



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL MODIFICATION  
SUMMIT COUNTY**

**CERTIFIED MAIL**

Street Address:

122 S. Front Street

Lazarus Gov. Center TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:

Lazarus Gov. Center  
P.O. Box 1049

**Application No: 16-01533**

**DATE: 2/26/2002**

Knapp Foundry Company Inc  
Charles Knapp  
1207 Sweitzer Avenue  
Akron, OH 44301

Enclosed Please find a modification to the Ohio EPA Permit To Install referenced above which will modify the terms and conditions.

You are hereby notified that this action by the Director is final and may be appealed to the Ohio Environmental Review Appeals Commission pursuant to Chapter 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. It must be filed within thirty (30) days after the notice of the Directors action. A copy of the appeal must be served on the Director of the Ohio Environmental Protection Agency within three (3) days of filing with the Commission. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission  
236 East Town Street, Room 300  
Columbus, Ohio 43215

Very truly yours,

Thomas G. Rigo, Manager  
Field Operations and Permit Section  
Division of Air Pollution Control

CC: USEPA

ARAQMD



**Permit To Install  
Terms and Conditions**

**Issue Date: 2/26/2002  
Effective Date: 2/26/2002**

**FINAL ADMINISTRATIVE MODIFICATION OF PERMIT TO INSTALL 16-01533**

Application Number: 16-01533  
APS Premise Number: 1677010014  
Permit Fee: **\$0**  
Name of Facility: Knapp Foundry Company Inc  
Person to Contact: Charles Knapp  
Address: 1207 Sweitzer Avenue  
Akron, OH 44301

Location of proposed air contaminant source(s) [emissions unit(s)]:  
**1207 Sweitzer Avenue  
Akron, Ohio**

Description of proposed emissions unit(s):  
**Two Electric Induction Furnaces, Mold and Core Preparation, Shot Blasting Unit, and Three Sand Storage Silos.**

The above named entity is hereby granted a modification to the permit to install described above pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this modification does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the above described source(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans included in the application, the above described source(s) of pollutants will be granted the necessary operating permits.

This permit is granted subject to the conditions attached hereto.

  
Ohio Environmental Protection Agency

Director

## Part I - GENERAL TERMS AND CONDITIONS

### A. Permit to Install General Terms and Conditions

#### 1. Compliance Requirements

The emissions unit(s) identified in this Permit to Install shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

#### 2. Reporting Requirements Related to Monitoring and Recordkeeping Requirements

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or recordkeeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
- b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

#### 3. Records Retention Requirements

Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

#### 4. Inspections and Information Requests

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized

representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

**5. Scheduled Maintenance/Malfunction Reporting**

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s).

**6. Permit Transfers**

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

**7. Air Pollution Nuisance**

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

**8. Termination of Permit to Install**

This Permit to Install shall terminate within eighteen months of the effective date of the Permit to Install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

**9. Construction of New Sources(s)**

The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio

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Environmental Protection Agency if the proposed sources cannot meet the requirements of this permit or cannot meet applicable standards.

If the construction of the proposed emissions unit(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.

**10. Public Disclosure**

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.

**11. Applicability**

This Permit to Install is applicable only to the emissions unit(s) identified in the Permit to Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s).

**12. Best Available Technology**

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

**13. Source Operation and Operating Permit Requirements After Completion of Construction**

- a. If the permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77, the permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or

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modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).

- b. If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35, the source(s) identified in this Permit To Install is (are) permitted to operate for a period of up to one year from the date the source(s) commenced operation. Permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within thirty (30) days after commencing operation of the source(s) covered by this permit.

#### **14. Construction Compliance Certification**

The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the facility has been constructed in accordance with the Permit to Install application and the terms and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

#### **15. Fees**

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable Permit to Install fees within 30 days after the issuance of this Permit to Install.

### **B. Permit to Install Summary of Allowable Emissions**

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

SUMMARY (for informational purposes only)  
 TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

| <u>Pollutant</u> | <u>Tons Per Year</u> |
|------------------|----------------------|
| PE               | 53.95                |
| OC               | 16.0                 |
| NOx              | 12.88                |
| CO               | 10.82                |
| SO2              | 0.09                 |
| combined HAPs*   | 3.26**               |

\*HAPs are any pollutant which is listed as a hazardous air pollutant in Section 112(b) of Title III of the Clean Air Act.

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\*\*Includes lead emissions.

**PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. Applicable Emissions Limitations and/or Control Requirements**

- 1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property,<br/>and/or Equipment</u> | <u>Applicable Rules/Requirements</u> |
|---|--------------------------------------|
| F001 - Electric Induction Furnace<br>No 1.        | OAC rule 3745-31-05(A)(3)            |
|   | OAC rule 3745-31-05(D)               |
|   | OAC rule 3745-17-07(B)               |
|   | OAC rule 3745-17-08                  |

**Knapp****PTI A****Modification Issued: 2/26/2002**Emissions Unit ID: **F001**

Applicable Emissions  
Limitations/Control Measures

The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-08 and 3745-31-05(D).

13.1 pounds per hour (lbs/hr) of particulate emissions (PE)

0.23 lb/hr of lead

The natural gas combustion emissions from heating the ladle shall not exceed the following:

2.94 lbs/hr and 12.88 tons per year (TPY) of nitrogen oxides (NO<sub>x</sub>)

2.47 lbs/hr and 10.82 TPY of carbon monoxide (CO)

0.06 lb/hr and 0.26 TPY of PE

0.02 lb/hr and 0.09 TPY of sulfur dioxide (SO<sub>2</sub>)

0.32 lb/hr and 1.40 TPY of organic compounds (OC)

There shall be no visible particulate emissions from any building openings.

5.7 lbs of PE per ton of gray iron produced

0.1 lb of lead per ton of gray iron produced

26.43 TPY of PE for F001 and F002, combined, as a rolling, 12-month summation

0.46 TPY of lead for F001 and F002, combined, as a rolling, 12-month summation

The visible emission limitation specified by this rule is less stringent than the visible emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

See B.2 below

**Modification Issued: 2/26/2002****2. Additional Terms and Conditions**

- 2.a** The above hourly emission limits (regulated under OAC rule 3745-31-05) are based on the potential to emit for this emissions unit, as determined from permit application data and AP-42 emission factors. Therefore, no record keeping, reporting, nor emissions calculations are required to demonstrate compliance with these emission limits.

**B. Operational Restrictions**

1. The maximum annual production rate for this facility shall not exceed 9274 tons per year of gray iron, based on a rolling, 12-month summation of the production rates.

To ensure enforceability during the first twelve calendar months of operation after the issuance of this permit to install, the permittee shall not exceed the production levels specified in the following table:

| <u>Month(s)</u> | <u>Maximum Allowable<br/>Cumulative Production</u> |
|-----------------|--|
| 1               | 773 tons   |
| 1-2             | 1546 tons  |
| 1-3             | 2319 tons  |
| 1-4             | 3091 tons  |
| 1-5             | 3864 tons  |
| 1-6             | 4637 tons  |
| 1-7             | 5410 tons  |
| 1-8             | 6183 tons  |
| 1-9             | 6956 tons  |
| 1-10            | 7728 tons  |
| 1-11            | 8501 tons  |
| 1-12            | 9274 tons  |

After the first 12 calendar months of operation following the issuance of this permit to install, compliance with the annual production rate limitation shall be based upon a rolling, 12-month summation of the production rates.

2. The only materials melted in the electric induction furnaces (F001 and F002) shall be ferrous materials, including pig iron, steel plate, and "No. 1 machinery cast" bearing no petroleum, paint, or paper residue.

### **C. Monitoring and/or Record keeping Requirements**

1. The permittee shall maintain monthly records of the following information:
  - a. the production rate for each month
  - b. beginning after the first 12 calendar months of operation following the issuance of this permit to install, the rolling 12-month summation of the production rates.

Also, during the first 12 calendar months of operation following the issuance of this permit to install, the permittee shall record the cumulative production rate for each calendar month.

2. When each shipment of ferrous material is received, the permittee shall record the following:
  - a. the type of ferrous material received; and
  - b. whether the ferrous material bears any petroleum, paint, or paper residue.

3. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the roof monitors, windows, and/or doors serving this emissions unit. The presence or absence of any visible particulate emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - a. the color of the emissions;
  - b. the cause of the emissions;
  - c. the total duration of any visible emission incident; and
  - d. any corrective actions taken to eliminate the visible emissions.

#### **D. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month production rate limitation and, for the first 12 calendar months of operation following the issuance of this permit to install, all exceedances of the maximum allowable cumulative production levels. These reports are due by the date described in Part I - General Terms and Conditions of this permit under section (A)(2).
2. The permittee shall submit deviation reports which identify any shipment of ferrous materials that did not meet the requirements of Section B.2 of these terms and conditions. These reports are due by the date described in Part I - General Terms and Conditions of this permit under section (A)(2).
3. The permittee shall submit semiannual written reports which (a) identify all days during which any visible particulate emissions were observed from the roof monitors, windows, and/or doors serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

#### **E. Testing Requirements**

1. Compliance with the emission limitations in Section A.1. of these terms and conditions shall be determined in accordance with the following method(s):
  - a. Emission Limitation:  
5.7 lbs of PE per ton of gray iron produced

Applicable Compliance Method:

Compliance with the emission limitation shall be demonstrated through the summation of the following AP-42 particulate emission factors: 0.9 lb of PE per ton of gray iron produced plus 0.6 lb of PE per ton of gray iron produced plus 4.2 lbs of PE per ton of gray iron produced from Tables 12.10-3 and 12.10-7 dated 1/95.

b. Emission Limitation:

13.1 lbs/hr of PE

Applicable Compliance Method:

Compliance with the allowable hourly emission limitation for particulates shall be determined by multiplying the allowable particulate emission limitation of 5.7 pounds of PE per ton of gray iron produced by the maximum hourly production rate.

c. Emission Limitation:

26.43 TPY of PE for F001 and F002, combined, as a rolling, 12-month summation

Applicable Compliance Method:

Compliance with the allowable annual rolling 12-month emission limitation for particulates shall be determined by multiplying the allowable particulate emission limitation of 5.7 pounds of PE per ton of gray iron produced by the maximum allowable annual rolling 12-month production rate (9274 tons per year as a rolling, 12-month summation), then divided by 2000.

d. Emission Limitation:

0.1 lb of lead per ton of gray iron produced

Applicable Compliance Method:

Compliance with the emission limitation shall be demonstrated through the following AP-42 lead emission factor: 0.1 lb of lead per ton of gray iron produced from Table 12.10-5 dated 1/95.

e. Emission Limitation:

0.23 lb/hr of lead

Applicable Compliance Method:

Compliance with the allowable hourly emission limitation for lead shall be determined by multiplying the allowable lead emission limitation of 0.1 pound of lead per ton of gray iron produced by the maximum hourly production rate.

f. Emission Limitation:

0.46 TPY of lead for F001 and F002, combined, as a rolling, 12-month summation

Applicable Compliance Method:

Compliance with the allowable annual rolling 12-month emission limitation for lead shall be determined by multiplying the allowable lead emission limitation of 0.1 pound of lead per ton of gray iron produced by the maximum allowable annual rolling 12-month production rate (9274 tons per year as a rolling, 12-month summation), then divided by 2000.

g. Emission Limitation:

There shall be no visible particulate emissions from any building openings.

Applicable Compliance Method:

Compliance with the requirement for no visible particulate emissions from any building openings shall be determined in accordance with the test method and procedures specified in OAC rule 3745-17-03(B)(4).

h. Emission Limitation:

2.94 lbs/hr of NO<sub>x</sub>

Applicable Compliance Method:

Compliance with the allowable hourly emission limitation for nitrogen oxides from the combustion of natural gas shall be determined by multiplying the AP-42 nitrogen oxides emission factor of 100 pounds of nitrogen oxides emissions per million standard cubic feet

Emissions Unit ID: F001

of natural gas fired (AP-42 Table 1.4-1, dated 7/98) by the maximum hourly amount of natural gas fired.

i. Emission Limitation:

12.88 TPY of NO<sub>x</sub>

Applicable Compliance Method:

Compliance with the allowable annual emission limitation for nitrogen oxides from the combustion of natural gas shall be determined by multiplying the AP-42 nitrogen oxides emission factor of 100 pounds of nitrogen oxides emissions per million standard cubic feet of natural gas fired (AP-42 Table 1.4-1, dated 7/98) by the maximum annual amount of natural gas fired, then divided by 2000.

j. Emission Limitation:

2.47 lbs/hr of CO

Applicable Compliance Method:

Compliance with the allowable hourly emission limitation for carbon monoxide from the combustion of natural gas shall be determined by multiplying the AP-42 carbon monoxide emission factor of 84 pounds of carbon monoxide emissions per million standard cubic feet of natural gas fired (AP-42 Table 1.4-1, dated 7/98) by the maximum hourly amount of natural gas fired.

k. Emission Limitation:

10.82 TPY of CO

Applicable Compliance Method:

Compliance with the allowable annual emission limitation for carbon monoxide from the combustion of natural gas shall be determined by multiplying the AP-42 carbon monoxide emission factor of 84 pounds of carbon monoxide emissions per million standard cubic feet of natural gas fired (AP-42 Table 1.4-1, dated 7/98) by the maximum annual amount of natural gas fired, then divided by 2000.

l. Emission Limitation:

0.06 lb/hr of PE

Applicable Compliance Method:

Compliance with the allowable hourly emission limitation for particulates from the combustion of natural gas shall be determined by multiplying the AP-42 particulate emission factor of 1.9 pounds of particulate emissions per million standard cubic feet of natural gas fired (AP-42 Table 1.4-2, dated 7/98) by the maximum hourly amount of natural gas fired.

m. Emission Limitation:

0.26 TPY of PE

Applicable Compliance Method:

Compliance with the allowable annual emission limitation for particulates from the combustion of natural gas shall be determined by multiplying the AP-42 particulate emission

factor of 1.9 pounds of particulate emissions per million standard cubic feet of natural gas fired (AP-42 Table 1.4-2, dated 7/98) by the maximum annual amount of natural gas fired, then divided by 2000.

n. Emission Limitation:

0.02 lb/hr of SO<sub>2</sub>

Applicable Compliance Method:

Compliance with the allowable hourly emission limitation for sulfur dioxide from the combustion of natural gas shall be determined by multiplying the AP-42 sulfur dioxide emission factor of 0.6 pound of sulfur dioxide emissions per million standard cubic feet of natural gas fired (AP-42 Table 1.4-2, dated 7/98) by the maximum hourly amount of natural gas fired.

o. Emission Limitation:

0.09 TPY of SO<sub>2</sub>

Applicable Compliance Method:

Compliance with the allowable annual emission limitation for sulfur dioxide from the combustion of natural gas shall be determined by multiplying the AP-42 sulfur dioxide emission factor of 0.6 pound of sulfur dioxide emissions per million standard cubic feet of natural gas fired (AP-42 Table 1.4-2, dated 7/98) by the maximum annual amount of natural gas fired, then divided by 2000.

p. Emission Limitation:

0.32 lb/hr of OC

Applicable Compliance Method:

Compliance with the allowable hourly emission limitation for organic compounds from the combustion of natural gas shall be determined by multiplying the AP-42 organic compounds emission factor of 11 pounds of organic compounds emissions per million standard cubic feet of natural gas fired (AP-42 Table 1.4-2, dated 7/98) by the maximum hourly amount of natural gas fired.

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**Emissions Unit ID: F001**

q. Emission Limitation:

1.40 TPY of OC

Applicable Compliance Method:

Compliance with the allowable annual emission limitation for organic compounds from the combustion of natural gas shall be determined by multiplying the AP-42 organic compounds emission factor of 11 pounds of organic compounds emissions per million standard cubic feet of natural gas fired (AP-42 Table 1.4-2, dated 7/98) by the maximum annual amount of natural gas fired, then divided by 2000.

**F. Miscellaneous Requirements**

None

**PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. Applicable Emissions Limitations and/or Control Requirements**

- 1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property,<br/>and/or Equipment</u> | <u>Applicable Rules/Requirements</u>  |
|---|---|
| F002 - Electric Induction Furnace<br>No 2.        | <p>OAC rule 3745-31-05(A)(3)</p> <p>OAC rule 3745-31-05(D)</p> <p>OAC rule 3745-17-07(B)</p> <p>OAC rule 3745-17-08</p> |

**Knapp****PTI A****Modification Issued: 2/26/2002**Emissions Unit ID: **F002**

Applicable Emissions  
Limitations/Control Measures

The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-08 and 3745-31-05(D).

13.1 pounds per hour (lbs/hr) of particulate emissions (PE)

0.23 lb/hr of lead

The natural gas combustion emissions from heating the ladle shall not exceed the following:

2.94 lbs/hr and 12.88 tons per year (TPY) of nitrogen oxides (NO<sub>x</sub>)

2.47 lbs/hr and 10.82 TPY of carbon monoxide (CO)

0.06 lb/hr and 0.26 TPY of PE

0.02 lb/hr and 0.09 TPY of sulfur dioxide (SO<sub>2</sub>)

0.32 lb/hr and 1.40 TPY of organic compounds (OC)

There shall be no visible particulate emissions from any building openings.

5.7 lbs of PE per ton of gray iron produced

0.1 lb of lead per ton of gray iron produced

26.43 TPY of PE for F001 and F002, combined, as a rolling, 12-month summation

0.46 TPY of lead for F001 and F002, combined, as a rolling, 12-month summation

The visible emission limitation specified by this rule is less stringent than the visible emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

See B.2 below.

**Modification Issued: 2/26/2002**

**2. Additional Terms and Conditions**

- 2.a** The above hourly emission limits (regulated under OAC rule 3745-31-05) are based on the potential to emit for this emissions unit, as determined from permit application data and AP-42 emission factors. Therefore, no record keeping, reporting, nor emissions calculations are required to demonstrate compliance with these emission limits.

**B. Operational Restrictions**

1. The maximum annual production rate for this facility shall not exceed 9274 tons per year of gray iron, based on a rolling, 12-month summation of the production rates.

To ensure enforceability during the first twelve calendar months of operation after the issuance of this permit to install, the permittee shall not exceed the production levels specified in the following table:

| <u>Month(s)</u> | <u>Maximum Allowable<br/>Cumulative Production</u> |
|-----------------|--|
| 1               | 773 tons   |
| 1-2             | 1546 tons  |
| 1-3             | 2319 tons  |
| 1-4             | 3091 tons  |
| 1-5             | 3864 tons  |
| 1-6             | 4637 tons  |
| 1-7             | 5410 tons  |
| 1-8             | 6183 tons  |
| 1-9             | 6956 tons  |
| 1-10            | 7728 tons  |
| 1-11            | 8501 tons  |
| 1-12            | 9274 tons  |

After the first 12 calendar months of operation following the issuance of this permit to install, compliance with the annual production rate limitation shall be based upon a rolling, 12-month summation of the production rates.

2. The only materials melted in the electric induction furnaces (F001 and F002) shall be ferrous materials, including pig iron, steel plate, and "No. 1 machinery cast" bearing no petroleum, paint, or paper residue.

### **C. Monitoring and/or Record keeping Requirements**

1. The permittee shall maintain monthly records of the following information:
  - a. the production rate for each month
  - b. beginning after the first 12 calendar months of operation following the issuance of this permit to install, the rolling 12-month summation of the production rates.

Also, during the first 12 calendar months of operation following the issuance of this permit to install, the permittee shall record the cumulative production rate for each calendar month.

2. When each shipment of ferrous material is received, the permittee shall record the following:
  - a. the type of ferrous material received; and
  - b. whether the ferrous material bears any petroleum, paint, or paper residue.
3. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the roof monitors, windows, and/or doors serving this emissions unit. The presence or absence of any visible particulate

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emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

- a. the color of the emissions;
- b. the cause of the emissions;
- c. the total duration of any visible emission incident; and
- d. any corrective actions taken to eliminate the visible emissions.

**D. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month production rate limitation and, for the first 12 calendar months of operation following the issuance of this permit to install, all exceedances of the maximum allowable cumulative production levels. These reports are due by the date described in Part I - General Terms and Conditions of this permit under section (A)(2).
2. The permittee shall submit deviation reports which identify any shipment of ferrous materials that did not meet the requirements of Section B.2 of these terms and conditions. These reports are due by the date described in Part I - General Terms and Conditions of this permit under section (A)(2).
3. The permittee shall submit semiannual written reports which (a) identify all days during which any visible particulate emissions were observed from the roof monitors, windows, and/or doors serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

**E. Testing Requirements**

1. Compliance with the emission limitations in Section A.1. of these terms and conditions shall be determined in accordance with the following method(s):
  - a. Emission Limitation:  
5.7 lbs of PE per ton of gray iron produced

Applicable Compliance Method:

Compliance with the emission limitation shall be demonstrated through the summation of the following AP-42 particulate emission factors: 0.9 lb of PE per ton of gray iron produced plus 0.6 lb of PE per ton of gray iron produced plus 4.2 lbs of PE per ton of gray iron produced from Tables 12.10-3 and 12.10-7 dated 1/95.

b. Emission Limitation:

13.1 lbs/hr of PE

Applicable Compliance Method:

Compliance with the allowable hourly emission limitation for particulates shall be determined by multiplying the allowable particulate emission limitation of 5.7 pounds of PE per ton of gray iron produced by the maximum hourly production rate.

c. Emission Limitation:

26.43 TPY of PE for F001 and F002, combined, as a rolling, 12-month summation

Applicable Compliance Method:

Compliance with the allowable annual rolling 12-month emission limitation for particulates shall be determined by multiplying the allowable particulate emission limitation of 5.7 pounds of PE per ton of gray iron produced by the maximum allowable annual rolling 12-month production rate (9274 tons per year as a rolling, 12-month summation), then divided by 2000.

d. Emission Limitation:

0.1 lb of lead per ton of gray iron produced

Applicable Compliance Method:

Compliance with the emission limitation shall be demonstrated through the following AP-42 lead emission factor: 0.1 lb of lead per ton of gray iron produced from Table 12.10-5 dated 1/95.

e. Emission Limitation:

0.23 lb/hr of lead

Applicable Compliance Method:

Compliance with the allowable hourly emission limitation for lead shall be determined by multiplying the allowable lead emission limitation of 0.1 pound of lead per ton of gray iron produced by the maximum hourly production rate.

f. Emission Limitation:

0.46 TPY of lead for F001 and F002, combined, as a rolling, 12-month summation

Applicable Compliance Method:

Compliance with the allowable annual rolling 12-month emission limitation for lead shall be determined by multiplying the allowable lead emission limitation of 0.1 pound of lead per ton of gray iron produced by the maximum allowable annual rolling 12-month production rate (9274 tons per year as a rolling, 12-month summation), then divided by 2000.

g. Emission Limitation:

There shall be no visible particulate emissions from any building openings.

Applicable Compliance Method:

Compliance with the requirement for no visible particulate emissions from any building openings shall be determined in accordance with the test method and procedures specified in OAC rule 3745-17-03(B)(4).

h. Emission Limitation:

2.94 lbs/hr of NO<sub>x</sub>

Applicable Compliance Method:

Compliance with the allowable hourly emission limitation for nitrogen oxides from the combustion of natural gas shall be determined by multiplying the AP-42 nitrogen oxides emission factor of 100 pounds of nitrogen oxides emissions per million standard cubic feet of natural gas fired (AP-42 Table 1.4-1, dated 7/98) by the maximum hourly amount of natural gas fired.

i. Emission Limitation:

12.88 TPY of NO<sub>x</sub>

Applicable Compliance Method:

Compliance with the allowable annual emission limitation for nitrogen oxides from the combustion of natural gas shall be determined by multiplying the AP-42 nitrogen oxides emission factor of 100 pounds of nitrogen oxides emissions per million standard cubic feet of natural gas fired (AP-42 Table 1.4-1, dated 7/98) by the maximum annual amount of natural gas fired, then divided by 2000.

j. Emission Limitation:

2.47 lbs/hr of CO

Applicable Compliance Method:

Compliance with the allowable hourly emission limitation for carbon monoxide from the combustion of natural gas shall be determined by multiplying the AP-42 carbon monoxide emission factor of 84 pounds of carbon monoxide emissions per million standard cubic feet of natural gas fired (AP-42 Table 1.4-1, dated 7/98) by the maximum hourly amount of natural gas fired.

k. Emission Limitation:

10.82 TPY of CO

Applicable Compliance Method:

Compliance with the allowable annual emission limitation for carbon monoxide from the combustion of natural gas shall be determined by multiplying the AP-42 carbon monoxide emission factor of 84 pounds of carbon monoxide emissions per million standard cubic feet of natural gas fired (AP-42 Table 1.4-1, dated 7/98) by the maximum annual amount of natural gas fired, then divided by 2000.

l. Emission Limitation:

0.06 lb/hr of PE

Applicable Compliance Method:

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Compliance with the allowable hourly emission limitation for particulates from the combustion of natural gas shall be determined by multiplying the AP-42 particulate emission factor of 1.9 pounds of particulate emissions per million standard cubic feet of natural gas fired (AP-42 Table 1.4-2, dated 7/98) by the maximum hourly amount of natural gas fired.

m. Emission Limitation:

0.26 TPY of PE

Applicable Compliance Method:

Compliance with the allowable annual emission limitation for particulates from the combustion of natural gas shall be determined by multiplying the AP-42 particulate emission

factor of 1.9 pounds of particulate emissions per million standard cubic feet of natural gas fired (AP-42 Table 1.4-2, dated 7/98) by the maximum annual amount of natural gas fired, then divided by 2000.

n. Emission Limitation:

0.02 lb/hr of SO<sub>2</sub>

Applicable Compliance Method:

Compliance with the allowable hourly emission limitation for sulfur dioxide from the combustion of natural gas shall be determined by multiplying the AP-42 sulfur dioxide emission factor of 0.6 pound of sulfur dioxide emissions per million standard cubic feet of natural gas fired (AP-42 Table 1.4-2, dated 7/98) by the maximum hourly amount of natural gas fired.

o. Emission Limitation:

0.09 TPY of SO<sub>2</sub>

Applicable Compliance Method:

Compliance with the allowable annual emission limitation for sulfur dioxide from the combustion of natural gas shall be determined by multiplying the AP-42 sulfur dioxide emission factor of 0.6 pound of sulfur dioxide emissions per million standard cubic feet of natural gas fired (AP-42 Table 1.4-2, dated 7/98) by the maximum annual amount of natural gas fired, then divided by 2000.

p. Emission Limitation:

0.32 lb/hr of OC

Applicable Compliance Method:

Compliance with the allowable hourly emission limitation for organic compounds from the combustion of natural gas shall be determined by multiplying the AP-42 organic compounds emission factor of 11 pounds of organic compounds emissions per million standard cubic feet of natural gas fired (AP-42 Table 1.4-2, dated 7/98) by the maximum hourly amount of natural gas fired.

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q. Emission Limitation:

1.40 TPY of OC

Applicable Compliance Method:

Compliance with the allowable annual emission limitation for organic compounds from the combustion of natural gas shall be determined by multiplying the AP-42 organic compounds emission factor of 11 pounds of organic compounds emissions per million standard cubic feet of natural gas fired (AP-42 Table 1.4-2, dated 7/98) by the maximum annual amount of natural gas fired, then divided by 2000.

**F. Miscellaneous Requirements**

None

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Emissions Unit ID: P002

**PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)****A. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u>  |
|---|--------------------------------------|---|
| P002 - Shot Blasting Unit.                    | OAC rule 3745-31-05(A)(3)            | The requirements of this rule also include compliance with the requirements of OAC rule s 3745-17-11(B)(4) and 3745-31-05(D).   |
|   | OAC rule 3745-31-05(D)               | The visible particulate emissions of from the baghouse/fabric filter outlet shall not exceed five percent opacity, as a six-minute average.   |
|   | OAC rule 3745-17-07(A)               | 2.683 pounds of particulate emissions (PE) per ton of gray iron produced<br>12.44 tons per year (TPY) of PE as a rolling, 12-month summation  |
|   | OAC rule 3745-17-11                  | The visible emission limitation specified by this rule is less stringent than the visible emission limitation established pursuant to OAC rule 3745-31-05(A)(3).<br>6.17 pounds per hour (lbs/hr) of PE |

**2. Additional Terms and Conditions**

- 2.a** The particulate emissions shall be vented to a baghouse/fabric filter.
- 2.b** The above hourly particulate emission limit (regulated under OAC rule 3745-17-11) is based on the potential to emit for this emissions unit, as determined from permit application data and using a controlled AP-42 emission factor. Therefore, no record keeping, reporting, nor emissions calculations are required to demonstrate compliance with this emission limit.

**B. Operational Restrictions**

- 1. The maximum annual production rate for this facility shall not exceed 9274 tons per year of gray iron, based on a rolling, 12-month summation of the production rates.

To ensure enforceability during the first twelve calendar months of operation after the issuance of this permit to install, the permittee shall not exceed the production levels specified in the following table:

| <u>Month(s)</u> | <u>Maximum Allowable<br/>Cumulative Production</u> |
|-----------------|--|
| 1               | 773 tons   |
| 1-2             | 1546 tons  |
| 1-3             | 2319 tons  |
| 1-4             | 3091 tons  |
| 1-5             | 3864 tons  |
| 1-6             | 4637 tons  |
| 1-7             | 5410 tons  |
| 1-8             | 6183 tons  |
| 1-9             | 6956 tons  |
| 1-10            | 7728 tons  |
| 1-11            | 8501 tons  |
| 1-12            | 9274 tons  |

After the first 12 calendar months of operation following the issuance of this permit to install, compliance with the annual production rate limitation shall be based upon a rolling, 12-month summation of the production rates.

- 2. The permittee shall only clean/finish gray iron that is produced at this facility.
- 3. The pressure drop across the baghouse, while the emission unit is in operation, shall be maintained within the pressure drop range determined during the most recent performance or visible emissions test that demonstrated that the source was in compliance or by the manufacturer’s written recommendation.

**C. Monitoring and/or Record keeping Requirements**

1. The permittee shall maintain monthly records of the following information:
  - a. the production rate for each month
  - b. beginning after the first 12 calendar months of operation following the issuance of this permit to install, the rolling 12-month summation of the production rates.

Also, during the first 12 calendar months of operation following the issuance of this permit to install, the permittee shall record the cumulative production rate for each calendar month.

2. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse on a daily basis.
3. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible particulate emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - a. the color of the emissions;
  - b. whether the emissions are representative of normal operations;
  - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
  - d. the total duration of any visible emission incident; and
  - e. any corrective actions taken to eliminate the visible emissions.

**D. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month production rate limitation and, for the first 12 calendar months of operation following the issuance of this permit to install, all exceedances of the maximum allowable

cumulative production levels. These reports are due by the date described in Part I - General Terms and Conditions of this permit under section (A)(2).

2. The permittee shall submit pressure drop deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above. These reports are due by the date described in Part I - General Terms and Conditions of this permit under section (A)(2).

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3. The permittee shall submit semiannual written reports which (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

#### **E. Testing Requirements**

1. Compliance with the emission limitations in Section A.1. of these terms and conditions shall be determined in accordance with the following method(s):

- a. Emission Limitation:

2.683 pounds of PE per ton of gray iron produced

6.17 lbs/hr of PE

Applicable Compliance Method:

If required, compliance with the allowable emission limitations for particulates shall be determined by using the test method(s) and procedures specified in OAC rule 3745-17-03(B)(10).

- b. Emission Limitation:

12.44 TPY of PE as a rolling, 12-month summation

Applicable Compliance Method:

Compliance with the allowable annual rolling 12-month emission limitation for particulates shall be determined by multiplying the allowable particulate emission limitation of 2.683 pounds of particulate emissions per ton of gray iron produced by the maximum allowable annual rolling 12-month tons of gray iron produced (9274 tons per year as a rolling, 12-month summation), then divided by 2000.

- c. Emission Limitation:

The visible particulate emissions from the baghouse/fabric filter outlet shall not exceed five percent opacity, as a six-minute average.

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Applicable Compliance Method:

Compliance with the visible emissions limitation for particulates from the baghouse/fabric filter outlet shall be determined in accordance with the test method and procedures specified in OAC rule 3745-17-03(B)(1).

**F. Miscellaneous Requirements**

None

**PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)****A. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u>  |
|---|--------------------------------------|---|
| P003 - New Sand Storage Silo.                 | OAC rule 3745-31-05(A)(3)            | The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D).<br><br>0.45 pound per hour (lb/hr) of particulate emissions (PE)<br><br>1.97 tons per year (TPY) of PE |
|   | OAC rule 3745-31-05(D)               | The visible particulate emissions from the baghouse/fabric filter outlet shall not exceed five percent opacity, as a six-minute average.<br><br>0.036 pound of PE per ton of sand handled                     |
|   | OAC rule 3745-17-07(A)               | The visible emission limitation specified by this rule is less stringent than the visible emission limitation established pursuant to OAC rule 3745-31-05(A)(3).  |
|   | OAC rule 3745-17-11                  | The emission limitation specified by this rule is less stringent than the   |

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Emissions Unit ID: **P003**

emission limitation established  
pursuant to OAC rule  
3745-31-05(A)(3).

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**2. Additional Terms and Conditions**

- 2.a** The particulate emissions shall be vented to a baghouse/fabric filter.
- 2.b** The above hourly and yearly particulate emission limits (regulated under OAC rule 3745-31-05(A)(3)) is based on the potential to emit for this emissions unit, as determined from permit application data and using a controlled AP-42 emission factors. Therefore, no record keeping, reporting, nor emissions calculations are required to demonstrate compliance with these emission limits.

**B. Operational Restrictions**

1. The pressure drop across the baghouse, while the emissions unit is in operation, shall be maintained within the pressure drop range determined either during the most recent performance or visible emissions test that demonstrated that the emissions unit was in compliance or by the manufacturer's written recommendation.

**C. Monitoring and/or Record keeping Requirements**

1. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse on a daily basis.
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible particulate emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
- a. the color of the emissions;
  - b. whether the emissions are representative of normal operations;
  - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
  - d. the total duration of any visible emission incident; and

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- e. any corrective actions taken to eliminate the visible emissions.

**D. Reporting Requirements**

1. The permittee shall submit pressure drop deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above. These reports are due by the date described in Part I - General Terms and Conditions of this permit under section (A)(2).
2. The permittee shall submit semiannual written reports which (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

**E. Testing Requirements**

1. Compliance with the emission limitations in Section A.1. of these terms and conditions shall be determined in accordance with the following method(s):

- a. Emission Limitation:

0.036 pound of PE per ton of sand handled

Applicable Compliance Method:

If required, compliance with the allowable emission limitations for particulates shall be determined by using the test method(s) and procedures specified in OAC rule 3745-17-03(B)(10).

- b. Emission Limitation:

0.45 lb/hr of PE

Applicable Compliance Method:

Compliance with the allowable hourly emission limitation for particulates shall be determined by multiplying the allowable particulate emission limitation of 0.036 pound of particulate emissions per ton of sand handled by the maximum tons of sand handled per hour (12.5 tons per hour).

- c. Emission Limitation:

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1.97 TPY of PE

Applicable Compliance Method:

Compliance with the allowable annual emission limitation for particulates shall be determined by multiplying the allowable particulate emission limitation of 0.036 pound of particulate emissions per ton of sand handled by the maximum tons of sand handled per hour (12.5 tons per hour) times 8760 hours per year, then divided by 2000.

d. Emission Limitation:

The visible particulate emissions from the baghouse/fabric filter outlet shall not exceed five percent opacity, as a six-minute average.

Applicable Compliance Method:

Compliance with the visible emissions limitation for particulates from the baghouse/fabric filter outlet shall be determined in accordance with the test method and procedures specified in OAC rule 3745-17-03(B)(1).

**F. Miscellaneous Requirements**

None

**PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property,<br/>and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions<br/>Limitations/Control Measures</u>   |
|---|--------------------------------------|--|
| P004 - Reclaimed Core Sand Storage Silo.          | OAC rule 3745-31-05(A)(3)            | The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D).   |
|   |                                      | 0.32 pound per hour (lb/hr) of particulate emissions (PE)  |
|   |                                      | 1.40 tons per year (TPY) of PE   |
|   |                                      | The visible particulate emissions from the baghouse/fabric filter outlet shall not exceed five percent opacity, as a six-minute average                          |
|   | OAC rule 3745-31-05(D)               | 0.036 pound of PE per ton of sand handled  |
|   | OAC rule 3745-17-07(A)               | The visible emission limitation specified by this rule is less stringent than the visible emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
|   | OAC rule 3745-17-11                  | The emission limitation specified by this rule is less stringent than the  |

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emission limitation established  
pursuant to OAC rule  
3745-31-05(A)(3).

Emissions Unit ID: **P004**

Modification Issued: 2/26/2002

**2. Additional Terms and Conditions**

- 2.a** The particulate emissions shall be vented to a baghouse/fabric filter.
- 2.b** The above hourly and yearly particulate emission limits (regulated under OAC rule 3745-31-05(A)(3)) is based on the potential to emit for this emissions unit, as determined from permit application data and using a controlled AP-42 emission factors. Therefore, no record keeping, reporting, nor emissions calculations are required to demonstrate compliance with these emission limits.

**B. Operational Restrictions**

1. The pressure drop across the baghouse, while the emissions unit is in operation, shall be maintained within the pressure drop range determined either during the most recent performance or visible emissions test that demonstrated that the emissions unit was in compliance or by the manufacturer's written recommendation.

**C. Monitoring and/or Record keeping Requirements**

1. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse on a daily basis.
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible particulate emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
- a. the color of the emissions;
  - b. whether the emissions are representative of normal operations;
  - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
  - d. the total duration of any visible emission incident; and

- e. any corrective actions taken to eliminate the visible emissions.

**D. Reporting Requirements**

1. The permittee shall submit pressure drop deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above. These reports are due by the date described in Part I - General Terms and Conditions of this permit under section (A)(2).
2. The permittee shall submit semiannual written reports which (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

**E. Testing Requirements**

1. Compliance with the emission limitations in Section A.1. of these terms and conditions shall be determined in accordance with the following method(s):
  - a. Emission Limitation:  
  
0.036 pound of PE per ton of sand handled  
  
Applicable Compliance Method:  
  
If required, compliance with the allowable emission limitations for particulates shall be determined by using the test method(s) and procedures specified in OAC rule 3745-17-03(B)(10).
  - b. Emission Limitation:  
  
0.32 lb/hr of PE  
  
Applicable Compliance Method:  
  
Compliance with the allowable hourly emission limitation for particulates shall be determined by multiplying the allowable particulate emission limitation of 0.036 pound of particulate emissions per ton of sand handled by the maximum tons of sand handled per hour (9.0 tons per hour).
  - c. Emission Limitation:

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**Emissions Unit ID: P004**

1.40 TPY of PE

Applicable Compliance Method:

Compliance with the allowable annual emission limitation for particulates shall be determined by multiplying the allowable particulate emission limitation of 0.036 pound of particulate emissions per ton of sand handled by the maximum tons of sand handled per hour (9.0 tons per hour) times 8760 hours per year, then divided by 2000.

d. Emission Limitation:

The visible particulate emissions from the baghouse/fabric filter outlet shall not exceed five percent opacity, as a six-minute average.

Applicable Compliance Method:

Compliance with the visible emissions limitation for particulates from the baghouse/fabric filter outlet shall be determined in accordance with the test method and procedures specified in OAC rule 3745-17-03(B)(1).

**F. Miscellaneous Requirements**

None

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Modification Issued: 2/26/2002

Emissions Unit ID: P005

**PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)****A. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property,<br/>and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions<br/>Limitations/Control Measures</u>   |
|---|--------------------------------------|--|
| P005 - Reclaimed Mold Sand Storage Silo.          | OAC rule 3745-31-05(A)(3)            | The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D).   |
|   |                                      | 1.08 pounds per hour (lb/hr) of particulate emissions (PE)   |
|   |                                      | 4.73 tons per year (TPY) of PE   |
|   |                                      | The visible particulate emissions from the baghouse/fabric filter outlet shall not exceed five percent, as a six-minute average.                                 |
|   | OAC rule 3745-31-05(D)               | 0.036 pound of PE per ton of sand handled  |
|   | OAC rule 3745-17-07(A)               | The visible emission limitation specified by this rule is less stringent than the visible emission limitation established pursuant to OAC rule 3745-31-05(A)(3). |
|   | OAC rule 3745-17-11                  | The emission limitation specified by this rule is less   |

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stringent than the  
emission limitation  
established pursuant  
to OAC rule  
3745-31-05(A)(3).

**2. Additional Terms and Conditions**

- 2.a** The particulate emissions shall be vent to a baghouse/fabric filter.
- 2.b** The above hourly and yearly particulate emission limits (regulated under OAC rule 3745-31-05(A)(3)) is based on the potential to emit for this emissions unit, as determined from permit application data and using a controlled AP-42 emission factors. Therefore, no record keeping, reporting, nor emissions calculations are required to demonstrate compliance with these emission limits.

**B. Operational Restrictions**

1. The pressure drop across the baghouse, while the emission unit is in operation, shall be maintained within the pressure drop range determined during the most recent performance or visible emissions test that demonstrated that the source was in compliance or by the manufacturer's written recommendation.

**C. Monitoring and/or Record keeping Requirements**

1. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse on a daily basis.
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible particulate emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
- the color of the emissions;
  - whether the emissions are representative of normal operations;
  - if the emissions are not representative of normal operations, the cause of the abnormal emissions;
  - the total duration of any visible emission incident; and

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- e. any corrective actions taken to eliminate the visible emissions.

**D. Reporting Requirements**

1. The permittee shall submit pressure drop deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above. These reports are due by the date described in Part I - General Terms and Conditions of this permit under section (A)(2).
2. The permittee shall submit semiannual written reports which (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency)

**E. Testing Requirements**

1. Compliance with the emission limitations in Section A.1. of these terms and conditions shall be determined in accordance with the following method(s):
  - a. Emission Limitation:  
  
0.036 pound of PE per ton of sand handled  
  
Applicable Compliance Method:  
  
If required, compliance with the allowable emission limitations for particulates shall be determined by using the test method(s) and procedures specified in OAC rule 3745-17-03(B)(10).
  - b. Emission Limitation:  
  
1.08 lbs/hr of PE  
  
Applicable Compliance Method:  
  
Compliance with the allowable hourly emission limitation for particulates shall be determined by multiplying the allowable particulate emission limitation of 0.036 pound of particulate emissions per ton of sand handled by the maximum tons of sand handled per hour (30.0 tons per hour).
  - c. Emission Limitation:

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4.73 TPY of PE

Applicable Compliance Method:

Compliance with the allowable annual emission limitation for particulates shall be determined by multiplying the allowable particulate emission limitation of 0.036 pound of particulate emissions per ton of sand handled by the maximum tons of sand handled per hour (30.0 tons per hour) times 8760 hours per year, then divided by 2000.

d. Emission Limitation:

The visible particulate emissions from the baghouse/fabric filter outlet shall not exceed five percent opacity, as a six-minute average.

Applicable Compliance Method:

Compliance with the visible emissions limitation for particulates from the baghouse/fabric filter outlet shall be determined in accordance with the test method and procedures specified in OAC rule 3745-17-03(B)(1).

**F. Miscellaneous Requirements**

None

**PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. Applicable Emissions Limitations and/or Control Requirements**

- 1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> |                           |
|---|--------------------------------------|---------------------------|
| P901 - Mold Sand Mixer, Mold Preparation.     | OAC rule 3745-31-05(A)(3)            | OAC rule 3745-17-07(B)    |
|   |                                      | OAC rule 3745-17-08       |
|   |                                      | OAC rule 3745-21-07(G)(2) |
|   | OAC rule 3745-31-05(D)               |                           |

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Emissions Unit ID: **P901**

Applicable Emissions  
Limitations/Control Measures

The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-08, 3745-21-07(G)(2), and 3745-31-05(D).

0.58 pound per hour (lb/hr) of particulate emissions (PE)

7.7 lbs/day of combined hazardous air pollutants (HAPs)

1.4 tons per year (TPY) of combined HAPs

7.3 TPY of organic compounds (OC)

There shall be no visible particulate emissions from any building openings.

0.25 pound of PE per ton of gray iron produced

1.16 TPY of PE as a rolling, 12-month summation

The visible emission limitation specified by this rule is less stringent than the visible emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

The baghouse shall achieve an outlet emission rate of not greater

than 0.030 grain of particulate emissions per dry standard cubic foot of exhaust gases.

8 lbs/hr of OC,  
40 lbs/day of OC

**2. Additional Terms and Conditions**

- 2.a** The particulate emissions shall be vented to a baghouse/fabric filter.
- 2.b** The mixer and mixer loading system shall be of an enclosed design in order to eliminate or minimize visible particulate emissions of fugitive dust. The moisture content of the sand shall be sufficient to eliminate or minimize visible particulate emissions of fugitive dust during mold formation.
- 2.c** The above hourly particulate emission limit (regulated under OAC rule 3745-31-05(A)(3)) is based on the potential to emit for this emissions unit, as determined from permit application data and using a controlled Ohio RACM emission factor and stack exhaust allowable. Therefore, no record keeping, reporting, nor emissions calculations are required to demonstrate compliance with this emission limit.

**B. Operational Restrictions**

1. The maximum annual production rate for this facility shall not exceed 9274 tons per year of gray iron, based on a rolling, 12-month summation of the production rates.

To ensure enforceability during the first twelve calendar months of operation after the issuance of this permit to install, the permittee shall not exceed the production levels specified in the following table:

| <u>Month(s)</u> | <u>Maximum Allowable<br/>Cumulative Production</u> |
|-----------------|--|
| 1               | 773 tons   |
| 1-2             | 1546 tons  |
| 1-3             | 2319 tons  |
| 1-4             | 3091 tons  |
| 1-5             | 3864 tons  |
| 1-6             | 4637 tons  |
| 1-7             | 5410 tons  |
| 1-8             | 6183 tons  |
| 1-9             | 6956 tons  |
| 1-10            | 7728 tons  |
| 1-11            | 8501 tons  |
| 1-12            | 9274 tons  |

After the first 12 calendar months of operation following the issuance of this permit to install, compliance with the annual production rate limitation shall be based upon a rolling, 12-month summation of the production rates.

2. The permittee shall only manufacture molds for the gray iron produced at this facility.

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3. The pressure drop across the baghouse, while the emission unit is in operation, shall be maintained within the pressure drop range determined during the most recent performance or visible emissions test that demonstrated that the source was in compliance or by the manufacturer's written recommendation.

**C. Monitoring and/or Record keeping Requirements**

1. The permittee shall maintain monthly records of the following information:
  - a. the production rate for each month
  - b. beginning after the first 12 calendar months of operation following the issuance of this permit to install, the rolling 12-month summation of the production rates.

Also, during the first 12 calendar months of operation following the issuance of this permit to install, the permittee shall record the cumulative production rate for each calendar month.

2. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse on a daily basis.
3. The permittee shall collect and record the following information each day:
  - a. the amount of sand and resin mixed, in pounds;
  - b. the OC emission rate from the resin, in pounds per day (i.e., (a) times 0.00014 pound of OC per pound of sand and resin);

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- c. the ratio of combined HAPs to OC in the resin (i.e., weight percent combined HAPs divided by weight percent OC);
  - d. the combined HAPs emission rate from the resin, in pounds per day (i.e., (c) times (b));
  - e. the company identification for each mold repair adhesive and each pattern release material employed;
  - f. the amount of each mold repair adhesive and pattern release material employed, in pounds;
  - g. the OC content of each mold repair adhesive and pattern release material, in weight per cent;
  - h. the combined HAPs content of each mold adhesive and each pattern release material, in weight percent;
  - i. the OC emission rate for all mold repair adhesives and all pattern release materials, in pounds per day (i.e., the sum of (f) times (g) for each mold repair adhesive and each pattern release material);
  - j. the combined HAPs emission rate for all mold repair adhesive and all pattern release materials, in pounds per day (i.e., the sum of (f) times (h) for each mold repair adhesive and each pattern release material);
  - k. the total OC emission rate for this emissions unit, pounds per day (i.e., (b) plus (i));
  - l. the total combined HAPs emission rate for this emissions unit, pounds per day (i.e., (d) plus (j));
  - m. the total number of hours the emissions unit was in operation; and
  - n. the average hourly OC emission rate for this emissions unit, in pounds per hour (average) (i.e., (k)/(m)).
4. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the roof monitors, windows, and/or doors serving this emissions unit serving this emissions unit. The presence or absence of any visible particulate emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

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- a. the color of the emissions;
- b. the cause of the emissions;
- c. the total duration of any visible emission incident; and
- d. any corrective actions taken to eliminate the visible emissions.

**D. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month production rate limitation and, for the first 12 calendar months of operation following the issuance of this permit to install, all exceedances of the maximum allowable cumulative production levels. These reports are due by the date described in Part I - General Terms and Conditions of this permit under section (A)(2).
2. The permittee shall submit pressure drop deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above. These reports are due by the date described in Part I - General Terms and Conditions of this permit under section (A)(2).
3. The permittee shall submit deviation (excursion) reports which include the following information:
  - a. an identification of each day during which the average hourly organic compound emission rate exceeded 8 pounds per hour, and the actual hourly organic compound emission rate for each such day; and
  - b. an identification of each day during which the organic compound emission rate exceeded 40 pounds per day, and the actual organic compound emission rate for each such day.
  - c. an identification of each day during which the combined HAPs emission rate exceeded 7.7 pounds per day, and the actual combined HAPs emission rate for each such day.

These reports are due by the date described in Part I - General Terms and Conditions of this permit under section (A)(2).

4. The permittee shall submit semiannual written reports which (a) identify all days during which any visible particulate emissions were observed from the roof monitors, windows, and/or doors serving this emissions unit serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the

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appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

## E. Testing Requirements

1. Compliance with the emission limitations in Section A.1. of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitation:

0.25 pound of PE per ton of gray iron produced

Applicable Compliance Method:

Compliance with the emission limitation shall be demonstrated through the summation of the following Ohio RACM particulate emission factors and the OAC rule 3745-17-08 allowable: Multiply the Ohio RACM particulate emission factor of 1.3 pounds of PE per ton of castings produced (Table 2.7-1) by the maximum hourly amount of castings produced times (1 - 0.90\*) plus multiply the Ohio RACM particulate emission factor of 0.04 pound of PE per ton of castings produced (Table 2.7-1) by the maximum hourly amount of castings produced plus multiply the allowable 0.030 grain of particulate emissions per dry standard cubic foot of exhaust gases (OAC rule 3745-17-08 allowable) by the maximum dry standard cubic foot of exhaust gases times 60 minutes/hour divided by 7000 grains per lb, then divided by 2.3 tons of gray iron produced per hour.

\*capture efficiency

b. Emission Limitation:

0.58 lb/hr of PE

Applicable Compliance Method:

Compliance with the allowable hourly emission limitation for particulates shall be determined by multiplying the allowable particulate emission limitation of 0.25 pound of PE per ton of gray iron produced by the maximum hourly production rate.

c. Emission Limitation:

1.16 TPY of PE as a rolling, 12-month summation

Applicable Compliance Method:

Compliance with the allowable annual rolling 12-month emission limitation for particulates shall be determined by multiplying the allowable particulate emission limitation of 0.25 pound of PE per ton of gray iron produced by the maximum allowable annual rolling 12-month production rate (9274 tons per year as a rolling, 12-month summation), then divided by 2000.

d. Emission Limitation:

0.030 grains of PE per dry standard cubic foot of exhaust gases

Applicable Compliance Method:

If required, compliance with the allowable emission limitations for particulates shall be determined by using the test method(s) and procedures specified in OAC rule 3745-17-03(B)(10).

e. Emission Limitation:

There shall be no visible particulate emissions from any building opening.

Applicable Compliance Method:

Compliance with the requirement for no visible particulate emissions from any building openings shall be determined in accordance with the test method and procedures specified in OAC rule 3745-17-03(B)(4).

f. Emission Limitation:

7.7 lbs/day of combined HAPs  
 1.4 TPY of combined HAPs  
 8 lbs/hr of OC  
 40 lbs/day of OC  
 7.3 TPY of OC

Applicable Compliance Method:

Compliance with the allowable annual, hourly, and/or daily emission limitations for OC and combined HAPs shall be determined daily record keeping as required by Section C.3 of these terms and conditions. Formulation data shall be used to determine the OC content and the combined HAPs content of the material used in this emissions unit.

**F. Miscellaneous Requirements**

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None

**PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

| <u>Operations, Property,<br/>and/or Equipment</u> | <u>Applicable Rules/Requirements</u> |   |
|---|--------------------------------------|---|
| P902 - Core Sand Mixer, Core Preparation.         | OAC rule 3745-31-05(A)(3)            | OAC rule 3745-17-07(B)<br><br>OAC rule 3745-17-08 |
|   |                                      | OAC rule 3745-21-07(G)(2)                         |
|   |                                      |   |
|   | OAC rule 3745-31-05(D)               |   |

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Emissions Unit ID: **P902**

Applicable Emissions  
Limitations/Control Measures

The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-08, OAC rule 3745-21-07(G)(2), and OAC rule 3745-31-05(D).

1.27 pounds per hour (lbs/hr) of particulate emissions (PE)

5.56 tons per year (TPY) of PE

7.7 lbs/day of combined hazardous air pollutants (HAPs)

1.4 TPY of combined HAPs

7.3 TPY of organic compounds (OC)

The visible particulate emissions from the baghouse/fabric filter outlet shall not exceed five percent opacity, as a six-minute average.

0.141 pound of PE per ton of cores produced

Visible particulate emissions from any fugitive dust source shall not exceed twenty percent opacity, as a three-minute average.

The baghouse shall achieve an outlet emission rate of not greater than 0.030 grain of particulate

emissions per dry standard cubic foot of exhaust gases.

8 lbs/hr of OC,  
40 lbs/day of OC

**2. Additional Terms and Conditions**

- 2.a** The particulate emissions shall be vented to a baghouse/fabric filter.
- 2.b** The moisture content of the sand shall be sufficient to eliminate or minimize visible particulate emissions of fugitive dust during core formation. The mixer and mixer loading system shall be of an enclosed design in order to eliminate or minimize visible particulate emissions of fugitive dust.
- 2.c** The above hourly particulate emission limit (regulated under OAC rule 3745-31-05(A)(3)) is based on the potential to emit for this emissions unit, as determined from permit application data and using a controlled Ohio RACM emission factor and stack exhaust allowable. Therefore, no record keeping, reporting, nor emissions calculations are required to demonstrate compliance with this emission limit.

**B. Operational Restrictions**

- 1. The permittee shall only manufacture cores for the gray iron produced at this facility.

**C. Monitoring and/or Record keeping Requirements**

- 1. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit and for any visible particulate emissions from the roof monitors, windows, and/or doors serving this emissions unit. The presence or absence of any visible particulate emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - a. the color of the emissions;
  - b. whether the emissions are representative of normal operations;
  - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

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- d. the total duration of any visible emission incident; and
  - e. any corrective actions taken to eliminate the visible emissions.
2. The permittee shall collect and record the following information each day:
- a. the amount of sand and resin mixed, in pounds;
  - b. the OC emission rate from the resin, in pounds per day (i.e., (a) times 0.00014 pound of OC per pound of sand and resin);
  - c. the ratio of combined HAPs to OC in the resin (i.e., weight percent combined HAPs divided by weight percent OC);
  - d. the combined HAPs emission rate from the resin, in pounds per day (i.e., (c) times (b));
  - e. the company identification for each core repair adhesive and each pattern release material employed;
  - f. the amount of each core repair adhesive and pattern release material employed, in pounds;
  - g. the OC content of each core repair adhesive and pattern release material, in weight per cent;
  - h. the combined HAPs content of each core adhesive and each pattern release material, in weight percent;
  - i. the OC emission rate for all core repair adhesives and all pattern release materials, in pounds per day (i.e., the sum of (f) times (g) for each core repair adhesive and each pattern release material);
  - j. the combined HAPs emission rate for all core repair adhesive and all pattern release materials, in pounds per day (i.e., the sum of (f) times (h) for each core repair adhesive and each pattern release material);
  - k. the total OC emission rate for this emissions unit, pounds per day (i.e., (b) plus (i));
  - l. the total combined HAPs emission rate for this emissions unit, pounds per day (i.e., (d) plus (j));

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- m. the total number of hours the emissions unit was in operation; and
- n. the average hourly OC emission rate for this emissions unit, in pounds per hour (average) (i.e., (k)/(m))

**D. Reporting Requirements**

1. The permittee shall submit semiannual written reports which (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and any visible particulate emissions were observed from the roof monitors, windows, and/or doors serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.
2. The permittee shall submit deviation (excursion) reports which include the following information:
  - a. an identification of each day during which the average hourly organic compound emission rate exceeded 8 pounds per hour, and the actual hourly organic compound emission rate for each such day; and
  - b. an identification of each day during which the organic compound emission rate exceeded 40 pounds per day, and the actual organic compound emission rate for each such day.
  - c. an identification of each day during which the combined HAPs emission rate exceeded 7.7 pounds per day, and the actual combined HAPs emission rate for each such day.

These reports are due by the date described in Part I - General Terms and Conditions of this permit under section (A)(2).

**E. Testing Requirements**

1. Compliance with the emission limitations in Section A.1. of these terms and conditions shall be determined in accordance with the following method(s):
  - a. Emission Limitation:  
  
0.141 pound of PE per ton of cores produced  
  
Applicable Compliance Method:

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Compliance with the emission limitation shall be demonstrated through the summation of the following Ohio RACM particulate emission factor and the OAC rule 3745-17-08 allowable: Multiply the Ohio RACM particulate emission factor of 0.35 pound of PE per ton of cores produced (Table 2.7-1) by the maximum hourly amount of cores produced times (1 - 0.60\*) plus multiply the allowable 0.030 grain of particulate emissions per dry standard cubic foot of exhaust gases (OAC rule 3745-17-08 allowable) by the maximum dry standard cubic foot of exhaust gases times 60 minutes/hour divided by 7000 grains per lb, then divided by 9.0 tons of cores produced per hour.

\*capture efficiency

b. Emission Limitation:

1.27 lbs/hr of PE

Applicable Compliance Method:

Compliance with the allowable hourly emission limitation for particulates shall be determined by multiplying the allowable particulate emission limitation of 0.141 pound of PE per ton of castings produced by the maximum hourly production rate.

c. Emission Limitation:

5.56 TPY of PE

Applicable Compliance Method:

Compliance with the allowable annual emission limitation for particulates shall be determined by multiplying the allowable particulate emission limitation of 0.141 pound of PE per ton of castings produced by the maximum hourly production rate times 8760 hours per year, then divided by 2000.

d. Emission Limitation:

0.030 grains of PE per dry standard cubic foot of exhaust gases

Applicable Compliance Method:

If required, compliance with the allowable emission limitations for particulates shall be determined by using the test method(s) and procedures specified in OAC rule 3745-17-03(B)(10).

e. Emission Limitation:

Visible particulate emissions from any fugitive dust source shall not exceed twenty percent

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opacity, as a three-minute average.

Applicable Compliance Method:

Compliance with the visible particulate emission limitation for fugitive dust from the emissions unit shall be determined in accordance with the test method and procedures specified in OAC rule 3745-17-07(B)(3).

f. Emission Limitation:

7.7 lbs/day of combined HAPs  
1.4 TPY of combined HAPs  
8 lbs/hr of OC  
40 lbs/day of OC  
7.3 TPY of OC

Applicable Compliance Method:

Compliance with the allowable annual, hourly, and/or daily emission limitations for OC and combined HAPs shall be determined daily record keeping as required by Section C.2 of these terms and conditions. Formulation data shall be used to determine the OC content and the combined HAPs content of the material used in this emissions unit.

g. Emission Limitation:

The visible particulate emissions from the baghouse/fabric filter outlet shall not exceed five percent opacity, as a six-minute average.

Applicable Compliance Method:

Compliance with the visible emissions limitation for particulates from the baghouse/fabric filter outlet shall be determined in accordance with the test method and procedures specified in OAC rule 3745-17-03(B)(1).

**F. Miscellaneous Requirements**

None