

Vigo County Air Pollution Control  
103 South 3<sup>rd</sup> Street  
Terre Haute, Indiana 47807

(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 and VCAPC, on or before the date it is due.
- (2) If IDEM, OAQ and VCAPC 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 and VCAPC take 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 and VCAPC, 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  
Indianapolis, Indiana 46204

And

Vigo County Air Pollution Control  
103 South 3<sup>rd</sup> Street  
Terre Haute, Indiana 47807

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]**

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- (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  
Indianapolis, Indiana 46204

And

Vigo County Air Pollution Control  
103 South 3<sup>rd</sup> Street  
Terre Haute, Indiana 47807

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

**B.19 Permit Revision Requirement [326 IAC 2-8-11.1]**

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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 13-17-3-2][IC 13-17-3-2][IC13-30-3-1]**

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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, VCAPC, 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]**

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- (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  
Indianapolis, Indiana 46204

And

Vigo County Air Pollution Control  
103 South 3<sup>rd</sup> Street  
Terre Haute, Indiana 47807

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 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.23 Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][62 FR 8314][326 IAC 1-1-6]

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

## SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

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

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

- (a) Pursuant to 326 IAC 2-8:
- (1) The potential to emit any regulated pollutant, except particulate matter (PM), from the entire source shall be limited to less than one-hundred (100) tons per twelve (12) consecutive month period. This limitation shall also make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable;
  - (2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and
  - (3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.
- (b) Pursuant to 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), potential to emit particulate matter (PM) from the entire source shall be limited to less than one-hundred (100) tons per twelve (12) consecutive month period.
- (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.2 Opacity [326 IAC 5-1]

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

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

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

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

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

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

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

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

---

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

All required notifications shall be submitted to:

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

And

Vigo County Air Pollution Control  
103 South 3<sup>rd</sup> Street  
Terre Haute, Indiana 47807

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.9 Performance Testing [326 IAC 3-6]**

---

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

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

And

Vigo County Air Pollution Control  
103 South 3<sup>rd</sup> Street  
Terre Haute, Indiana 47807

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 and VCAPC 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 and VCAPC not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ and VCAPC, if the Permittee submits to IDEM, OAQ and VCAPC, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

#### **Compliance Requirements [326 IAC 2-1.1-11]**

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

---

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

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

##### **C.11 Compliance Monitoring [326 IAC 2-8-4(3)] [326 IAC 2-8-5(a)(1)]**

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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.12 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]**

---

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

##### **C.13 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 (" 2%) of full scale reading.
- (b) 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 pH point.

- (c) The Permittee may request the IDEM, OAQ and VCAPC, 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.14 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.15 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 and VCAPC 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 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 and VCAPC of the expected date of the shut down. The notification shall also include the 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 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.16 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4][326 IAC 2-8-5]**

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ and VCAPC, 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 and VCAPC that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ and VCAPC may extend the retesting deadline.
- (c) IDEM, OAQ and VCAPC reserve 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.17 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]**

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- (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 or Vigo County Air Pollution Control makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner or Vigo County Air Pollution Control 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.18 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  
Indianapolis, Indiana 46204  
  
And  
  
Vigo County Air Pollution Control  
103 South 3<sup>rd</sup> Street  
Terre Haute, Indiana 47807
- (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 and VCAPC, 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, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

## **Stratospheric Ozone Protection**

### **C.19 Compliance with 40 CFR 82 and 326 IAC 22-1**

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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)]:

1. EU130, consisting of induction furnace #3, constructed in 1995, with a maximum capacity of 5.0 tons of metal per hour, using Steelcraft baghouse (BH1) for control, and exhausting to stack SC-2.
2. EU140, consisting of induction furnace #4, constructed in 1995, with a maximum capacity of 5.0 tons of metal per hour, using Steelcraft baghouse (BH1) for control, and exhausting to stack SC-2.

(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 Housekeeping

Pursuant to OP-07-3321-03-95, the charge materials for electric induction furnaces #3 and #4 shall be stored inside a building. Also, visible emissions from any building opening shall not exceed 20% opacity, as determined by 40 CFR 60 Appendix A, Method 9 and 326 IAC 5-1.

#### D.1.2 Particulate Emissions [326 IAC 2-2] [326 IAC 2-8]

- (a) Pursuant to Significant Source Modification 167-16913-00007, issued on June 3, 2003, the input of metal to the induction furnaces (EU130 and EU140 combined) shall be less than 13,800 tons per 12 consecutive month period with compliance determined at the end of each month.
- (b) The PM emissions from the induction furnaces (#3 and #4) shall be limited to 0.018 pounds per ton of metal melted.
- (c) The PM10 emissions from the induction furnaces (#3 and #4) shall be limited to 0.017 pounds per ton of metal melted.

These limits (combined with others throughout this approval) are required to limit the potential to emit of particulate matter (PM and PM10) for Gartland Foundry to less than 100 tons per 12 consecutive month period. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) and 326 IAC 2-7 (Part 70 Permit Program) not applicable.

#### D.1.3 Particulate Emissions [326 IAC 6-1-2]

Pursuant to 326 IAC 6-1-2(e), the Permittee shall not allow or permit the discharge into the atmosphere any gases from the induction furnaces (#3 and #4) containing a particulate matter content greater than 0.07 grain per dry standard cubic foot.

#### D.1.4 Hazardous Air Pollutant (HAP) Emissions [326 IAC 2-8]

The combined Metallic HAP emissions (chromium compounds, cobalt compounds, nickel compounds, arsenic compounds, cadmium compounds, selenium compounds, manganese compounds, and antimony compounds) from the induction furnaces (#3 and #4) shall be limited to 0.02843 pounds per ton of metal melted. This limit (combined with others throughout this approval) is required to limit the potential to emit of HAPs for Gartland Foundry to less than 10 tons per 12 consecutive month period individually and to less than 25 tons per 12 consecutive month period combined. Compliance with this limit makes 326 IAC 2-7 (Part 70 Permit Program) not applicable.

**D.1.5 Preventive Maintenance Plan [326 IAC 2-8-4(9)]**

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

**Compliance Determination Requirements**

**D.1.6 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]**

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During the period between 6 and 12 months after the issuance of this approval, in order to demonstrate compliance with Condition D.1.2, the Permittee shall perform PM and PM10 testing on each Electric Induction Furnace utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C – Performance Testing.

**D.1.7 Particulate Matter (PM)**

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Pursuant to OP-07-3321-03-95, issued on August 21, 1995, the baghouse for PM control shall be in operation and control emissions from the Electric Induction Furnaces #3 and #4 are in operation.

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

**D.1.8 Visible Emissions Notations**

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- (a) Visible emission notations of the Electric Induction Furnace stack (SC-2) exhaust shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. 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.1.9 Parametric Monitoring**

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The Permittee shall record the total static pressure drop across the Steelcraft baghouse (BH1) used in conjunction with the Electric Induction Furnaces #3 and #4, at least once per day when either Electric Induction Furnace is in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C – 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 Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ and VCAPC, and shall be calibrated at least once every six (6) months.

#### D.1.10 Baghouse Inspections

An inspection shall be performed each calendar quarter of all bags controlling the Electric Induction Furnace operation when venting to the atmosphere. Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.

#### D.1.11 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) 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 and VCAPC 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 processes 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.1.12 Record Keeping Requirements

- (a) To document compliance with Condition D.1.8, the Permittee shall maintain records of visible emission notations of the Electric Induction Furnace stack exhaust once per shift.
- (b) To document compliance with Condition D.1.9, the Permittee shall maintain records once per shift of the total static pressure drop during normal operation when venting to the atmosphere.
- (c) To document compliance with Condition D.1.10, the Permittee shall maintain records of the results of the inspections required under Condition D.1.10 and the dates the vents are redirected.
- (d) To document compliance with Condition D.1.2, the Permittee shall maintain records of the weight of metal melted each month. The records shall be complete and sufficient to establish compliance with the melting use limitation in Condition D.1.2.

- (e) To document compliance with Condition D.1.5, 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.1.13 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.1.2(a) shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

## SECTION D.2 FACILITY OPERATION CONDITIONS

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

One (1) electrostatic spray booth, identified as prime paint line EU710, constructed in 1983, with a maximum capacity of 500 grey iron castings per hour, with dry filters for control of particulate matter overspray, and exhausting to stack SC-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.2.1 Volatile Organic Compounds (VOC) [326 IAC 8-2-9]

The volatile organic compound (VOC) content of coating delivered to the applicator at Spray Booth EU710 shall be limited to 3.5 pounds of VOCs per gallon of coating less water, for extreme performance coatings.

#### D.2.2 Emission Minimization [326 IAC 8-2-9]

Solvent sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

#### D.2.3 Particulate Matter (PM) [326 IAC 6-1-2]

Pursuant to 326 IAC 6-1-2(a) (Nonattainment Area Particulate Limitations), particulate matter (PM) emissions from the electrostatic spray booth (EU710) shall be limited to 0.03 grain per dry standard cubic foot of exhaust air.

#### D.2.4 PSD Minor Limit [326 IAC 2-2] [326 IAC 2-8]

Pursuant to Significant Source Modification 167-16913-00007, issued on June 3, 2003, and revised through this FESOP, the VOC input to the electrostatic spray booth (EU710) shall not exceed 39.9 tons per 12 consecutive month period with compliance determined at the end of each month. This usage limit is required to limit the potential to emit of volatile organic compounds for this emission unit to less than the 40 tons per 12 consecutive month period significant level. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) and 326 IAC 2-7 (Part 70 Program) not applicable.

#### D.2.5 Hazardous Air Pollutant (HAP) Limit [326 IAC 2-8]

The Xylene input to the electrostatic spray booth (EU710) shall not exceed 9.883 tons per 12 consecutive month period with compliance determined at the end of each month. Compliance with this limit makes 326 IAC 2-7 (Part 70 Program) not applicable.

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

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control device.

### Compliance Determination Requirements

#### D.2.7 Volatile Organic Compounds (VOC)

Compliance with the VOC content and usage limitations contained in Condition D.2.1 and D.2.4 shall be determined pursuant to 326 IAC 8-1-4(a)(3)(A) using formulation data supplied by the coating manufacturer. However, IDEM, OAQ, and VCAPC reserve the authority to determine

compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

#### D.2.8 Particulate Matter (PM)

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The dry filters for PM overspray control from Spray Booth EU710 shall be in operation at all times when the spray booth is in operation and exhausting to the outside atmosphere.

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

#### D.2.9 Monitoring

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- (a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters. To monitor the performance of the dry filters, weekly observations shall be made of the overspray from the spray booth stack (SC-6) while the spray booth is in operation. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Response Plan – Preparation, Implementation, Records, and Reports, shall be considered a deviation of this permit.
- (b) Monthly inspections shall be performed of the coating emissions from the stack and the presence of overspray on the rooftops and the nearby ground. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when a noticeable change in overspray emission, or evidence of overspray emission is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Response Plan – Preparation, Implementation, Records, and Reports, shall be considered a deviation of this permit.
- (c) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

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

#### D.2.10 Record Keeping Requirements

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- (a) To document compliance with Condition D.2.1 and D.2.4, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC usage limits and/or the VOC emission limits established in Condition D.2.1. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.
  - (1) The VOC content of each coating material and solvent used.
  - (2) The amount of coating material and solvent less water used on monthly basis.
    - (A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.
    - (B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;
  - (3) The cleanup solvent usage for each month;
  - (4) The total VOC usage for each month; and
  - (5) The weight of VOCs emitted for each compliance period.
- (b) To document compliance with Condition D.2.5, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the HAP usage limits and/or the HAP emission limits established in Condition D.2.5. Records

necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

- (1) The HAP content of each coating material and solvent used.
  - (2) The amount of coating material and solvent less water used on monthly basis.
    - (A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.
    - (B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;
  - (3) The cleanup solvent usage for each month;
  - (4) The total HAP usage for each month; and
  - (5) The weight of HAPs emitted (by HAP) for each compliance period.
- (c) To document compliance with Condition D.2.9, the Permittee shall maintain a log of weekly overspray observations, daily and monthly inspections, and those additional inspections prescribed by the Preventive Maintenance Plan.
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.2.11 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.2.4 and D.2.5 shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

### SECTION D.3 FACILITY OPERATION CONDITIONS

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

1. Sand handling systems including:
  - (a) Sand Muller, identified as EU591, constructed in 1997, with a maximum capacity of 100 tons per hour, and sand conveyor, constructed in 1970, identified as EU592, using Hosakawa baghouse (BH5) for control, and exhausting to stack SC-5.
  - (b) Casting shakeout, identified as EU570, constructed in 2001, with a maximum capacity of 80 tons of sand per hour and 18 tons of metal per hour, using a Wheelabrator-88 baghouse (BH3) for control, and exhausting to stack SC-4.
  - (c) Mold making process including six (6) squeezer mold machines (EU520, constructed in 1902), three (3) rotolift mold machines (EU521, constructed in 1902), auto mold machine (EU530, constructed in 2000), and another auto mold machine (EU531, constructed in 1993), utilizing no control, and exhausting to SU-INT6/7/8/13.
2. One (1) Scrap/Charge Handling operation for the electric induction furnaces, identified as EU120, constructed in 1995, with a maximum capacity of 19 tons of metal per hour, and exhausting as fugitive emissions FG-1.
3. Casting Finishing:
  - (a) One (1) Spin Blast, identified as EU610, constructed in 1986, with a maximum capacity of 5 tons per hour of metal castings, using Wheelabrator-35 baghouse (BH2) for control and exhausting to stack SC-7.
  - (b) One (1) Tumble Blast, identified as EU620, constructed in 1988, with a maximum capacity of 5 tons per hour of metal castings, using Hosakawa baghouse (BH5) for control and exhausting to stack SC-5.
  - (c) One (1) Tumbler, identified as EU630, constructed in 1989, with a maximum capacity of 1 ton per hour of metal castings using Hosakawa baghouse (BH5) for control and exhausting to stack SC-5.
  - (d) Four (4) Snag Grinders, identified as EU640 (2 constructed in 1975, 1 in 1985, and 1 in 1991), each with a maximum capacity of 2 tons per hour of metal castings, using Hosakawa baghouse (BH5) for control and exhausting to stack SC-5.
  - (e) Six (6) self-contained finish grinders, identified as EU650, constructed in 1990, each with a maximum capacity of 2 tons per hour of metal castings, with downdraft tables using baffles for control and exhausting to general ventilation.
4. Core making systems including:
  - (a) Three (3) Shell Core Machines, identified as EU320, EU321, and EU322, constructed in 1979, each with a maximum capacity of 1 ton per hour of sand, utilizing no controls and exhausting to general ventilation;
  - (b) One (1) Oil Core Making Process, identified as EU410, constructed in 1902, utilizing a mixer and associated core boxes with a maximum capacity of 0.25 tons per hour of sand, utilizing no controls and exhausting to general ventilation; and
  - (c) Core Wash Process, identified as EU730, constructed in 1902, with a maximum capacity of 1 ton per hour of sand, utilizing no controls and exhausting to general ventilation.

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

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

### D.3.1 Hosakawa baghouse (BH5) Emissions [326 IAC 2-2]

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- (a) The PM emissions from Hosakawa baghouse (BH5) shall be limited to 8.9 pounds per hour.
- (b) The PM10 emissions from Hosakawa baghouse (BH5) shall be limited to 1.25 pounds per hour.
- (c) The Hosakawa baghouse (BH5) shall not operate more than 6,447 hours per 12 consecutive month period with compliance determined at the end of each month.

These limits (combined with others throughout this approval) are required to limit the potential to emit of particulate matter for Gartland Foundry to less than 100 tons per 12 consecutive month period. Compliance with these limits makes 326 IAC 2-2 (Prevention of Significant Deterioration) and 326 IAC 2-7 (Part 70 Program) not applicable.

### D.3.2 Particulate Matter Limitation (PM) [326 IAC 6-1-2]

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The Sand Muller (EU591); Casting shakeout (EU570); Mold making process (mold making muller (EU510), six (6) squeezer mold machines (EU520), four (4) rotolift mold machines (EU521), and two auto mold machines (EU530 and EU531)); Scrap/Charge Handling operation for the electric induction furnaces (EU120); Casting Finishing (Spin Blast (EU610), Tumble Blast (EU620), Tumbler (EU630), Snag Grinding (EU640), and Finish Grinding (EU650)); Core making systems (Shell Core Machines (EU320, EU321, and EU322), Oil Core Making Process (EU410), and Core Wash Process (EU730)) shall each not emit particulate matter (PM) in excess of 0.03 grains per dry standard cubic foot.

### D.3.3 PSD Minor Limit [326 IAC 2-2] [326 IAC 2-8][326 IAC 8-1-6]

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- (a) Casting Shakeout System
  1. The throughput of metal to the casting shakeout system shall not exceed 13,800 tons per 12 consecutive month period with compliance determined at the end of each month.
  2. The PM emissions from the casting shakeout system shall be limited to 0.064 pound per ton of metal.
  3. The PM10 emissions from the casting shakeout system shall be limited to 0.045 pound per ton of metal.
  4. The VOC emissions from the casting shakeout system shall be limited to 1.2 pounds per ton of metal.Compliance with this limit makes 326 IAC 8-1-6 (General VOC Reduction) not applicable.
- (b) Mold Making Process (squeezer mold machines (EU520), rotolift mold machines (EU521), Sinto auto mold machine (EU530), and B&P auto mold machine (EU531))
  1. The throughput of sand to the mold making process shall not exceed 41,400 tons per 12 consecutive month period with compliance determined at the end of each month.
  2. The PM emissions from the mold making process shall be limited to 0.9 pound per ton of sand.
  3. The PM10 emissions from the mold making process shall be limited to 0.9 pound per ton of sand.
- (c) Scrap/Charge Handling System
  1. The throughput of metal to the scrap/charge handling system shall not exceed 13,800 tons per 12 consecutive month period with compliance determined at the end of each month.

2. The PM emissions from the scrap/charge handling system shall be limited to 0.6 pound per ton of metal.
  3. The PM10 emissions from the scrap/charge handling system shall be limited to 0.36 pound per ton of metal.
- (d) Sandblast System - Spinblast
1. The input of metal to be cleaned in the sandblast system (spinblast, EU610) shall be less than 13,800 tons per 12 consecutive month period with compliance determined at the end of each month.
  2. The PM emissions from the sandblast systems shall be limited to 0.34 pound per ton of metal.
  3. The PM10 emissions from the sandblast systems shall be limited to 0.034 pound per ton of metal.
- (e) Finish Grinders
1. The input of metal processed in the finish grinders (EU650 combined) shall be less than 13,800 tons per 12 consecutive month period with compliance determined at the end of each month.
  2. The PM emissions from the finish grinders shall be limited to 0.0020 pound per ton metal.
  3. The PM10 emissions from the finish grinders shall be limited to 0.0009 pound per ton metal.
- (f) Shell Core Making
1. The input of core sand to the shell core making process shall be less than 1,000 tons per 12 consecutive month period with compliance determined at the end of each month.
  2. The PM emissions from the shell core making process shall be limited to 0.9 pound per ton sand.
  3. The PM10 emissions from the shell core making process shall be limited to 0.9 pound per ton sand.
  4. The VOC emissions from the shell core making process shall be limited to 0.254 pound per ton sand.
- (g) Oil Core Making
1. The input of core sand to the oil core making process shall be less than 1,000 tons per 12 consecutive month period with compliance determined at the end of each month.
  2. The PM emissions from the oil core making process shall be limited to 0.9 pound per ton sand.
  3. The PM10 emissions from the oil core making process shall be limited to 0.9 pound per ton sand.
  4. The VOC emissions from the oil core making process shall be limited to 3.05 pound per ton sand.
- (h) Core Wash
1. The VOC emissions from the core wash process shall be limited to 5.2 pounds per ton core material.

These limits (combined with others throughout this approval) are required to limit the potential to emit of particulate matter for Gartland Foundry to less than 100 tons per 12 consecutive month period. Compliance with these limits makes 326 IAC 2-2 (Prevention of Significant Deterioration) and 326 IAC 2-7 (Part 70 Program) not applicable.

#### D.3.4 Hazardous Air Pollutant (HAP) Limit [326 IAC 2-8]

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- (a) The combined Metallic HAP emissions (chromium compounds, cobalt compounds, nickel compounds, arsenic compounds, cadmium compounds, selenium compounds, manganese compounds, and antimony compounds) from the Casting Shakeout System shall be limited to 0.002 pounds per ton of metal.
- (b) The combined Metallic HAP emissions (chromium compounds, cobalt compounds, nickel compounds, arsenic compounds, cadmium compounds, selenium compounds, manganese compounds, and antimony compounds) from the Sandblast Systems shall be limited to 0.0029 pounds per ton of metal.

These limits (combined with others throughout this approval) are required to limit the potential to emit of HAPs for Gartland Foundry to less than 10 tons per 12 consecutive month period individually and to less than 25 tons per 12 consecutive month period combined. Compliance with this limit makes 326 IAC 2-7 (Part 70 Permit Program) not applicable.

#### D.3.5 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

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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.3.6 Particulate Matter (PM)

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- (a) The Hosakawa baghouse (BH5) for PM control from the sand muller, sand conveyor, tumble blast, tumbler, and snag grinder shall be in operation at all times when the sand muller, sand conveyor, tumble blast, tumbler, or snag grinder is in operation.
- (b) The Wheelabrator-88 baghouse (BH3) for PM control from the casting shakeout shall be in operation at all times when the casting shakeout system is in operation.
- (c) The Wheelabrator-35 baghouse (BH2) for PM control from the spin blast shall be in operation at all times when the spin blast is in operation.

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

#### D.3.7 Visible Emissions Notations

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- (a) Visible emission notations of each of the three baghouse (BH2, BH3, and BH5) exhausts shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. 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.3.8 Parametric Monitoring

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- (a) The Permittee shall record the total static pressure drop across the Hosakawa baghouse used in conjunction with the sand muller and sand conveyor (BH5), at least once per day when the sand muller and sand conveyor are in operation and when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C – 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) The Permittee shall record the total static pressure drop across the Wheelabrator-88 baghouse used in conjunction with casting shakeout (BH3), at least once per day when the casting shakeout system is in operation and when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C – 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) The Permittee shall record the total static pressure drop across the Wheelabrator-35 baghouse used in conjunction with the spin blast (BH2), at least once per day when the spin blast is in operation and when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C – 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) The instruments used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and VCAPC and shall be calibrated at least once every six (6) months.

#### D.3.9 Baghouse Inspections

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- (a) An inspection shall be performed each calendar quarter of all bags controlling the sand muller and sand conveyor (Hosakawa baghouse BH5) when venting to the atmosphere. Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.
- (b) An inspection shall be performed each calendar quarter of all bags controlling the casting shakeout (Wheelabrator-88 baghouse BH3) when venting to the atmosphere. Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.

- (c) An inspection shall be performed each calendar quarter of all bags controlling the spin blast (Wheelabrator-35 baghouse BH2) when venting to the atmosphere. Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.

#### D.3.10 Broken Bag or Failure Detection

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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) 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 and VCAPC 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 processes 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.3.11 Record Keeping Requirements

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- (a) To document compliance with Condition D.3.7, the Permittee shall maintain records of visible emission notations taken each shift of the baghouses BH2, BH3 and BH5 stack exhausts.
- (b) To document compliance with Condition D.3.8, the Permittee shall maintain records once per shift of the total static pressure drop during normal operation when venting to the atmosphere.
- (c) To document compliance with Condition D.3.9, the Permittee shall maintain records of the results of the inspections required under Condition D.3.9 and the dates the vents are redirected.
- (d) To document compliance with Condition D.3.3, the Permittee shall maintain records of the weight of metal throughput to each process each month. The records shall be complete and sufficient to establish compliance with the melting use limitation in Condition D.3.3.

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

#### D.3.12 Reporting Requirements

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A quarterly summary of the information to document compliance with Condition D.3.3 shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

## SECTION D.4 FACILITY OPERATION CONDITIONS

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

1. Magnesium Treatment (Inoculation), with a maximum capacity of 10 tons of metal per hour, identified as EU150, constructed in 1986, utilizing a closed ladle, and exhausting to general ventilation.
2. Pouring, identified as EU540, constructed in 1902, with a maximum capacity of 19.2 tons of metal per hour total. Pouring operations are conducted on the floor, sinto molding line, and beadsley molding line. The maximum pouring capacity of the floor, sinto molding line, and beadsley molding line is 11.2, 5.0, and 3.0 tons per hour of metal, respectively.
3. Cooling, identified as EU550, constructed in 1902, with a maximum capacity of 19.2 tons of metal per hour total. Cooling operations are conducted on the floor, sinto molding line, and beadsley molding line. The maximum cooling capacity of the floor, sinto molding line, and beadsley molding line is 11.2, 5.0, and 3.0 tons per hour of metal, respectively.

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

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

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

Pursuant to 326 IAC 6-1-2, each of the facilities listed above (Magnesium Treatment, Pouring, and Cooling) shall not emit particulate matter (PM) in excess of 0.03 grains per dry standard cubic foot.

#### D.4.2 PSD Minor Limit [326 IAC 2-2] [326 IAC 2-8]

##### (a) Magnesium Treatment (Inoculation)

1. The input of metal to the Magnesium Treatment (EU150) shall be less than 1,970 tons per 12 consecutive month period with compliance determined at the end of each month.
2. The PM emissions from Magnesium Treatment shall be limited to 1.8 pounds per ton of metal.
3. The PM10 emissions from Magnesium Treatment shall be limited to 1.8 pounds per ton of metal.

##### (b) Pouring

1. The PM emissions from Pouring shall be limited to 4.20 pounds per ton of metal.
2. The PM10 emissions from Pouring shall be limited to 2.06 pounds per ton of metal.
3. The VOC emissions from Pouring and Cooling shall be limited to 0.14 pounds per ton of metal.

##### (c) Cooling

1. The PM emissions from Cooling shall be limited to 1.40 pounds per ton of metal.
2. The PM10 emissions from Cooling shall be limited to 1.40 pounds per ton of metal.

These limits (combined with others throughout this approval) are required to limit the potential to emit of particulate matter and VOC for Gartland Foundry to less than 100 tons per 12 consecutive

month period. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) and 326 IAC 2-7 (Part 70 Program) not applicable.

#### D.4.3 Hazardous Air Pollutant (HAP) Emissions [326 IAC 2-8]

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- (a) The combined Metallic HAP emissions (chromium compounds, cobalt compounds, nickel compounds, arsenic compounds, cadmium compounds, selenium compounds, manganese compounds, and antimony compounds) from Magnesium Treatment (Inoculation) shall be limited to 0.05684 pounds per ton of metal.
- (b) The combined Metallic HAP emissions (chromium compounds, cobalt compounds, nickel compounds, arsenic compounds, cadmium compounds, selenium compounds, manganese compounds, and antimony compounds) from Pouring shall be limited to 0.13264 pounds per ton of metal.
- (c) The combined Non-Metallic HAP emissions (acrolein, benzene, formaldehyde, naphthalene, phenol, toluene, and xylene) from Pouring shall be limited to 0.09563 pounds per ton of metal.
- (d) The xylene emissions from Pouring shall be limited to 0.0168 pounds per ton of metal.
- (e) The combined Metallic HAP emissions (chromium compounds, cobalt compounds, nickel compounds, arsenic compounds, cadmium compounds, selenium compounds, manganese compounds, and antimony compounds) from Cooling shall be limited to 0.0442 pounds per ton of metal.

These limits (combined with others throughout this approval) are required to limit the potential to emit of HAPs for Gartland Foundry to less than 10 tons per 12 consecutive month period individually and to less than 25 tons per 12 consecutive month period combined. Compliance with this limit makes 326 IAC 2-7 (Part 70 Permit Program) not applicable.

#### D.4.4 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

---

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

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

#### D.4.5 Record Keeping Requirements

---

- (a) To document compliance with Condition D.4.2, the Permittee shall maintain records of the weight of metal inoculated each month. The records shall be complete and sufficient to establish compliance with the metal throughput limitation in Condition D.4.2.
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.4.6 Reporting Requirements

---

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

## SECTION D.5 FACILITY CONDITIONS

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

Isocure Core making systems including:

1. Isocure Core Machine, identified as EU 222, constructed in 1994, fed by mixer 2, with a maximum capacity of 0.525 tons of sand/resin mixture per hour, a maximum of 21 pounds of resin per hour, and a maximum of 3.15 pounds of TEA per hour, controlled by an acid scrubber, and exhausting to stack SC-8.
2. Cold Box (Isocure) Core Machine, identified as CBCM-1, constructed in 2003, fed by mixer 2, with a maximum capacity of 1 ton of sand/resin mixture per hour, a maximum of 40 pounds of resin per hour, and a maximum of 6 pounds of TEA per hour, controlled by an acid scrubber, and exhausting to stack SC-8.
3. Cold Box (Isocure) Core Machine, identified as CBCM-2, constructed in 2003, fed by mixer 2, with a maximum capacity of 1 ton of sand/resin mixture per hour, a maximum of 40 pounds of resin per hour, and a maximum of 6 pounds of TEA per hour, controlled by an acid scrubber, and exhausting to stack SC-8.
4. Sand Mixer, identified as mixer 2, constructed in 2003, with a maximum capacity of 2.525 tons of sand/resin mixture per hour.
5. Sand heater, constructed in 1978.
6. Sand Silo, with a maximum capacity of 165 tons of sand, loaded via pneumatic conveying system including an integral bin vent, utilizing no control.

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

Pursuant to 326 IAC 6-1-2(a) particulate matter emissions from each emission unit shall not exceed 0.03 grain per dry standard cubic foot.

#### D.5.2 PSD Minor Limit [326 IAC 2-2] [326 IAC 2-8]

- (a) The production of cores in the isocure machines (EU222, CBCM-1 and CBCM-2 combined) shall be less than 1,100 tons per 12 consecutive month period with compliance determined at the end of each month.
- (b) The VOC emissions, including triethylamine (TEA), from each of the isocure machines (EU222, CBCM-1 and CBCM-2) shall be limited to 0.94 pounds per ton.
- (c) The PM emissions from the sand silo shall be limited to 0.072 pounds per ton.
- (d) The PM10 emissions from the sand silo shall be limited to 0.011 pounds per ton.

These limits (combined with others throughout this approval) are required to limit the potential to emit of particulate matter for Gartland Foundry to less than 100 tons per 12 consecutive month period. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

#### D.5.3 Hazardous Air Pollutant (HAP) Emissions [326 IAC 2-8]

Pursuant to Significant Permit Modification 167-17187-0007 issued on July 10, 2003, the triethylamine (TEA) emissions from the Isocure systems shall be limited to 0.12 pounds per ton.

**D.5.4 Preventive Maintenance Plan [326 IAC 2-8-4(9)]**

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

**Compliance Determination Requirements**

**D.5.5 Triethylamine Control [326 IAC 2-2][326 IAC 2-4.1]**

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Pursuant to Significant Permit Modification 167-17187-00007 (issued on July 10, 2003) the acid scrubber shall be in operation at all times any of the associated Cold Box Core Machines (EU222, Cold Box Core Machine 1, and Cold Box Core Machine 2) are in operation.

**D.5.6 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]**

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During the period between 6 and 12 months after issuance of this approval, in order to demonstrate the removal efficiency of the acid scrubber for triethylamine (TEA) and the emission rate of total VOC (including TEA), the Permittee shall perform testing 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. 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.5.7 Bin Vent Monitoring**

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- (a) Visible emissions notations of the bin vent exhaust shall be performed during each time the sand silo is loaded. A trained employee will record whether emissions are normal or abnormal.
  - (1) 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.
  - (2) 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.
  - (3) 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.
  - (4) The Compliance Response Plan shall contain troubleshooting contingency and response steps for when 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 of this permit.
- (b) The Permittee shall quarterly inspect the bin vent for proper operation and to ensure the filters are in good condition. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation of this permit.
- (c) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

**D.5.8 Acid Scrubber Monitoring**

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- (a) The Permittee shall record the scrubbing liquor flow rate through the acid scrubber controlling the core making machines, at least once per day when the scrubber is in operation. When for any one reading, the flow rate through the scrubber is below the minimum 10 gallons per minute or a minimum 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 flow reading 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 of this permit.

- (b) The Permittee shall record the scrubbing liquid pH in the acid scrubber controlling the core making machines, at least once per day when the scrubber is in operation. When for any one reading, the scrubbing liquid pH is above the maximum 4.5 or a maximum 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 pH reading that is above the above mentioned maximum 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 of this permit.
- (c) The Permittee shall record the total static pressure drop across the acid scrubber controlling the core making machines, at least once per day when the scrubber is in operation. When for any one reading, the pressure drop across the scrubber is outside the normal range of 1.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C – 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) The instruments used for determining the scrubbing liquid flow rate, pH, and pressure drop shall comply with Section C – Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ and VCAPC, and shall be calibrated at least once every six (6) months.
- (e) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

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

##### **D.5.9 Record Keeping Requirements**

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- (a) To document compliance with Conditions D.5.7 and D.5.8, the Permittee shall maintain a log of sand silo loading times, visible emission notations for sand silo loading, quarterly inspections of the bin vent, pressure drop across the acid scrubber, scrubbing liquid flow rate, and scrubbing liquid pH, and those additional inspections prescribed by the Preventive Maintenance Plan.
- (b) To document compliance with Condition D.5.3, the Permittee shall maintain records of the weight of cores produced each month. The records shall be complete and sufficient to establish compliance with the core production limitation in Condition D.5.2.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.5.10 Reporting Requirements

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A quarterly summary of the information to document compliance with Condition D.5.2 shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. 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  
And  
VIGO COUNTY AIR POLLUTION CONTROL**

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

Source Name: Gartland Foundry Company  
Source Address: 330 Grant Street, Terre Haute, Indiana 47802  
Mailing Address: PO Box 1564, Terre Haute, Indiana 47808  
FESOP No.: F167-17828-00007

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

Please check what document is being certified:

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

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

Signature:

Printed Name:

Title/Position:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE BRANCH  
100 North Senate Avenue  
Indianapolis, Indiana 46204  
Phone: 317-233-5674  
Fax: 317-233-5967  
And  
VIGOCOUNTY AIR POLLUTION CONTROL  
103 South 3<sup>rd</sup> Street  
Terre Haute, Indiana 47807  
Phone: 812-462-3433  
Fax: 812-462-3447**

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

Source Name: Gartland Foundry Company  
Source Address: 330 Grant Street, Terre Haute, Indiana 47802  
Mailing Address: PO Box 1564, Terre Haute, Indiana 47808  
FESOP No.: F167-17828-00007

**This form consists of 2 pages**

**Page 1 of 2**

<input type="checkbox"/> This is an emergency as defined in 326 IAC 2-7-1(12) <ul style="list-style-type: none"><li>• The Permittee must notify the Office of Air Quality (OAQ) and Vigo County Air Pollution Control (VCAPC), within four (4) business hours (IDEM: 1-800-451-6027 or 317-233-5674, ask for Compliance Section and VCAPC: 812-462-3433); and</li><li>• The Permittee must submit notice in writing or by facsimile within two (2) working days (IDEM Facsimile Number: 317-233-5967 and VCAPC Facsimile Number: 812-462-3447), and follow the other requirements of 326 IAC 2-7-16</li></ul>
---

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

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

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

**Page 2 of 2**

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency?    Y    N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO <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  
And  
VIGO COUNTY AIR POLLUTION CONTROL**

**FESOP Quarterly Report**

Source Name: Gartland Foundry Company  
Source Address: 330 Grant Street, Terre Haute, Indiana 47802  
Mailing Address: PO Box 1564, Terre Haute, Indiana 47808  
FESOP No.: F167-17828-00007  
Facility: Induction Furnaces (EU130 and EU140)  
Parameter: combined metal input  
Limit: 13,800 tons (combined) per 12 consecutive month period with compliance determined at the end of each month

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

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

No deviation occurred in this quarter.

Deviation/s occurred in this quarter.

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

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

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION  
And  
VIGO COUNTY AIR POLLUTION CONTROL**

**FESOP Quarterly Report**

Source Name: Gartland Foundry Company  
Source Address: 330 Grant Street, Terre Haute, Indiana 47802  
Mailing Address: PO Box 1564, Terre Haute, Indiana 47808  
FESOP No.: F167-17828-00007  
Facility: Scrap/Charge Handling  
Parameter: total metal input  
Limit: 13,800 tons (combined) per 12 consecutive month period with compliance determined at the end of each month

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

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

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

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

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF AIR QUALITY  
 COMPLIANCE DATA SECTION  
 And  
 VIGO COUNTY AIR POLLUTION CONTROL**

**FESOP Quarterly Report**

Source Name: Gartland Foundry Company  
 Source Address: 330 Grant Street, Terre Haute, Indiana 47802  
 Mailing Address: PO Box 1564, Terre Haute, Indiana 47808  
 FESOP No.: F167-17828-00007  
 Facility: Shell Core Making and Oil Core Making  
 Parameter: sand input  
 Limit: 1,000 tons (each) per 12 consecutive month period with compliance determined at the end of each month

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

Month	Oil Core (tons produced)			Shell Core (tons produced)		
	This Month	Previous 11 Months	12 Month Total	This Month	Previous 11 Months	12 Month Total
Month 1						
Month 2						
Month 3						

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

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

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**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION  
And  
VIGO COUNTY AIR POLLUTION CONTROL**

**FESOP Quarterly Report**

Source Name: Gartland Foundry Company  
Source Address: 330 Grant Street, Terre Haute, Indiana 47802  
Mailing Address: PO Box 1564, Terre Haute, Indiana 47808  
FESOP No.: F167-17828-00007  
Facility: Magnesium Treatment  
Parameter: Metal Treated  
Limit: 1,970 tons of metal per 12 consecutive month period with compliance determined at the end of each month

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

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

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

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

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION  
And  
VIGO COUNTY AIR POLLUTION CONTROL**

**FESOP Quarterly Report**

Source Name: Gartland Foundry Company  
Source Address: 330 Grant Street, Terre Haute, Indiana 47802  
Mailing Address: PO Box 1564, Terre Haute, Indiana 47808  
FESOP No.: F167-17828-00007  
Facility: Mold Making Process (squeezer mold machines (EU520), rotolift mold machines (EU521), Sinto auto mold machine (EU530), and B&P auto mold machine (EU531))  
Parameter: combined sand input  
Limit: 41,400 tons (combined) per 12 consecutive month period with compliance determined at the end of each month

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

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

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

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

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**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION  
And  
VIGO COUNTY AIR POLLUTION CONTROL**

**FESOP Quarterly Report**

Source Name: Gartland Foundry Company  
Source Address: 330 Grant Street, Terre Haute, Indiana 47802  
Mailing Address: PO Box 1564, Terre Haute, Indiana 47808  
FESOP No.: F167-17828-00007  
Facility: Casting Shakeout  
Parameter: Metal Processed  
Limit: 13,800 tons of metal per 12 consecutive month period with compliance determined at the end of each month

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

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

No deviation occurred in this quarter.

Deviation/s occurred in this quarter.

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

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

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

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

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

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

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION  
And  
VIGO COUNTY AIR POLLUTION CONTROL**

**FESOP Quarterly Report**

Source Name: Gartland Foundry Company  
Source Address: 330 Grant Street, Terre Haute, Indiana 47802  
Mailing Address: PO Box 1564, Terre Haute, Indiana 47808  
FESOP No.: F167-17828-00007  
Facility: Sandblast System (EU610)  
Parameter: Metal Cleaned  
Limit: 13,800 tons of metal per 12 consecutive month period with compliance determined at the end of each month

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

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

No deviation occurred in this quarter.

Deviation/s occurred in this quarter.

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

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

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

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

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

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

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION  
And  
VIGO COUNTY AIR POLLUTION CONTROL**

**FESOP Quarterly Report**

Source Name: Gartland Foundry Company  
Source Address: 330 Grant Street, Terre Haute, Indiana 47802  
Mailing Address: PO Box 1564, Terre Haute, Indiana 47808  
FESOP No.: F167-17828-00007  
Facility: Finish Grinders (EU650)  
Parameter: Metal Processed  
Limit: 13,800 tons of metal per 12 consecutive month period with compliance determined at the end of each month

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

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

No deviation occurred in this quarter.

Deviation/s occurred in this quarter.

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

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

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION  
And  
VIGO COUNTY AIR POLLUTION CONTROL**

**FESOP Quarterly Report**

Source Name: Gartland Foundry Company  
Source Address: 330 Grant Street, Terre Haute, Indiana 47802  
Mailing Address: PO Box 1564, Terre Haute, Indiana 47808  
FESOP No.: F167-17828-00007  
Facility: Isocure Core Making  
Parameter: Core Production  
Limit: 1100 tons per 12 consecutive month period with compliance determined at the end of each month

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

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

No deviation occurred in this quarter.

Deviation/s occurred in this quarter.

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

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

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION  
And  
VIGO COUNTY AIR POLLUTION CONTROL**

**FESOP Quarterly Report**

Source Name: Gartland Foundry Company  
Source Address: 330 Grant Street, Terre Haute, Indiana 47802  
Mailing Address: PO Box 1564, Terre Haute, Indiana 47808  
FESOP No.: F167-17828-00007  
Facility: Hosakawa baghouse (BH5) operation  
Parameter: hours of operation  
Limit: 6447 hours per 12 consecutive month period with compliance determined at the end of each month

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

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

No deviation occurred in this quarter.

Deviation/s occurred in this quarter.

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

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

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION  
And  
VIGO COUNTY AIR POLLUTION CONTROL**

**FESOP Quarterly Report**

Source Name: Gartland Foundry Company  
Source Address: 330 Grant Street, Terre Haute, Indiana 47802  
Mailing Address: PO Box 1564, Terre Haute, Indiana 47808  
FESOP No.: F167-17828-00007  
Facility: Electrostatic Spray Booth  
Parameter: VOC Input  
Limit: 39.9 tons per 12 consecutive month period with compliance determined at the end of each month

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

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

No deviation occurred in this quarter.

Deviation/s occurred in this quarter.

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

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

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION  
And  
VIGO COUNTY AIR POLLUTION CONTROL**

**FESOP Quarterly Report**

Source Name: Gartland Foundry Company  
Source Address: 330 Grant Street, Terre Haute, Indiana 47802  
Mailing Address: PO Box 1564, Terre Haute, Indiana 47808  
FESOP No.: F167-17828-00007  
Facility: Electrostatic Paint Booth  
Parameter: HAP Input  
Limit: Shall not exceed 9.823 tons of Xylene per 12 consecutive month period with compliance determined at the end of each month

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

Month	Xylene Use (tons)		
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

No deviation occurred in this quarter.

Deviation/s occurred in this quarter.

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

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

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION  
And  
VIGO COUNTY AIR POLLUTION CONTROL**

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

Source Name: Gartland Foundry Company  
Source Address: 330 Grant Street, Terre Haute, Indiana 47802  
Mailing Address: PO Box 1564, Terre Haute, Indiana 47808  
FESOP No.: F167-17828-00007

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. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".</p>	
<input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
<input type="checkbox"/> THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD	
<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>	
<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>	

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

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

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

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

Attach a signed certification to complete this report.

**Indiana Department of Environmental Management  
Office of Air Quality  
And  
Vigo County Air Pollution Control**

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

**Source Background and Description**

<b>Source Name:</b>	<b>Gartland Foundry Company</b>
<b>Source Location:</b>	<b>330 Grant Street, Terre Haute, Indiana 47802</b>
<b>County:</b>	<b>Vigo County</b>
<b>SIC Code:</b>	<b>3321 (NAICS 331511)</b>
<b>Operation Permit No.:</b>	<b>T167-5998-00007</b>
<b>Operation Permit Issuance Date:</b>	<b>September 27, 2000</b>
<b>Permit No.:</b>	<b>167-17828-00007</b>
<b>Permit Reviewer:</b>	<b>Rob Harmon</b>

The Office of Air Quality (OAQ) and Vigo County Air Pollution Control (VCAPC) have reviewed a FESOP application (transition from a Part 70) from Gartland Foundry Company relating to the operation of a grey and ductile iron foundry.

**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 as follows:
  - 1. EU130, consisting of induction furnace #3, constructed in 1995, with a maximum capacity of 5.0 tons of metal per hour, using Steelcraft baghouse (BH1) for control, and exhausting to stack SC-2.
  - 2. EU140, consisting of induction furnace #4, constructed in 1995, with a maximum capacity of 5.0 tons of metal per hour, using Steelcraft baghouse (BH1) for control, and exhausting to stack SC-2.
  
- (b) One (1) electrostatic spray booth, identified as prime paint line EU710, constructed in 1983, with a maximum capacity of 500 grey iron castings per hour, with dry filters for control of particulate matter overspray, and exhausting to stack SC-6.
  
- (c) Sand handling systems including:
  - 1. Sand Muller, identified as EU591, constructed in 1997, with a maximum capacity of 100 tons per hour, and sand conveyor, constructed in 1970, identified as EU592, using Hosakawa baghouse (BH5) for control, and exhausting to stack SC-5.
  - 2. Casting shakeout, identified as EU570, constructed in 2001, with a maximum capacity of 80 tons of sand per hour and 18 tons of metal per hour, using a Wheelabrator-88 baghouse (BH3) for control, and exhausting to stack SC-4.
  - 3. Mold making process including six (6) squeezer mold machines (EU520, constructed in 1902), three (3) rotolift mold machines (EU521, constructed in 1902), auto mold machine (EU530, constructed in 2000), and another auto mold machine (EU531, constructed in 1993), utilizing no control, and exhausting to SU-INT6/7/8/13.

- (d) One (1) Scrap/Charge Handling operation for the electric induction furnaces, identified as EU120, constructed in 1995, with a maximum capacity of 19 tons of metal per hour, and exhausting as fugitive emissions FG-1.
- (e) Casting Finishing:
  - 1. One (1) Spin Blast, identified as EU610, constructed in 1986, with a maximum capacity of 5 tons per hour of metal castings, using Wheelabrator-35 baghouse (BH2) for control and exhausting to stack SC-7.
  - 2. One (1) Tumble Blast, identified as EU620, constructed in 1988, with a maximum capacity of 5 tons per hour of metal castings, using Hosakawa baghouse (BH5) for control and exhausting to stack SC-5.
  - 3. One (1) Tumbler, identified as EU630, constructed in 1989, with a maximum capacity of 1 ton per hour of metal castings using Hosakawa baghouse (BH5) for control and exhausting to stack SC-5.
  - 4. Four (4) Snag Grinders, identified as EU640(2 constructed in 1975, 1 in 1985, and 1 in 1991), each with a maximum capacity of 2 tons per hour of metal castings, using Hosakawa baghouse (BH5) for control and exhausting to stack SC-5.
  - 5. Six (6) self-contained finish grinders, identified as EU650, constructed in 1990, each with a maximum capacity of 2 tons per hour of metal castings, with downdraft tables using baffles for control and exhausting to general ventilation.
- (f) Core making systems including:
  - 1. Three (3) Shell Core Machines, identified as EU320, EU321, and EU322, constructed in 1979, each with a maximum capacity of 1 ton per hour of sand, utilizing no controls and exhausting to general ventilation;
  - 2. One (1) Oil Core Making Process, identified as EU410, constructed in 1902, utilizing a mixer and associated core boxes with a maximum capacity of 0.25 tons per hour of sand, utilizing no controls and exhausting to general ventilation; and
  - 3. Core Wash Process, identified as EU730, constructed in 1902, with a maximum capacity of 1 ton per hour of sand, utilizing no controls and exhausting to general ventilation.
- (g) Magnesium Treatment (Inoculation), with a maximum capacity of 10 tons of metal per hour, identified as EU150, constructed in 1986, utilizing a closed ladle, and exhausting to general ventilation.
- (h) Pouring, identified as EU540, constructed in 1902, with a maximum capacity of 19.2 tons of metal per hour total. Pouring operations are conducted on the floor, sinto molding line, and beardsley molding line. The maximum pouring capacity of the floor, sinto molding line, and beardsley molding line is 11.2, 5.0, and 3.0 tons per hour of metal, respectively.
- (i) Cooling, identified as EU550, constructed in 1902, with a maximum capacity of 19.2 tons of metal per hour total. Cooling operations are conducted on the floor, sinto molding line, and beardsley molding line. The maximum cooling capacity of the floor, sinto molding line, and beardsley molding line is 11.2, 5.0, and 3.0 tons per hour of metal, respectively.
- (j) Isocure Core making systems including:
  - 1. Isocure Core Machine, identified as EU 222, constructed in 1994, fed by mixer 2, with a maximum capacity of 0.525 tons of sand/resin mixture per hour, a maximum of 21 pounds of resin per hour, and a maximum of 3.15 pounds of TEA per hour, controlled by an acid scrubber, and exhausting to stack SC-8.
  - 2. Cold Box (Isocure) Core Machine, identified as CBCM-1, constructed in 2003, fed by mixer 2, with a maximum capacity of 1 ton of sand/resin mixture per hour,

- a maximum of 40 pounds of resin per hour, and a maximum of 6 pounds of TEA per hour, controlled by an acid scrubber, and exhausting to stack SC-8.
3. Cold Box (Isocure) Core Machine, identified as CBCM-2, constructed in 2003, fed by mixer 2, with a maximum capacity of 1 ton of sand/resin per hour, a maximum of 40 pounds of resin per hour, and a maximum of 6 pounds of TEA per hour, controlled by an acid scrubber, and exhausting to stack SC-8.
  4. Sand Mixer, identified as mixer 2, constructed in 2003, with a maximum capacity of 2.525 tons of sand/resin mixture per hour.
  5. Sand heater, constructed in 1978
  6. Sand Silo, with a maximum capacity of 165 tons of sand, loaded via pneumatic conveying system including an integral bin vent, utilizing no control.

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

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

### **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 sources with heat input equal to or less than ten million (10,000,000) BTU per hour.
- (b) Application of oils, greases, lubricants or other nonvolatile materials applied as temporary protective coatings.
- (c) The following equipment related to manufacturing activities not resulting in the emission of HAPs; brazing equipment, cutting torches, soldering equipment, welding equipment.
- (d) Closed loop heating and cooling systems.
- (e) Any operation using aqueous solutions containing less than 1% by weight of VOCs excluding HAPs.
- (f) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.
- (g) Heat exchanger cleaning and repair.
- (h) Paved and unpaved roads and parking lots with public access.
- (i) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations.
- (j) Filter or coalescer media change out.
- (k) Mold release agents using low volatile products (vapor pressure less than or equal to 2 kilopascals measured at 38 degrees C.
- (l) A laboratory as defined in 326 IAC 2-7-1(21)(D).
- (m) Other activities or categories not previously identified with emissions equal to or less than specific thresholds:
  1. Unit 780 - Storage Piles
  2. One (1) Turntable, identified as EU580, with a maximum capacity of 8.0 tons per hour of metal castings, using Hosakawa baghouse (BH5) for control, and exhausting to stack SC-5.

### **Existing Approvals**

The source has been operating under the previous Part 70 Permit T167-5998-00007 issued on September 27, 2000, with an expiration date of September 27, 2005, and the following amendments and revisions:

- (a) First Administrative Amendment 167-14263-00007 issued on April 25, 2001.

- (b) First Significant Source Modification 167-14075-00007 issued on August 3, 2001.
- (c) First Significant Permit Modification 167-14215-00007 issued on August 29, 2001.
- (d) Second Significant Source Modification 167-16913-00007 issued on June 3, 2003.
- (e) Second Significant Permit Modification 167-17187-00007 issued on July 10, 2003.

All conditions from previous approvals were incorporated into this FESOP.

### Enforcement Issue

IDEM and VCAPC are aware that the Electrostaic Paint Booth has been modified prior to receipt of the proper permit.

IDEM and VCAPC are reviewing this matter and will take appropriate action. This proposed permit is intended to satisfy the requirements of the construction permit rules.

### Recommendation

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

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

An administratively complete FESOP application for the purposes of this review was received on August 8, 2003.

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

### Emission Calculations

See Appendix A of this document for detailed emission (Pages 1 through 22)

### Potential to Emit

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

Pollutant	Potential to Emit (tons/yr)
PM	Greater than 1000
PM-10	Greater than 250
SO <sub>2</sub>	Less than 1
VOC	Greater than 100
CO	Negligable
NO <sub>x</sub>	Less than 1

  

HAPs	Potential to Emit (tons/yr)
TEA (triethylamine)	Greater than 10
Xylene	Greater than 10
Glycol Ether	Less than 10
Chromium Compounds	Less than 10

Cobalt Compounds	Less than 10
Nickel Compounds	Less than 10
Arsenic Compounds	Less than 10
Cadmium Compounds	Less than 10
HAPs	Potential to Emit (tons/yr)
Selenium Compounds	Less than 10
Manganese Compounds	Less than 10
Antimony Compounds	Less than 10
Acrolein	Less than 10
Benzene	Less than 10
Formaldehyde	Less than 10
Napthalene	Less than 10
Phenol	Less than 10
Toluene	Less than 10
Total	Greater than 25

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of pollutants are equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 2-7. The source will be issued a FESOP because the source will limit its emissions below the Title V levels.
- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is equal to or greater than ten (10) tons per year and/or the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is equal to or greater than twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7. The source will be issued a FESOP because the source will limit its emissions below the Title V levels.

**Potential to Emit After Issuance**

The source has opted to remain a FESOP source. The table below summarizes the potential to emit, reflecting all limits of the emission units. Any control equipment is considered enforceable only after issuance of this FESOP and only to the extent that the effect of the control equipment is made practically enforceable in the permit. Since the source has not constructed any new emission units, the source's potential to emit is based on the emission units included in the original FESOP.

**Criteria Pollutants**

Emission Unit	Limit* (tpy)	PM	PM10	SOx	NOx	VOC	CO	Pb
Scrap and Charge Handling	13,800	4.14	2.48	-	-	-	-	Neg.
Electric Induction Melting	13,800	0.12	0.12	-	-	-	-	Neg.
Magnesium Treatment	1,970	1.77	1.77	-	-	-	-	Neg.
Pouring Operations	13,800	28.98	14.21	0.14	0.07	0.97	-	Neg.
Cooling Operations	13,800	9.66	9.66	-	-	-	-	-
Casting Shakeout	13,800	0.44	0.31	-	-	8.28	-	Neg.
Mold Making	41,400	18.63	18.63	-	-	-	-	-
Coldbox Sand Handling	1,100	0.04	Neg.	-	-	-	-	-

Emission Unit (continued)	Limit* (tpy)	PM	PM10	SOx	NOx	VOC	CO	Pb
Coldbox Core Machine	1,100	-	-	-	-	0.52	-	-
Coldbox Mixers	1,100	-	-	-	-	0.22	-	-
Shell Core Making	1,000	0.45	0.45	-	-	0.13	-	-
Oil Core Making	1,000	0.45	0.45	-	-	1.52	-	-
Release Agents	2,122 gallons	-	-	-	-	6.86	-	-
Core Wash	8760	-	-	-	-	12.53	-	-
Spinblast, Wheelabrator	13,800	2.35	0.23	-	-	-	-	Neg.
Finish Grinding	13,800	Neg.	Neg.	-	-	-	-	-
Electrostatic Surface Coating Booth	VOC input limit	4.32	4.32	-	-	24.50	-	-
Combined Hosakawa (BH5) Operations**	6447 Hours	28.70	4.03	-	-	-	-	-
Other Insignificant	Est.	2	2	-	-	2	-	-
Source Wide Total		99.97	56.59	0.14	0.07	72.92	-	0.01

\* These limitations were set pursuant to Significant Source Modification 167-16913-00007 issued on June 3, 2003. They were later incorporated into the Part 70 Permit through Significant Permit Modification 167-17187-00007 issued on July 10, 2003. Some changes have been made to those limits as a result of this FESOP.

\*\* The operations controlled by the Hosakawa Baghouse (BH5) are: Sand Handling (Muller and Conveyor), Tumble Blast / Tumbler, Snag Grinders, and insignificant shaker/sorter.

#### Hazardous Air Pollutants (HAPs)

Emission Unit	Limited TEA Emissions (tpy)	Limited Xylene Emissions (tpy)
Pouring Operations	-	0.116
Coldbox Core Making	0.066	-
Surface Coating Booth	-	9.883
Total	0.066	9.999

- Pouring emissions are limited by the throughput limit on melting in the furnaces
- Coldbox Core Making emissions are limited by both a throughput limitation and the requirement to control the emissions with an acid scrubber.
- Surface Coating emissions are limited by a throughput limitation.

#### County Attainment Status

The source is located in Vigo County.

Pollutant	Status
PM-10	Attainment
PM2.5	Attainment
SO <sub>2</sub>	Maintenance Attainment
NO <sub>2</sub>	Attainment
8-hour Ozone	Basic Non-Attainment
1-hour Ozone	Attainment

CO	Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purpose of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to the ozone standards. Vigo County has been designated as nonattainment for the 8-hour ozone standard. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.
- (b) Vigo County has been classified as attainment for PM2.5. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM 2.5 emissions. Therefore, until the U.S. EPA adopts specific provisions for PSD review for PM 2.5 emissions, it has directed states to regulate PM10 emissions as a surrogate for PM 2.5 emissions. See the State Rule Applicability for the source section.
- (c) Vigo County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability for the source section.

**Source Status**

Existing Source PSD, Part 70, or FESOP Definition (emissions after controls, based on 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/yr)
PM	Less than 100
PM-10	Less than 100
SO <sub>2</sub>	Less than 100
VOC	Less than 100
CO	Less than 100
NO <sub>x</sub>	Less than 100
Single HAP	Less than 10
Combination HAPs	Less than 25

This existing source is **not** a major stationary source because even though it is one of the 28 listed source categories, it does not emit 100 tons per year or greater of any regulated pollutant.

**Federal Rule Applicability**

- (a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit for this source.
- (b) The National Emission Standards for Hazardous Air Pollutants (NESHAP), Subpart MMMM (Surface Coating of Miscellaneous Metal Parts and Products) are not included in the permit for the surface coating operations. This FESOP limits potential HAP emissions to below major source thresholds.
- (c) The National Emission Standards for Hazardous Air Pollutants (NESHAP), Subpart EEEEE (Iron and Steel Foundries) are not included in the permit for the foundry operations. This FESOP limits potential HAP emissions to below major source thresholds.

### **State Rule Applicability – Entire Source**

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

This source is located in Vigo County and the potential to emit of Particulate Matter is less than one hundred (100) tons per year. Therefore, 326 IAC 2-6 does not apply.

#### 326 IAC 5-1 (Visible Emissions Limitations)

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

This company is not located in the small area of Vigo County subject to the more stringent requirements under 326 IAC 5-1-2.

### **State Rule Applicability – Individual Facilities**

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

The review and approval of SSM 167-16913-00007 (issued June 3, 2003) and SPM 167-17187-00007 (issued on July 10, 2003) addressed the entire source with regard to PSD. Specific, enforceable limitations were placed on Gartland Foundry to limit PM, PM10, VOC, and CO to less than 100 tons per year, thus allowing Gartland Foundry to be considered a minor source with regard to PSD (and now nonattainment new source review as well). Specific limitations are:

- The total tons of metal melted (electric induction furnaces #3 and #4, EU130 and EU140) shall be less than 13,800 tons per 12-consecutive month period. This also effectively limits the scrap & charge handling, pouring, and cooling operations to that level.
- The VOC input coatings used (EU710) shall be less than 39.9 tons per 12-consecutive month period.
- The throughput to the casting shakeout system shall be less than 13,800 tons per 12-consecutive month period.
- The input of metal to be cleaned in the sandblast - spinblast system (EU610) shall be less than 13,800 tons per 12 consecutive month period.
- The input of metal processed in the finish grinders (EU650 combined) shall be less than 13,800 tons per 12 consecutive month period.
- The input of metal to the inoculation system (EU150) shall be less than 1,970 tons per 12 consecutive month period.
- The production of cores in the isocure machines (EU222, CBCM-1 and CBCM-2 combined) shall be less than 1,100 tons per 12 consecutive month period.
- The production of cores in the shell core machines shall be less than 1,000 tons per 12 consecutive month period.
- The production of cores in the oil core machine shall be less than 1,000 tons per 12 consecutive month period.

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

Pursuant to this rule, source wide emissions of PM-10, SO<sub>2</sub>, VOC and NO<sub>x</sub> shall be limited to less than one hundred (100) tons per year such that it does not fall within any of the categories listed in 326 IAC 2-7-2(a) and that assure compliance with all applicable requirements at the time of FESOP issuance (see Emissions Calculations, Appendix A). The potential to emit PM-10 and

VOC before limitations from the entire source is greater than 100 tons/yr, however the limitations established in SSM 167-16913-00007 (issued June 3, 2003) and SPM 167-17187-00007 (issued on July 10, 2003) addressed these emissions and carrying those limitations forward effectively limits both PM-10 and VOC to less than one hundred tons per year. In addition individual HAP emissions and combined HAP emissions shall be limited to less than 10 tons per year and 25 tons per year respectively. The following limits shall apply to assure compliance with this rule:

- The Xylene delivered to the surface coating system (EU710) shall be less than 9.823 tons per 12 consecutive month period.
- Additionally, short term PM-10, VOC, and HAP emission rates have been added to all significant emission units.

#### 326 IAC 6-1 (Particulate Emissions Limitations)

Even though Vigo County is currently not a nonattainment area for particulate matter, it is still a listed county under 326 IAC 6-1-7. As such, the general nonattainment area provisions under 326 IAC 6-1-2 are still applicable.

- (a) Pursuant to 326 IAC 6-1-2(a), the Permittee shall not allow or permit discharge to the atmosphere of any gases which contain particulate matter in excess of 0.03 grain per dry standard cubic foot. The following emission units are subject to this requirement: Electrostatic Spray Booth (EU710); Sand Muller (EU591); Casting shakeout (EU570); Mold making process (mold making muller (EU510), six (6) squeezer mold machines (EU520), four (4) rotolift mold machines (EU521), and two auto mold machines (EU530 and EU531)); Scrap/Charge Handling operation for the electric induction furnaces (EU120); Casting Finishing (Spin Blast (EU610), Tumble Blast (EU620), Tumbler (EU630), Snag Grinding (EU640), and Finish Grinding (EU650)); Core making systems (Shell Core Machines (EU320, EU321, and EU322), Oil Core Making Process (EU410), and Core Wash Process (EU730)); Magnesium Treatment; Pouring; Cooling; and the Isocure Core making system (Isocure Core Machines (EU222, CBCM-1, and CBCM-2), Sand Mixer (Mixer 2), Sand heater, and sand silo).
- (b) Pursuant to 326 IAC 6-1-2(e), the Permittee shall not allow or permit (from any melting operation other than a cupola) the discharge into the atmosphere any gases containing a particulate matter content greater than 0.07 grain per dry standard cubic foot. The following emission units are subject to this requirement: Induction Furnace #3 (EU130) and Induction Furnace #4 (EU140).

#### 326 IAC 8-1-6 (VOC General Reduction Requirements)

Pursuant to 326 IAC 8-1-6 new sources or facilities constructed after January 1, 1980 with potential emissions of VOC greater than 25 tons per year and not otherwise limited by Article 8 shall install BACT control.

- The Pouring and Cooling Operations (EU540 and EU550) were constructed in 1902. Therefore 8-1-6 does not apply based on the construction date.
- The Casting Shakeout system (EU570) was constructed in 2001. SSM167-14075-00007 contained throughput limits to keep the potential VOC emissions limited to 24 tons per year (limit was 40,000 tons of castings per 12 month period). This limit made the requirements of 326 IAC 8-1-6 not applicable. This limitation was later changed by SSM167-16913-00007, at the request of the Permittee, in order to make the entire source an existing minor source with regard to the PSD requirements.
- The ColdBox Core Machines (CBCM-1 and CBCM-2) were constructed in 2003, but do not have VOC potential to emit above 25 tons per year. Therefore 8-1-6 does not apply based on the PTE.

#### 326 IAC 8-2-9 (Miscellaneous Metal Coating)

Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of the coating delivered to the applicator at the prime paint line (EU710)

shall be limited to 3.5 pounds of VOCs per gallon of coating less water, for extreme performance coatings.

Solvent sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

## Testing Requirements

Pursuant to the Part 70 Permit for this company (T167-5998-00007, as amended), the Permittee was required to test the PM emissions from each Electric Induction Furnace at least once every 5 years. This was required because the Potential PM emissions (before control) exceeded the emission limitation. The last compliance test was conducted on August 3, 2001, and was only for PM emissions, not PM10. This testing is still required even though the source is transitioning to a FESOP level.

Pursuant to Significant Permit Modification 167-17187-00007, the Permittee was required to test the removal efficiency of the acid scrubber for triethylamine (TEA). This test was also required to be repeated at least once every 5 years. Additionally, the Permittee is now required to test the total VOC (including TEA) emission rate. This testing is still required even though the source is transitioning to a FESOP level.

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

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

1. Steelcraft baghouse (BH1), controlling Electric Induction Furnaces #3 and #4, has applicable compliance monitoring conditions as specified below:
  - (a) Visible emissions notations of the Electric Induction Furnace stack exhaust shall be performed once per day during normal daylight operations. 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 shall be followed whenever a condition exists which should result in a response step. 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 controlling Furnaces #3 and #4, at least once per day when the Furnaces are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C – 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.

These monitoring conditions are necessary because the baghouse for the Furnaces because they must operate properly to ensure compliance with 326 IAC 6-1-2 (Particulate Matter Emissions) and 326 IAC 2-2 (PSD).

- 2. Hosakawa Baghouse (BH5) controlling the Sand Muller, Tumble Blast, Tumbler, and Snag Grinders has applicable compliance monitoring conditions as specified below:

- (a) Visible emissions notations of the baghouse BH5 stack exhaust shall be performed once per day during normal daylight operations. 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 shall be followed whenever a condition exists which should result in a response step. 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 baghouse BH5, at least once per day when the Sand Muller is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C – 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.

These monitoring conditions are necessary because the baghouse for the Sand Muller because it must operate properly to ensure compliance with 326 IAC 6-1-2 (Particulate Matter Emissions) and 326 IAC 2-2 (PSD).

3. Wheelabrator-88 baghouse (BH3) controlling the Casting Shakeout system has applicable compliance monitoring conditions as specified below:
  - (a) Visible emissions notations of the Casting Shakeout stack exhaust shall be performed once per day during normal daylight operations. 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 shall be followed whenever a condition exists which should result in a response step. 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 controlling the Casting Shakeout, at least once per day when the Casting Shakeout is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C – 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.

These monitoring conditions are necessary because the baghouse for the Casting Shakeout because it must operate properly to ensure compliance with 326 IAC 6-1-2 (Particulate Matter Emissions) and 326 IAC 2-2 (PSD).

4. Wheelabrator-35 baghouse (BH2) controlling the Spin Blast system has applicable compliance monitoring conditions as specified below:
  - (a) Visible emissions notations of the Spin Blast stack exhaust shall be performed once per day during normal daylight operations. 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 shall be followed whenever a condition exists which should result in a response step. 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 controlling the Spin Blast system, at least once per day when the Spin Blast system is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C – 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.

These monitoring conditions are necessary because the baghouse for the Spin Blast system because it must operate properly to ensure compliance with 326 IAC 6-1-2 (Particulate Matter Emissions) and 326 IAC 2-2 (PSD).

5. The Spray Booth has applicable compliance monitoring conditions as specified below:

- (a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters. To monitor the performance of the dry filters, weekly observations shall be made of the overspray while the spray booth is in operation.
- (b) Monthly inspections shall be performed of the coating emissions from the stack and the presence of overspray on the rooftops and the nearby ground.

These monitoring conditions are necessary to ensure compliance with 326 IAC 6-1-2 (Particulate Matter Emissions) and 326 IAC 2-2 (PSD).

6. The bin vent has applicable compliance monitoring conditions as specified below:

- (a) Visible emissions notations of the bin vent exhaust shall be performed once per day during sand silo loading. 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 shall be followed whenever a condition exists which should result in a response step. 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 quarterly inspect the bin vent for proper operation and to ensure the filters are in good condition. The Permittee shall take reasonable response steps in accordance with the Compliance Response Plan. An abnormal condition 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.

These monitoring conditions are necessary because the bin vent for controlling the sand silo must operate properly to ensure compliance with 326 IAC 6-1-2 (Particulate emissions) and 326 IAC 2-7 (Part 70).

7. The acid scrubber has applicable compliance monitoring conditions as specified below:
- (a) The Permittee shall record the scrubbing liquor flow rate through the acid scrubber controlling the core making machines, at least once per day when the scrubber is in operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the flow rate through the scrubber shall be maintained at a minimum of 10 gallons per minute or a minimum established during the latest stack test. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. 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 scrubbing liquid pH in the acid scrubber controlling the core making machines, at least once per day when the scrubber is in operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the scrubbing liquid pH shall be below 4.5 or a maximum established during the latest stack test. The Permittee shall take reasonable response steps in accordance with the Compliance Response Plan. A pH 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) The Permittee shall record the total static pressure drop across the acid scrubber controlling the core making machines, at least once per day when the scrubber is in operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the bin vent shall be maintained within the range of 1.0 to 6.0 inches of water or a range established during the latest stack test. The Permittee shall take reasonable response steps in accordance with the Compliance Response Plan. 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.

## **Conclusion**

The operation of this grey and ductile iron foundry shall be subject to the conditions of the FESOP 167-17828-00007.

**Gartland Foundry Company**  
**FESOP 167-17828-00007**  
**Application Received: August 8, 2003**  
**Permit Reviewer: Rob Harmon**

**Scrap and Charge Handling**

87600 Maximum throughput (tons per year)  
 13800 Limited throughput (tons per year)  
 0% Overall Control Efficiency

Pollutant	Emission Factor (pounds per ton)	Potential Emission (tons per year)	Max Limited Emission (tons per year)
PM	0.60	26.28	4.14
PM10	0.36	15.77	2.48
Lead	0.00001	0.00	0.00

Potential emission is determined prior to control equipment or throughput limitation.  
 Max Limited Emission includes enforceable limits on control and throughput.

PM and PM10 Emission Factors from AP-42. Pb Emission Factor generated by Lab Data from Gartland.

HAP Emissions	Pollutant	Emission Factor (pounds per ton)	Potential Emission (tons per year)	Max Limited Emission (tons per year)
	chromium	0.0054	0.24	0.04
	cobalt	0.00002	0.00	0.00
	nickel	0.009	0.39	0.06
	arsenic	0.00008	0.00	0.00
	cadmium	0.00004	0.00	0.00
	selenium	0.00001	0.00	0.00
	manganese	0.0033	0.14	0.02
	antimony	0.00111	0.05	0.01
	Total Metallic HAP	0.01896		

Emission Factors are from AP-42, Ch12.10 and Speciate Database.

**Gartland Foundry Company**  
**FESOP 167-17828-00007**  
**Application Received: August 8, 2003**  
**Permit Reviewer: Rob Harmon**

**Electric Induction Melting**

87600 Maximum throughput (tons per year)  
 13800 Limited throughput (tons per year)  
 98% Overall Control Efficiency [Steelcraft baghouse (BH1)]

Pollutant	Emission Factor (pounds per ton)	Potential Emission (tons per year)	Max Limited Emission (tons per year)	After Control Short Term Limit (pounds per ton)
PM	0.90	39.42	0.12	0.018
PM10	0.86	37.67	0.12	0.017
Lead	0.0455	1.99	0.01	0.001

Potential emission is determined prior to control equipment or throughput limitation.  
 Max Limited Emission includes enforceable limits on control and throughput.

PM, PM10, and Lead Emission Factors from AP-42.

HAP Emissions	Pollutant	Emission Factor (pounds per ton)	Potential Emission (tons per year)	Max Limited Emission (tons per year)
	chromium	0.0081	0.35	0.00
	cobalt	0.00003	0.00	0.00
	nickel	0.0135	0.59	0.00
	arsenic	0.00012	0.01	0.00
	cadmium	0.00005	0.00	0.00
	selenium	0.00001	0.00	0.00
	manganese	0.00495	0.22	0.00
	antimony	0.00167	0.07	0.00
	Total Metallic HAP	0.02843		

Emission Factors are from AP-42, Ch12.10 and Speciate Database.

**Gartland Foundry Company**  
**FESOP 167-17828-00007**  
**Application Received: August 8, 2003**  
**Permit Reviewer: Rob Harmon**

**Magnesium Treatment**

87600 Maximum throughput (tons per year)  
 1970 Limited throughput (tons per year)  
 0% Overall Control Efficiency

Pollutant	Emission Factor (pounds per ton)	Potential Emission (tons per year)	Max Limited Emission (tons per year)
PM	1.80	78.84	1.77
PM10	1.80	78.84	1.77
Lead	0.00003	0.00	0.00

Potential emission is determined prior to control equipment or throughput limitation.  
 Max Limited Emission includes enforceable limits on control and throughput.

PM and PM10 Emission Factors from AP-42. Pb Emission Factor generated by Lab Data from Gartland.

HAP Emissions	Pollutant	Emission Factor (pounds per ton)	Potential Emission (tons per year)	Max Limited Emission (tons per year)
	chromium	0.0162	0.71	0.02
	cobalt	0.00005	0.00	0.00
	nickel	0.027	1.18	0.03
	arsenic	0.00023	0.01	0.00
	cadmium	0.00011	0.00	0.00
	selenium	0.00002	0.00	0.00
	manganese	0.0099	0.43	0.01
	antimony	0.00333	0.15	0.00
	Total Metallic HAP	0.05684		

Emission Factors are from AP-42, Ch12.10 and Speciate Database.

**Gartland Foundry Company**  
**FESOP 167-17828-00007**  
**Application Received: August 8, 2003**  
**Permit Reviewer: Rob Harmon**

**Pouring Operations**

87600 Maximum throughput (tons per year)

13800 Limited throughput (tons per year)

0% Overall Control Efficiency

Pollutant	Emission Factor (pounds per ton)	Potential Emission (tons per year)	Max Limited Emission (tons per year)
PM	4.20	183.96	28.98
PM10	2.06	90.23	14.21
SO2	0.02	0.88	0.14
NOx	0.01	0.44	0.07
VOC	0.14	6.13	0.97
Lead	0.00007	0.00	0.00

Potential emission is determined prior to control equipment or throughput limitation.

Max Limited Emission includes enforceable limits on control and throughput.

PM and PM10 Emission Factors from AP-42. Pb Emission Factor generated by Lab Data from Gartland. SO2, NOx, and VOC Emission Factors from AP-42. SCC 3-04-003-20

HAP Emissions	Pollutant	Emission Factor (pounds per ton)	Potential Emission (tons per year)	Max Limited Emission (tons per year)
	chromium	0.0378	1.66	0.26
	cobalt	0.00013	0.01	0.00
	nickel	0.063	2.76	0.43
	arsenic	0.00055	0.02	0.00
	cadmium	0.00025	0.01	0.00
	selenium	0.00004	0.00	0.00
	manganese	0.0231	1.01	0.16
	antimony	0.00777	0.34	0.05
	acrolein	0.00046	0.02	0.00
	benzene	0.04858	2.13	0.34
	formaldehyde	0.00098	0.04	0.01
	naphthalene	0.00011	0.00	0.00
	phenol	0.00896	0.39	0.06
	toluene	0.01974	0.86	0.14
	xylene	0.0168	0.74	0.12
	Total Metallic HAP	0.13264		
	Total Non-Metallic HAP	0.09563		

Emission Factors are from AP-42, Ch12.10 and Speciate Database.

**Gartland Foundry Company**  
**FESOP 167-17828-00007**  
**Application Received: August 8, 2003**  
**Permit Reviewer: Rob Harmon**

**Cooling Operations**

87600 Maximum throughput (tons per year)  
 13800 Limited throughput (tons per year)  
 0% Overall Control Efficiency

Pollutant	Emission Factor (pounds per ton)	Potential Emission (tons per year)	Max Limited Emission (tons per year)
PM	1.40	61.32	9.66
PM10	1.40	61.32	9.66

Potential emission is determined prior to control equipment or throughput limitation.  
 Max Limited Emission includes enforceable limits on control and throughput.

PM and PM10 Emission Factors from AP-42. SCC 3-04-003-25

HAP Emissions	Pollutant	Emission Factor (pounds per ton)	Potential Emission (tons per year)	Max Limited Emission (tons per year)
	chromium	0.0126	0.55	0.09
	cobalt	0.00004	0.00	0.00
	nickel	0.021	0.92	0.14
	arsenic	0.00018	0.01	0.00
	cadmium	0.00008	0.00	0.00
	selenium	0.00001	0.00	0.00
	manganese	0.0077	0.34	0.05
	antimony	0.00259	0.11	0.02
	Total Metallic HAP	0.0442		

Emission Factors are from AP-42, Ch12.10 and Speciate Database.

**Gartland Foundry Company**  
**FESOP 167-17828-00007**  
**Application Received: August 8, 2003**  
**Permit Reviewer: Rob Harmon**

**Casting Shakeout**

87600 Maximum throughput (tons per year)  
 13800 Limited throughput (tons per year)  
 98% Overall Control Efficiency [Wheelabrator 88 Baghouse (BH3)]

Pollutant	Emission Factor (pounds per ton)	Potential Emission (tons per year)	Max Limited Emission (tons per year)	After Control Short Term Limit (pounds per ton)
PM	3.20	140.16	0.44	0.064
PM10	2.24	98.11	0.31	0.045
VOC	1.20	52.56	8.28	*
Lead	0.00005	0.00	0.00	0.000

Potential emission is determined prior to control equipment or throughput limitation.

Max Limited Emission includes enforceable limits on control and throughput.

A \* indicates there was no control for that pollutant, therefore the short term limit is equal to the E.F.

PM, PM10, and VOC Emission Factors from AP-42. Pb Emission Factor generated by Lab Data.

HAP Emissions	Pollutant	Emission Factor (pounds per ton)	Potential Emission (tons per year)	Max Limited Emission (tons per year)	After Control Short Term Limit (pounds per ton)
	chromium	0.0288	1.26	0.00	0.0006
	cobalt	0.0001	0.00	0.00	0.0000
	nickel	0.048	2.10	0.01	0.0010
	arsenic	0.00042	0.02	0.00	0.0000
	cadmium	0.00019	0.01	0.00	0.0000
	selenium	0.00003	0.00	0.00	0.0000
	manganese	0.0176	0.77	0.00	0.0004
	antimony	0.00592	0.26	0.00	0.0001
	Total Metallic HAP				0.0020

Emission Factors are from AP-42, Ch12.10 and Speciate Database.

**Gartland Foundry Company**  
**FESOP 167-17828-00007**  
**Application Received: August 8, 2003**  
**Permit Reviewer: Rob Harmon**

**Sand Handling System**

Includes sand muller and sand conveyor

876000 Maximum throughput (tons per year, based on 100 tons per hour @ 8760)

200000 Limited throughput (tons per year)

98% Overall Control Efficiency [Hosakawa Baghouse (BH5)]

Pollutant	Emission Factor (pounds per ton)	Potential Emission (tons per year)	Max Limited Emission* (tons per year)	After Control Short Term Limit (pounds per ton)
PM	3.60	1576.80	7.20	0.072
PM10	0.54	236.52	1.08	0.011

Potential emission is determined prior to control equipment or throughput limitation.

Max Limited Emission includes enforceable limits on control and throughput.

PM and PM10 Emission Factors from AP-42. SCC 3-04-003-50

\*Due to the variety of emission units controlled by BH5, there will be a combined limit approach on them.

**Mold Making**

Includes squeezer mold machines, rotolift mold machines, and two (2) automold lines (Sinto and B&amp;P)

508080 Maximum throughput (tons per year, based on 58 tons per hour @ 8760)

41400 Limited throughput (tons per year)

0% Overall Control Efficiency

Pollutant	Emission Factor (pounds per ton)	Potential Emission (tons per year)	Max Limited Emission (tons per year)	After Control Short Term Limit (pounds per ton)
PM	0.90	228.64	18.63	0.900
PM10	0.90	228.64	18.63	0.900

Potential emission is determined prior to control equipment or throughput limitation.

Max Limited Emission includes enforceable limits on control and throughput.

PM and PM10 Emission Factors from AP-42.

**Gartland Foundry Company**  
**FESOP 167-17828-00007**  
**Application Received: August 8, 2003**  
**Permit Reviewer: Rob Harmon**

**Coldbox Sand Handling**

22119 Maximum throughput (tons per year)  
 1100 Limited throughput (tons per year)  
 98% Overall Control Efficiency (integral bin vent)

Pollutant	Emission Factor (pounds per ton)	Potential Emission (tons per year)	Max Limited Emission (tons per year)	After Control Short Term Limit (pounds per ton)
PM	3.60	39.81	0.04	0.072
PM10	0.54	5.97	0.01	0.011

Potential emission is determined prior to control equipment or throughput limitation.  
 Max Limited Emission includes enforceable limits on control and throughput.

PM and PM10 Emission Factors from AP-42.

**Gartland Foundry Company**  
**FESOP 167-17828-00007**  
**Application Received: August 8, 2003**  
**Permit Reviewer: Rob Harmon**

**Coldbox Core Machine**

22119 Maximum throughput (tons per year)

1100 Limited throughput (tons per year)

98% Overall Control Efficiency (TEA only, no control on the non TEA VOC, Acid Scrubber)

Pollutant	Emission Factor (pounds per ton)	Potential Emission (tons per year)	Max Limited Emission (tons per year)	After Control Short Term Limit (pounds per ton)
VOC (non TEA)	0.82	9.07	0.45	0.820
TEA	6.00	66.36	0.07	0.120
Total VOC		75.43	0.52	0.940

Potential emission is determined prior to control equipment or throughput limitation.

Max Limited Emission includes enforceable limits on control and throughput.

VOC and TEA Emission Factors from Mass Balance calculations.

**Gartland Foundry Company**  
**FESOP 167-17828-00007**  
**Application Received: August 8, 2003**  
**Permit Reviewer: Rob Harmon**

**Coldbox Mixers**

22119 Maximum throughput (tons per year)  
1100 Limited throughput (tons per year)  
0% Overall Control Efficiency

Pollutant	Emission Factor (pounds per ton)	Potential Emission (tons per year)	Max Limited Emission (tons per year)
VOC	0.40	4.42	0.22

Potential emission is determined prior to control equipment or throughput limitation.  
Max Limited Emission includes enforceable limits on control and throughput.

VOC Emission Factor from Mass Balance calculations.

**Gartland Foundry Company**  
**FESOP 167-17828-00007**  
**Application Received: August 8, 2003**  
**Permit Reviewer: Rob Harmon**

**Shell Core Making**

26280 Maximum throughput (tons per year)  
 1000 Limited throughput (tons per year)  
 0% Overall Control Efficiency

Pollutant	Emission Factor (pounds per ton)	Potential Emission (tons per year)	Max Limited Emission (tons per year)	After Control Short Term Limit (pounds per ton)
PM	0.90	11.83	0.45	0.900
PM10	0.90	11.83	0.45	0.900
VOC	0.254	3.34	0.13	*

Potential emission is determined prior to control equipment or throughput limitation.  
 Max Limited Emission includes enforceable limits on control and throughput.

PM and PM10 Emission Factors from AP-42. VOC Emission Factor from Mass Balance.  
 A \* indicates there was no control for that pollutant, therefore the short term limit is equal to the E.F.

**Oil Core Making**

2190 Maximum throughput (tons per year)  
 1000 Limited throughput (tons per year)  
 0% Overall Control Efficiency

Pollutant	Emission Factor (pounds per ton)	Potential Emission (tons per year)	Max Limited Emission (tons per year)	After Control Short Term Limit (pounds per ton)
PM	0.90	0.99	0.45	0.900
PM10	0.90	0.99	0.45	0.900
VOC	3.05	3.34	1.52	*

Potential emission is determined prior to control equipment or throughput limitation.  
 Max Limited Emission includes enforceable limits on control and throughput.

PM and PM10 Emission Factors from AP-42. VOC Emission Factor from Mass Balance.  
 A \* indicates there was no control for that pollutant, therefore the short term limit is equal to the E.F.

**Gartland Foundry Company**  
**FESOP 167-17828-00007**  
**Application Received: August 8, 2003**  
**Permit Reviewer: Rob Harmon**

**Release Agents**

2122 Maximum throughput (gallons per year)  
 2122 Limited throughput (gallons per year)  
 0% Overall Control Efficiency

Pollutant	Emission Factor (pounds per gal)	Potential Emission (tons per year)	Max Limited Emission (tons per year)
VOC	6.47	6.86	6.86

Potential emission is determined prior to control equipment or throughput limitation.

VOC Emission Factor from MSDS sheets.

**Core Wash**

8760 Maximum throughput (tons isocure sand per year (from page 8))  
 8760 Limited throughput (tons isocure sand per year)  
 0% Overall Control Efficiency

Pollutant	Emission Factor (lb per ton sand)	Potential Emission (tons per year)	Max Limited Emission (tons per year)
VOC	5.2000	12.53	12.53

Potential emission is determined prior to control equipment or throughput limitation.

Core Wash is 55% volatile  
 VOC Emission Factor from Company

**Gartland Foundry Company**  
**FESOP 167-17828-00007**  
**Application Received: August 8, 2003**  
**Permit Reviewer: Rob Harmon**

**Sandblast - Spin Blast**

43800 Maximum throughput (tons per year, 5 tons per hour @ 8760)

13800 Limited throughput (tons per year)

98% Overall Control Efficiency [Wheelabrator 35 baghouse (BH2)]

Pollutant	Emission Factor (pounds per ton)	Potential Emission (tons per year)	Max Limited Emission* (tons per year)	After Control Short Term Limit (pounds per ton)
PM	17.00	372.30	2.35	0.340
PM10	1.70	37.23	0.23	0.034
Lead	0.00027	0.01	0.00	0.000

Potential emission is determined prior to control equipment or throughput limitation.

Max Limited Emission includes enforceable limits on control and throughput.

PM and PM10 Emission Factors from AP-42. Pb Emission Factor generated by Lab Data from Gartland.

HAP Emissions	Pollutant	Emission Factor (pounds per ton)	Potential Emission (tons per year)	Max Limited Emission (tons per year)	After Control Short Term Limit (pounds per ton)
	chromium	0.00646	0.14	0.00	0.0001
	cobalt	0.00051	0.01	0.00	0.0000
	nickel	0.01139	0.25	0.00	0.0002
	arsenic	0.00221	0.05	0.00	0.0000
	cadmium	0.00102	0.02	0.00	0.0000
	selenium	0.00017	0.00	0.00	0.0000
	manganese	0.0935	2.05	0.01	0.0019
	antimony	0.03145	0.69	0.00	0.0006
	Total Metallic HAP				0.0029

Emission Factors are from AP-42, Ch12.10 and Speciate Database.

**Gartland Foundry Company**  
**FESOP 167-17828-00007**  
**Application Received: August 8, 2003**  
**Permit Reviewer: Rob Harmon**

**Sandblast - Tumble Blast / Tumbler**

43800 Maximum throughput (tons per year, 5 tons per hour @ 8760)

13800 Limited throughput (tons per year)

98% Overall Control Efficiency [Hosakawa Baghouse (BH5)]

Pollutant	Emission Factor (pounds per ton)	Potential Emission (tons per year)	Max Limited Emission* (tons per year)	After Control Short Term Limit (pounds per ton)
PM	17.00	372.30	2.35	0.340
PM10	1.70	37.23	0.23	0.034
Lead	0.00027	0.01	0.00	0.000

Potential emission is determined prior to control equipment or throughput limitation.

Max Limited Emission includes enforceable limits on control and throughput.

PM and PM10 Emission Factors from AP-42. Pb Emission Factor generated by Lab Data from Gartland.

\*Due to the variety of emission units controlled by BH5, there will be a combined limit approach on them.

HAP Emissions	Pollutant	Emission Factor (pounds per ton)	Potential Emission (tons per year)	Max Limited Emission (tons per year)	After Control Short Term Limit (pounds per ton)
	chromium	0.00646	0.14	0.00	0.0001
	cobalt	0.00051	0.01	0.00	0.0000
	nickel	0.01139	0.25	0.00	0.0002
	arsenic	0.00221	0.05	0.00	0.0000
	cadmium	0.00102	0.02	0.00	0.0000
	selenium	0.00017	0.00	0.00	0.0000
	manganese	0.0935	2.05	0.01	0.0019
	antimony	0.03145	0.69	0.00	0.0006
	Total Metallic HAP				0.0029

Emission Factors are from AP-42, Ch12.10 and Speciate Database.

**Gartland Foundry Company**  
**FESOP 167-17828-00007**  
**Application Received: August 8, 2003**  
**Permit Reviewer: Rob Harmon**

**Tumble Grinding**

87600 Maximum throughput (tons per year)

13800 Limited throughput (tons per year)

98% Overall Control Efficiency [ Hosakawa Baghouse BH5]

Pollutant	Emission Factor (pounds per ton)	Potential Emission (tons per year)	Max Limited Emission* (tons per year)	After Control Short Term Limit (pounds per ton)
PM	0.010	0.44	0.00	0.00020
PM10	0.0045	0.20	0.00	0.00009
Lead	0.0000002	0.00	0.00	0.00000

Potential emission is determined prior to control equipment or throughput limitation.

Max Limited Emission includes enforceable limits on control and throughput.

PM and PM10 Emission Factors from AP-42. Pb Emission Factor generated by Lab Data from Gartland.

\*Due to the variety of emission units controlled by BH5, there will be a combined limit approach on them.

HAP Emissions	Pollutant	Emission Factor (pounds per ton)	Potential Emission (tons per year)	Max Limited Emission (tons per year)	After Control Short Term Limit (pounds per ton)
	nickel	0.00001	0.00	0.00	0.00000
	manganese	0.00006	0.00	0.00	0.00000
	antimony	2.00E-07	0.00	0.00	0.00000

Emission Factors are from AP-42, Ch12.10 and Speciate Database.

**Gartland Foundry Company**  
**FESOP 167-17828-00007**  
**Application Received: August 8, 2003**  
**Permit Reviewer: Rob Harmon**

**Finish Grinding**

87600 Maximum throughput (tons per year)

13800 Limited throughput (tons per year)

80% Overall Control Efficiency (downdraft tables with baffles for control)

Pollutant	Emission Factor (pounds per ton)	Potential Emission (tons per year)	Max Limited Emission (tons per year)	After Control Short Term Limit (pounds per ton)
PM	0.010	0.44	0.01	0.0020
PM10	0.0045	0.20	0.01	0.0009
Lead	2.00E-07	0.00	0.00	0.0000

Potential emission is determined prior to control equipment or throughput limitation.

Max Limited Emission includes enforceable limits on control and throughput.

PM and PM10 Emission Factors from AP-42. Pb Emission Factor generated by Lab Data from Gartland.

HAP Emissions	Pollutant	Emission Factor (pounds per ton)	Potential Emission (tons per year)	Max Limited Emission (tons per year)	After Control Short Term Limit (pounds per ton)
	nickel	0.00001	0.00	0.00	0.00000
	manganese	0.00006	0.00	0.00	0.00001
	antimony	0.00002	0.00	0.00	0.00000

Emission Factors are from AP-42, Ch12.10 and Speciate Database.

**Gartland Foundry Company**  
**FESOP 167-17828-00007**  
**Application Received: August 8, 2003**  
**Permit Reviewer: Rob Harmon**

**BH5 Limitation**

Before the limit for BH5 can be determined, an accounting of all the other PM and PM10 processes is needed. This accounting allows for the calculation of the amount of PM and PM10 remaining before 326 IAC 2-2 or 327 IAC 2-7 become applicable.

Emission Unit	Potential PM ton/yr after limit	Potential PM10 ton/yr after limit
Scrap and Charge Handling	4.140	2.484
Electric Induction Melting	0.124	0.119
Magnesium Treatment	1.773	1.773
Pouring Operations	28.980	14.214
Cooling Operations	9.660	9.660
Casting Shakeout	0.442	0.309
Mold Making	18.630	18.630
Coldbox Sand Handling	0.040	0.006
Shell Core Making	0.450	0.450
Oil Core Making	0.450	0.450
Spin Blast System	2.346	0.235
Surface Coating Booth	2.223	2.223
Insignificant (Estimated)	2.000	2.000
Total	71.257	52.552
Threshold	100	100
Space Remaining	28.743	47.448

Potential PM / PM10 Emissions from the units BH5 controls

Emission Unit	Potential PM ton/yr	Potential PM10 ton/yr
Sand Handling (muller / conveyor)	1576.80	236.52
Tumble Blast / Tumbler	372.30	37.23
Snag Grinders	0.44	0.20
Total	1949.54	273.95
After 98% control	38.99	5.48
pounds per hour	8.902	1.2509
Above Space Remaining?	Y	N

Therefore PM is the limiting factor because there is enough space for PM10 already.

Space Available (tons per year)            28.7  
 Emission Rate (pounds per hour)        8.902  
 Hours to reach the available space      6447

28.696 Max Limited PM Emissions  
 4.032 Max Limited PM10 Emissions

**Gartland Foundry Company**  
**FESOP 167-17828-00007**  
**Application Received: August 8, 2003**  
**Permit Reviewer: Rob Harmon**

**Surface Coating Emissions - Before Control or Limitations**

Material	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
<i>Coatings</i>																
KA 1663 HSPOXSL	11.7	27.10%	0.0%	27.1%	0.0%	46.90%	0.01000	500	3.17	3.17	15.85	380.48	69.44	46.70	6.76	75%
KWA-1887	9.4	45.80%	44.9%	0.9%	50.7%	43.20%	0.01000	500	0.17	0.08	0.42	10.15	1.85	27.89	0.20	75%
<i>Solvents</i>																
Methyl propyl ketone	6.76	100.00%	0.0%	100.0%	0.0%	0.00%	0.00100	500	6.76	6.76	3.38	81.12	14.80	0.00	NA	0%

**State Potential Emissions** **Add worst case coating to all solvents** **19.66    471.76    86.10    74.59**

**METHODOLOGY**

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) \* Weight % Organics) / (1-Volume % water)  
 Pounds of VOC per Gallon Coating = (Density (lb/gal) \* Weight % Organics)  
 Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr)  
 Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (24 hr/day)  
 Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (8760 hr/yr) \* (1 ton/2000 lbs)  
 Particulate Potential Tons per Year = (units/hour) \* (gal/unit) \* (lbs/gal) \* (1- Weight % Volatiles) \* (1-Transfer efficiency) \*(8760 hrs/yr) \*(1 ton/2000 lbs)  
 Pounds VOC per Gallon of Solids = (Density (lbs/gal) \* Weight % organics) / (Volume % solids)  
 Total = Worst Coating + Sum of all solvents used

**Particulate Emissions After Control**

Capture Efficiency 99%  
 Removal Efficiency 98% fabric filters  
 Overall Control Efficiency 97.02%

PM/PM10 Potential after control 2.22 tons per year

**HAP Potential Emissions**

Material	Density (Lb/Gal)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Weight % Xylene	Weight % Glycol Ethers	Weight % Methyl Isobutyl Ketone	Potential Xylene (ton/yr)	Potential Glycol Ethers (ton/yr)	Potential Methyl Isobutyl Ketone (ton/yr)	Potential HAP Total (ton/yr)
<i>Coatings</i>										
KA 1663 HSPOXSL	11.7	0.010	500	23.5%	0.0%	0.0%	60.21	0.00	0.00	60.21
KWA-1887	9.4	0.010	500	0.0%	1.7%	0.0%	0.00	3.50	0.00	3.50
<i>Solvents</i>										
Methyl propyl ketone	6.76	0.001	500	0.0%	0.0%	10.0%	0.00	0.00	1.48	1.48
<b>Total</b>							60.21	3.50	1.48	65.19

HAPS emission rate (tons/yr) = Density (lb/gal) \* Gal of Material (gal/unit) \* Maximum (unit/hr) \* Weight % HAP \*8760 (hrs/yr) \* 1 ton/2000 lbs

**Limited Emissions**

VOC limit 39.9 Tons VOC per 12 consecutive month period (makes 2-2 not applicable, source asked for that more restrictive limit)  
 Xylene Limit 9.883 Tons Xylene per 12 consecutive month period (makes 2-7 not applicable)

**Gartland Foundry Company**  
**FESOP 167-17828-00007**  
**Application Received: August 8, 2003**  
**Permit Reviewer: Rob Harmon**

**Summary Table 1 (Potential Emission in Tons per Year (tpy))**

<u>Emission Unit</u>	<u>PM</u>	<u>PM10</u>	<u>Lead</u>	<u>SO2</u>	<u>NOx</u>	<u>VOC</u>
Scrap and Charge Handling	26.28	15.77	0.00			
Electric Induction Melting	39.42	37.67	1.99			
Magnesium Treatment	78.84	78.84	0.00			
Pouring Operations	183.96	90.23	0.00	0.88	0.44	6.13
Cooling Operations	61.32	61.32				
Casting Shakeout	140.16	98.11	0.00			52.56
Sand Handling System	1576.80	236.52				
Mold Making Systems	228.64	228.64				
Coldbox Sand Handling	39.81	5.97				
Coldbox Core Making						75.43
Coldbox Mixers						4.42
Shell Core Making	11.83	11.83				3.34
Oil Core Making	0.99	0.99				3.34
Release Agents						6.86
Core Wash						12.53
Sandblast - Spin Blast	372.30	37.23	0.01			
Sandblast - Tumble Blast / Tumbler	372.30	37.23	0.01			
Tumble Grinding	0.44	0.20	0.00			
Finish Grinding	0.44	0.20	0.00			
Surface Coating Booth	74.59	74.59				86.10
<b>Total</b>	<b>3208.11</b>	<b>1015.32</b>	<b>2.01</b>	<b>0.88</b>	<b>0.44</b>	<b>250.70</b>

**Gartland Foundry Company**  
**FESOP 167-17828-00007**  
**Application Received: August 8, 2003**  
**Permit Reviewer: Rob Harmon**

**Summary Table 2 (Max Limited Emission in Tons per Year (tpy))**

<u>Emission Unit</u>	<u>PM</u>	<u>PM10</u>	<u>Lead</u>	<u>SO2</u>	<u>NOx</u>	<u>VOC</u>
Scrap and Charge Handling	4.14	2.48	0.00			
Electric Induction Melting	0.12	0.12	0.01			
Magnesium Treatment	1.77	1.77	0.00			
Pouring Operations	28.98	14.21	0.00	0.14	0.07	0.97
Cooling Operations	9.66	9.66				
Casting Shakeout	0.44	0.31	0.00			8.28
Sand Handling System*						
Mold Making Systems	18.63	18.63				
Coldbox Sand Handling	0.04	0.01				
Coldbox Core Making						0.52
Coldbox Mixers						0.22
Shell Core Making	0.45	0.45				0.13
Oil Core Making	0.45	0.45				1.52
Release Agents						6.86
Core Wash						12.53
Sandblast - Spin Blast	2.35	0.23	0.00			
Sandblast - Tumble Blast / Tumbler*						
Tumble Grinding*						
Finish Grinding	0.01	0.01	0.00			
Surface Coating Booth	2.22	2.22				39.90
BH5 Combined (Sand Handling, Tumble Blast, Tumbler, Snag Grinders, Auto Mold Machines)	28.70	4.03				
Other insignificant	2	2				2
<b>Total</b>	<b>99.97</b>	<b>56.59</b>	<b>0.01</b>	<b>0.14</b>	<b>0.07</b>	<b>72.92</b>

\* Part of Combined BH5 emission

Thus a FESOP is appropriate as all criteria pollutants have been limited below the 100 tpy Part 70 threshold.



**Gartland Foundry Company**  
**FESOP 167-17828-00007**  
**Application Received: August 8, 2003**  
**Permit Reviewer: Rob Harmon**

**Summary Table 4 (Max Limited HAP Emission in Tons per Year)**

<u>Emission Unit</u>	<u>TEA</u>	<u>Xylene</u>	<u>Glycol Ether</u>	<u>Methyl Isobutyl Ketone</u>	<u>Chromium</u>	<u>Cobalt</u>	<u>Nickel</u>	<u>Arsenic</u>	<u>Cadmium</u>	<u>Selenium</u>	<u>Manganese</u>	<u>Antimony</u>
Scrap and Charge Handling					0.037	0.000	0.062	0.001	0.000	0.000	0.023	0.008
Electric Induction Melting					0.001	0.000	0.002	0.000	0.000	0.000	0.001	0.000
Magnesium Treatment					0.016	0.000	0.027	0.000	0.000	0.000	0.010	0.003
Pouring Operations		0.116			0.261	0.001	0.435	0.004	0.002	0.000	0.159	0.054
Cooling Operations					0.087	0.000	0.145	0.001	0.001	0.000	0.053	0.018
Casting Shakeout					0.004	0.000	0.007	0.000	0.000	0.000	0.002	0.001
Coldbox Core Making	0.066											
Sandblast					0.001	0.000	0.002	0.000	0.000	0.000	0.013	0.004
Tumble Grinding							0.000				0.000	0.000
Finish Grinding							0.000				0.000	0.000
Surface Coating Booth		9.883	3.500	1.480								
<b>Total</b>	0.066	9.999	3.500	1.480	0.407	0.001	0.678	0.006	0.003	0.000	0.261	0.088
<u>Emission Unit</u>	<u>Acrolein</u>	<u>Benzene</u>	<u>Form- aldehyde</u>	<u>Napthalene</u>	<u>Phenol</u>	<u>Toluene</u>						
Pouring Operations	0.003	0.335	0.007	0.001	0.062	0.136						
<b>Total</b>	0.003	0.335	0.007	0.001	0.062	0.136						
<b>Grand Total</b>	17.034											

The operational and throughput limitations for TEA and Xylene have the additional impact of limiting total HAPs below the 25 tpy threshold without further limits. Thus a FESOP is appropriate as all individual HAPs have been limited below the 10 tpy Part 70 threshold and the combined HAPS are limited below 25 tpy.