



Environmental Protection Agency

John R. Kasich, Governor  
Mary Taylor, Lt. Governor  
Scott J. Nally, Director

11/29/2011

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

RE: DRAFT AIR POLLUTION PERMIT-TO-INSTALL AND OPERATE

Facility ID: 1677010014  
Permit Number: P0108324  
Permit Type: Renewal  
County: Summit

Certified Mail

|     |                                    |
|-----|------------------------------------|
| No  | TOXIC REVIEW                       |
| No  | PSD                                |
| No  | SYNTHETIC MINOR TO AVOID MAJOR NSR |
| No  | CEMS                               |
| Yes | MACT/GACT                          |
| No  | NSPS                               |
| No  | NESHAPS                            |
| No  | NETTING                            |
| No  | MAJOR NON-ATTAINMENT               |
| No  | MODELING SUBMITTED                 |
| Yes | SYNTHETIC MINOR TO AVOID TITLE V   |
| Yes | FEDERALLY ENFORCABLE PTIO (FEPTIO) |

Dear Permit Holder:

A draft of the Ohio Administrative Code (OAC) Chapter 3745-31 Air Pollution Permit-to-Install and Operate (PTIO) for the referenced facility has been issued for the emissions unit(s) listed in the Authorization section of the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the permit. A public notice will appear in the Ohio EPA Weekly Review and the local newspaper, Akron Beacon Journal. A copy of the public notice and the draft permit are enclosed. This permit can be accessed electronically on the Division of Air Pollution Control (DAPC) Web page, [www.epa.ohio.gov/dapc](http://www.epa.ohio.gov/dapc) by clicking the "Issued Air Pollution Control Permits" link. Comments will be accepted as a marked-up copy of the draft permit or in narrative format. Any comments must be sent to the following:

Andrew Hall  
Permit Review/Development Section  
Ohio EPA, DAPC  
122 South Front Street  
Columbus, Ohio 43215

and Akron Regional Air Quality Management District  
146 South High Street, Room 904  
Akron, OH 44308

Comments and/or a request for a public hearing will be accepted within 30 days of the date the notice is published in the newspaper. You will be notified in writing if a public hearing is scheduled. A decision on issuing a final permit-to-install will be made after consideration of comments received and oral testimony if a public hearing is conducted. Any permit fee that will be due upon issuance of a final Permit-to-Install is indicated in the Authorization section. Please do not submit any payment now. If you have any questions, please contact Akron Regional Air Quality Management District at (330)375-2480.

Sincerely,

Michael W. Ahern, Manager

Permit Issuance and Data Management Section, DAPC

Cc: U.S. EPA Region 5 Via E-Mail Notification  
ARAQMD; Pennsylvania; West Virginia; Canada





Permit Strategy Write-Up

1. Check all that apply:

X Synthetic Minor Determination

Netting Determination

2. Source Description: Knapp Foundry Company, Inc. produces gray iron castings. The facility consists of two electric induction furnaces (F001 and F002), core and mold preparation (P901 and P902), mold and core washing (R001), shot blasting unit (P002), three sand storage silos (P003, P004, and P005), shakeout area (F003), and sand reclamation system (F004).

3. Facility Emissions and Attainment Status: This facility will emit particulate emissions, organic compounds and hazardous air pollutants (HAPs) from the above-mentioned emissions units. The potential to emit for particulates less than 10 micrometers in diameter (PM-10) is 132 tons per year. The potentials to emit for organic compounds and HAPs are below the Title V thresholds. Summit County is attainment for PM-10.

4. Source Emissions: This permit will restrict the particulate emissions from this facility by limiting the annual production of gray iron and requiring capture and control systems on the mold and core preparation, the shot blasting unit, the three sand storage silos, the shakeout area, and the sand reclamation system to achieve the desired emission levels. The potential to emit for particulate emissions (stack and fugitive) for F001, F002, F003, F004, P901, P902, P002, P003, P004, and P005 will be restricted to 75.51 tons per year.

5. Conclusion: Through limiting the annual production of gray iron and the use of control, Knapp Foundry Company, Inc.'s the potential to emit for particulate emissions will be limited to below the Title V threshold.

6. Please provide additional notes or comments as necessary:

None

7. Total Permit Allowable Emissions Summary (for informational purposes only):

Table with 2 columns: Pollutant, Tons Per Year. Rows include PE (75.51), OC (18.74), Combined HAPs (2.8), and Lead (0.46).



PUBLIC NOTICE

11/29/2011 Issuance of Draft Air Pollution Permit-To-Install and Operate

Knapp Foundry Company Inc

1207 Sweitzer Avenue,

Akron, OH 44301

Summit County

FACILITY DESC.: Iron Foundries

PERMIT #: P0108324

PERMIT TYPE: Renewal

PERMIT DESC: Renewal Federally Enforceable Permit to Install and Operate for the grey iron foundry with includes two electric induction furnaces (F001 and F002), three sand storage silos (P003, P004, and P005), shakeout area (F003), sand reclamation system (F004), shot blasting unit (P002), mold sand mixer and mold preparation (P901), core sand mixer and core preparation (P902), and mold/core wash (R001).

The Director of the Ohio Environmental Protection Agency issued the draft permit above. The permit and complete instructions for requesting information or submitting comments may be obtained at: [epa.ohio.gov/dapc/permit](http://epa.ohio.gov/dapc/permit) by entering the permit # or: Laura Miracle, Akron Regional Air Quality Management District, 146 South High Street, Room 904, Akron, OH 44308. Ph: (330)375-2480



**Ohio**

**Environmental  
Protection Agency**

**DRAFT**

**Division of Air Pollution Control  
Permit-to-Install and Operate  
for  
Knapp Foundry Company Inc**

|                |                                   |
|----------------|-----------------------------------|
| Facility ID:   | 1677010014                        |
| Permit Number: | P0108324                          |
| Permit Type:   | Renewal                           |
| Issued:        | 11/29/2011                        |
| Effective:     | To be entered upon final issuance |
| Expiration:    | To be entered upon final issuance |





Division of Air Pollution Control
Permit-to-Install and Operate
for
Knapp Foundry Company Inc

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## Authorization

Facility ID: 1677010014  
Application Number(s): A0042150  
Permit Number: P0108324  
Permit Description: Renewal Federally Enforceable Permit to Install and Operate for the grey iron foundry with includes two electric induction furnaces (F001 and F002), three sand storage silos (P003, P004, and P005), shakeout area (F003), sand reclamation system (F004), shot blasting unit (P002), mold sand mixer and mold preparation (P901), core sand mixer and core preparation (P902), and mold/core wash (R001).  
Permit Type: Renewal  
Permit Fee: \$0.00 *DO NOT send payment at this time, subject to change before final issuance*  
Issue Date: 11/29/2011  
Effective Date: To be entered upon final issuance  
Expiration Date: To be entered upon final issuance  
Permit Evaluation Report (PER) Annual Date: To be entered upon final issuance

This document constitutes issuance to:

Knapp Foundry Company Inc  
1207 Sweitzer Avenue  
Akron, OH 44301

of a Permit-to-Install and Operate for the emissions unit(s) identified on the following page.

Ohio EPA District Office or local air agency responsible for processing and administering your permit:

Akron Regional Air Quality Management District  
146 South High Street, Room 904  
Akron, OH 44308  
(330)375-2480

The above named entity is hereby granted this Permit-to-Install and Operate for the air contaminant source(s) (emissions unit(s)) listed in this section pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the described emissions unit(s) will operate in compliance with applicable State and Federal laws and regulations.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Scott J. Nally  
Director



## Authorization (continued)

Permit Number: P0108324  
 Permit Description: Renewal Federally Enforceable Permit to Install and Operate for the grey iron foundry with includes two electric induction furnaces (F001 and F002), three sand storage silos (P003, P004, and P005), shakeout area (F003), sand reclamation system (F004), shot blasting unit (P002), mold sand mixer and mold preparation (P901), core sand mixer and core preparation (P902), and mold/core wash (R001).

Permits for the following Emissions Unit(s) or groups of Emissions Units are in this document as indicated below:

- Emissions Unit ID: F003**  
 Company Equipment ID: Shakeout Area  
 Superseded Permit Number: P0102573  
 General Permit Category and Type: Not Applicable
- Emissions Unit ID: F004**  
 Company Equipment ID: Sand Reclamation System  
 Superseded Permit Number: P0102573  
 General Permit Category and Type: Not Applicable
- Emissions Unit ID: P002**  
 Company Equipment ID: Shot Blasting Unit  
 Superseded Permit Number: 16-01533  
 General Permit Category and Type: Not Applicable
- Emissions Unit ID: R001**  
 Company Equipment ID: Mold/Core Wash  
 Superseded Permit Number: P0102574  
 General Permit Category and Type: Not Applicable

**Group Name: Electric Induction Furnaces**

|                                   |                                  |
|-----------------------------------|----------------------------------|
| <b>Emissions Unit ID:</b>         | <b>F001</b>                      |
| Company Equipment ID:             | Electric Induction Furnace No. 1 |
| Superseded Permit Number:         | 16-01533                         |
| General Permit Category and Type: | Not Applicable                   |
| <b>Emissions Unit ID:</b>         | <b>F002</b>                      |
| Company Equipment ID:             | Electric Induction Furnace No. 2 |
| Superseded Permit Number:         | 16-01533                         |
| General Permit Category and Type: | Not Applicable                   |

**Group Name: Mixers**

|                                   |                       |
|-----------------------------------|-----------------------|
| <b>Emissions Unit ID:</b>         | <b>P901</b>           |
| Company Equipment ID:             | Mold Sand Mixer No. 1 |
| Superseded Permit Number:         | 16-01533              |
| General Permit Category and Type: | Not Applicable        |
| <b>Emissions Unit ID:</b>         | <b>P902</b>           |
| Company Equipment ID:             | Core Sand Mixer No. 2 |
| Superseded Permit Number:         | 16-01533              |
| General Permit Category and Type: | Not Applicable        |

**Draft Permit-to-Install and Operate**

Knapp Foundry Company Inc

**Permit Number:** P0108324

**Facility ID:** 1677010014

**Effective Date:** To be entered upon final issuance

**Group Name:** Sand Storage Silos

|                                   |                                  |
|-----------------------------------|----------------------------------|
| <b>Emissions Unit ID:</b>         | <b>P003</b>                      |
| Company Equipment ID:             | New Sand Storage Silo            |
| Superseded Permit Number:         | 16-01533                         |
| General Permit Category and Type: | Not Applicable                   |
| <b>Emissions Unit ID:</b>         | <b>P004</b>                      |
| Company Equipment ID:             | Reclaimed Core Sand Storage Silo |
| Superseded Permit Number:         | 16-01533                         |
| General Permit Category and Type: | Not Applicable                   |
| <b>Emissions Unit ID:</b>         | <b>P005</b>                      |
| Company Equipment ID:             | Reclaimed Mold Sand Storage Silo |
| Superseded Permit Number:         | 16-01533                         |
| General Permit Category and Type: | Not Applicable                   |

## **A. Standard Terms and Conditions**

**1. What does this permit-to-install and operate ("PTIO") allow me to do?**

This permit allows you to install and operate the emissions unit(s) identified in this PTIO. You must install and operate the unit(s) in accordance with the application you submitted and all the terms and conditions contained in this PTIO, including emission limits and those terms that ensure compliance with the emission limits (for example, operating, recordkeeping and monitoring requirements).

**2. Who is responsible for complying with this permit?**

The person identified on the "Authorization" page, above, is responsible for complying with this permit until the permit is revoked, terminated, or transferred. "Person" means a person, firm, corporation, association, or partnership. The words "you," "your," or "permittee" refer to the "person" identified on the "Authorization" page above.

The permit applies only to the emissions unit(s) identified in the permit. If you install or modify any other equipment that requires an air permit, you must apply for an additional PTIO(s) for these sources.

**3. What records must I keep under this permit?**

You must keep all records required by this permit, including monitoring data, test results, strip-chart recordings, calibration data, maintenance records, and any other record required by this permit for five years from the date the record was created. You can keep these records electronically, provided they can be made available to Ohio EPA during an inspection at the facility. Failure to make requested records available to Ohio EPA upon request is a violation of this permit requirement.

**4. What are my permit fees and when do I pay them?**

There are two fees associated with permitted air contaminant sources in Ohio:

- PTIO fee. This one-time fee is based on a fee schedule in accordance with Ohio Revised Code (ORC) section 3745.11, or based on a time and materials charge for permit application review and permit processing if required by the Director.

You will be sent an invoice for this fee after you receive this PTIO and payment is due within 30 days of the invoice date. You are required to pay the fee for this PTIO even if you do not install or modify your operations as authorized by this permit.

- Annual emissions fee. Ohio EPA will assess a separate fee based on the total annual emissions from your facility. You self-report your emissions in accordance with Ohio Administrative Code (OAC) Chapter 3745-78. This fee assessed is based on a fee schedule in ORC section 3745.11 and funds Ohio EPA's permit compliance oversight activities. Unless otherwise specified, facilities subject to one or more synthetic minor restrictions must use Ohio EPA's "Air Services" to submit annual emissions associated with this permit requirement. Ohio EPA will notify you when it is time to report your emissions and to pay your annual emission fees.

**5. When does my PTIO expire, and when do I need to submit my renewal application?**

This permit expires on the date identified at the beginning of this permit document (see "Authorization" page above) and you must submit a renewal application to renew the permit. Ohio EPA will send a renewal notice to you approximately six months prior to the expiration date of this permit. However, it is

very important that you submit a complete renewal permit application (postmarked prior to expiration of this permit) even if you do not receive the renewal notice.

If a complete renewal application is submitted before the expiration date, Ohio EPA considers this a timely application for purposes of ORC section 119.06, and you are authorized to continue operating the emissions unit(s) covered by this permit beyond the expiration date of this permit until final action is taken by Ohio EPA on the renewal application.

**6. What happens to this permit if my project is delayed or I do not install or modify my source?**

This PTIO expires 18 months after the issue date identified on the "Authorization" page above unless otherwise specified if you have not (1) started constructing the new or modified emission sources identified in this permit, or (2) entered into a binding contract to undertake such construction. This deadline can be extended by up to 12 months, provided you apply to Ohio EPA for this extension within a reasonable time before the 18-month period has ended and you can show good cause for any such extension.

**7. What reports must I submit under this permit?**

An annual permit evaluation report (PER) is required in addition to any malfunction reporting required by OAC rule 3745-15-06 or other specific rule-based reporting requirement identified in this permit. Your PER due date is identified in the Authorization section of this permit.

**8. If I am required to obtain a Title V operating permit in the future, what happens to the operating provisions and PER obligations under this permit?**

If you are required to obtain a Title V permit under OAC Chapter 3745-77 in the future, the permit-to-operate portion of this permit will be superseded by the issued Title V permit. From the effective date of the Title V permit forward, this PTIO will effectively become a PTI (permit-to-install) in accordance with OAC rule 3745-31-02(B). The following terms and conditions will no longer be applicable after issuance of the Title V permit: Section B, Term 1.b) and Section C, for each emissions unit, Term a)(2).

The PER requirements in this permit remain effective until the date the Title V permit is issued and is effective, and cease to apply after the effective date of the Title V permit. The final PER obligation will cover operations up to the effective date of the Title V permit and must be submitted on or before the submission deadline identified in this permit on the last day prior to the effective date of the Title V permit.

**9. What are my obligations when I perform scheduled maintenance on air pollution control equipment?**

You must perform scheduled maintenance of air pollution control equipment in accordance with OAC rule 3745-15-06(A). If scheduled maintenance requires shutting down or bypassing any air pollution control equipment, you must also shut down the emissions unit(s) served by the air pollution control equipment during maintenance, unless the conditions of OAC rule 3745-15-06(A)(3) are met. Any emissions that exceed permitted amount(s) under this permit (unless specifically exempted by rule) must be reported as deviations in the annual permit evaluation report (PER), including nonexempt excess emissions that occur during approved scheduled maintenance.

**10. Do I have to report malfunctions of emissions units or air pollution control equipment? If so, how must I report?**

If you have a reportable malfunction of any emissions unit(s) or any associated air pollution control system, you must report this to the Akron Regional Air Quality Management District in accordance with OAC rule 3745-15-06(B). Malfunctions that must be reported are those that result in emissions that exceed permitted emission levels. It is your responsibility to evaluate control equipment breakdowns and operational upsets to determine if a reportable malfunction has occurred.

If you have a malfunction, but determine that it is not a reportable malfunction under OAC rule 3745-15-06(B), it is recommended that you maintain records associated with control equipment breakdown or process upsets. Although it is not a requirement of this permit, Ohio EPA recommends that you maintain records for non-reportable malfunctions.

**11. Can Ohio EPA or my local air agency inspect the facility where the emission unit(s) is/are located?**

Yes. Under Ohio law, the Director or his authorized representative may inspect the facility, conduct tests, examine records or reports to determine compliance with air pollution laws and regulations and the terms and conditions of this permit. You must provide, within a reasonable time, any information Ohio EPA requests either verbally or in writing.

**12. What happens if one or more emissions units operated under this permit is/are shut down permanently?**

Ohio EPA can terminate the permit terms associated with any permanently shut down emissions unit. "Shut down" means the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31.

You should notify Ohio EPA of any emissions unit that is permanently shut down by submitting<sup>1</sup> a certification that identifies the date on which the emissions unit was permanently shut down. The certification must be submitted by an authorized official from the facility. You cannot continue to operate an emissions unit once the certification has been submitted to Ohio EPA by the authorized official.

You must comply with all recordkeeping and reporting for any permanently shut down emissions unit in accordance with the provisions of the permit, regulations or laws that were enforceable during the period of operation, such as the requirement to submit a PER, air fee emission report, or malfunction report. You must also keep all records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, for at least five years from the date the record was generated.

Again, you cannot resume operation of any emissions unit certified by the authorized official as being permanently shut down without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31.

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<sup>1</sup>Permittees that use Ohio EPA's "Air Services" can mark the affected emissions unit(s) as "permanently shutdown" in the facility profile along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update will constitute notifying of the permanent shutdown of the affected emissions unit(s).

**13. Can I transfer this permit to a new owner or operator?**

You can transfer this permit to a new owner or operator. If you transfer the permit, you must follow the procedures in OAC Chapter 3745-31, including notifying Ohio EPA or the local air agency of the change in ownership or operator. Any transferee of this permit must assume the responsibilities of the transferor permit holder.

**14. Does compliance with this permit constitute compliance with OAC rule 3745-15-07, "air pollution nuisance"?**

This permit and OAC rule 3745-15-07 prohibit operation of the air contaminant source(s) regulated under this permit in a manner that causes a nuisance. Ohio EPA can require additional controls or modification of the requirements of this permit through enforcement orders or judicial enforcement action if, upon investigation, Ohio EPA determines existing operations are causing a nuisance.

**15. What happens if a portion of this permit is determined to be invalid?**

If a portion of this permit is determined to be invalid, the remainder of the terms and conditions remain valid and enforceable. The exception is where the enforceability of terms and conditions are dependent on the term or condition that was declared invalid.

## **B. Facility-Wide Terms and Conditions**

**Draft Permit-to-Install and Operate**

Knapp Foundry Company Inc

**Permit Number:** P0108324

**Facility ID:** 1677010014

**Effective Date:** To be entered upon final issuance

1. This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
  - a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
    - (1) None.
  - b) For the purpose of a permit-to-operate document, the facility-wide terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
    - (1) 2, 3, and 4.
2. 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.
3. The permittee shall maintain monthly records of the following information for the facility:
  - a) the production rate for each month; and
  - b) the rolling, 12-month summation of the production rates.
4. The permittee shall submit quarterly deviation (excursion) reports that identify:
  - a) all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
    - (1) all exceedances of the rolling, 12-month limitation of the production rate
      - a. the probable cause of each deviation (excursion);
      - b. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
      - c. the magnitude and duration of each deviation (excursion).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted, electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

5. The Ohio EPA has determined that this facility may be applicable to the requirements of an area source MACT/GACT rule that the Ohio EPA does not have the delegated authority to implement. Although Ohio EPA has determined that an area source MACT (also known as the GACT) may apply, at this time

**Draft Permit-to-Install and Operate**

Knapp Foundry Company Inc

**Permit Number:** P0108324

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**Effective Date:** To be entered upon final issuance

Ohio EPA does not have the authority to enforce this standard. Instead, U.S. EPA has the authority to enforce this standard. Please be advised that all requirements associated with these rules are in effect and are enforceable by U.S. EPA. For more information on the area source rules, please refer to the follow U.S. EPA website: <http://www.epa.gov/ttn/atw/area/arearules.html>.

## **C. Emissions Unit Terms and Conditions**

**1. F003, Shakeout Area**

**Operations, Property and/or Equipment Description:**

Shakeout Area

- a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
  - (1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
    - a. None.
  - (2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
    - a. b)(1)c., d)(1), d)(2) and e)(1).
- b) Applicable Emissions Limitations and/or Control Requirements
  - (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

|    | Applicable Rules/Requirements   | Applicable Emissions Limitations/Control Measures   |
|----|---|---|
| a. | OAC rule 3745-17-07(B)  | Visible particulate emissions (PE) from any fugitive dust source shall not exceed twenty percent opacity, as a three-minute average.  |
| b. | OAC rule 3745-17-08   | See b)(2)a. below.  |
| c. | OAC rule 3745-31-05(D)<br>(Synthetic Minor to avoid Title V permitting) | The PE from this emissions unit shall not exceed 2.85 pounds of PE per ton of gray iron produced.<br><br>The PE from this emissions unit shall not exceed 13.2 tons per year as a rolling, 12-month summation.<br><br>Compliance with the annual PE limitation above shall be achieved by restricting the facility's gray iron production rate. Therefore, no record keeping, reporting, nor emissions calculations are required to demonstrate compliance with this emission limitation. |

**Draft Permit-to-Install and Operate**

Knapp Foundry Company Inc

**Permit Number:** P0108324

**Facility ID:** 1677010014

**Effective Date:** To be entered upon final issuance

|  | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures                  |
|--|-------------------------------|--|
|  |                               | See 2 through 4 of Section B - Facility-Wide Terms and Conditions. |

(2) Additional Terms and Conditions

- a. The permittee shall use hoods, fans, and other equipment to adequately enclose, contain, capture, vent and control the fugitive dust. Such equipment shall meet the following requirements:
  - i. the collection efficiency for such equipment shall be sufficient to minimize or eliminate visible PE of fugitive dust at the point(s) of capture to the extent possible with good engineering design; and
  - ii. the control equipment shall achieve an outlet emission rate of not greater than 0.030 grain of PE per dry standard cubic foot of exhaust gases or there shall be no visible PE from the exhaust stack(s), whichever is less stringent.

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range established for the pressure drop across the baghouse is between 2 to 10 inches of water.
- (2) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit is in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

Whenever the monitored value for the pressure drop deviates from the limit or range established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

- a. the date and time the deviation began;
- b. the magnitude of the deviation at that time;
- c. the date the investigation was conducted;
- d. the name(s) of the personnel who conducted the investigation; and

- e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

- a. a description of the corrective action;
- b. the date corrective action was completed;
- c. the date and time the deviation ended;
- d. the total period of time (in minutes) during which there was a deviation;
- e. the pressure drop readings immediately after the corrective action was implemented; and
- f. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

This range or limit on the pressure drop across the baghouse is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable PE rate for the controlled emissions unit. In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

- (3) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible PE from the roof monitors, windows, and/or doors serving this emissions unit. The presence or absence of any visible PE 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.

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that identify:
  - a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
    - i. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the acceptable range;
    - ii. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the baghouse;
  - b. the probable cause of each deviation (excursion);
  - c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
  - d. the magnitude and duration of each deviation (excursion).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted, electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be completed electronically and submitted via the Ohio EPA eBusiness Center: Air Services by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:
  - a. Emission Limitation:  
  
The PE from this emissions unit shall not exceed 2.85 pounds of PE per ton of gray iron produced.

Applicable Compliance Method:

Compliance with the allowable PE limitation above shall be demonstrated as follows:

i. multiply the AP-42 PE factor of 3.2 pounds of PE per ton of gray iron produced (Table 12.10-7 dated 1/95) by  $(1 - 0.60^*)$ ;

ii. multiply the allowable 0.030 grain of PE 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 per hour divided by 7000 grains per pound, then divided by 2.3 tons of gray iron produced per hour; and

iii. sum i + ii.

If required, compliance with the allowable PE limitation above shall be determined by using the test method(s) and procedures in Methods 1-5 of 40 CFR Part 60, Appendix A.

\*capture efficiency

b. Emission Limitation:

The PE from this emissions unit shall not exceed 13.2 tons per year as a rolling, 12-month summation.

Applicable Compliance Method:

Compliance with the annual allowable PE limitation above shall be determined by multiplying the allowable PE limitation of 2.85 pounds of PE per ton of gray iron produced by the maximum allowable annual production rate (9274 tons per year, as a rolling, 12-month summation), then divided by 2000 pounds per ton.

c. Emission Limitation:

There shall be no visible PE from the exhaust stack(s).

Applicable Compliance Method:

If required, compliance with the allowable visible PE limitation above shall be determined in accordance with the test method and procedures specified in OAC rule 3745-17-03(B)(7).

d. Emission Limitation:

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

Applicable Compliance Method:

If required, compliance with the allowable PE limitation above shall be determined by using the test method(s) and procedures specified in OAC rule 3745-17-03(B)(7).

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e. Emission Limitation:

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

Applicable Compliance Method:

If required, compliance with the allowable visible PE limitation above shall be determined in accordance with the test method and procedures specified in OAC rule 3745-17-03(B)(3).

g) Miscellaneous Requirements

(1) None.

**2. F004, Sand Reclamation System**

**Operations, Property and/or Equipment Description:**

Sand Reclamation System

- a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
  - (1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
    - a. None.
  - (2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
    - a. b)(1)c., d)(1), d)(2) and e)(1).
- b) Applicable Emissions Limitations and/or Control Requirements
  - (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

|    | Applicable Rules/Requirements   | Applicable Emissions Limitations/Control Measures  |
|----|---|--|
| a. | OAC rule 3745-17-07(B)  | Visible particulate emissions (PE) from any fugitive dust source shall not exceed twenty percent opacity, as a three-minute average.   |
| b. | OAC rule 3745-17-08   | See b)(2)a. below.   |
| c. | OAC rule 3745-31-05(D)<br>(Synthetic Minor to avoid Title V permitting) | The PE from this emissions unit shall not exceed 1.66 pounds of PE per ton of gray iron produced.<br><br>The PE from this emissions unit shall not exceed 7.70 tons per year, as a rolling, 12-month summation.<br><br>Compliance with the annual PE limitation above shall be achieved by restricting the facility's gray iron production rate. Therefore, no record keeping, reporting, nor emissions calculations are required to demonstrate compliance with this emission limitation. |

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|  | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures                 |
|--|-------------------------------|---|
|  |                               | See 2 through 4 of Section B. Facility-Wide Terms and Conditions. |

(2) Additional Terms and Conditions

- a. The permittee shall use hoods, fans, and other equipment to adequately enclose, contain, capture, vent and control the fugitive dust. Such equipment shall meet the following requirements:
  - i. the collection efficiency for such equipment shall be sufficient to minimize or eliminate visible PE of fugitive dust at the point(s) of capture to the extent possible with good engineering design; and
  - ii. the control equipment shall achieve an outlet emission rate of not greater than 0.030 grain of PE per dry standard cubic foot of exhaust gases or there shall be no visible PE from the exhaust stack(s), whichever is less stringent.

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range established for the pressure drop across the baghouse is between 2 to 10 inches of water.
- (2) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit is in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

Whenever the monitored value for the pressure drop deviates from the limit or range established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

- a. the date and time the deviation began;
- b. the magnitude of the deviation at that time;
- c. the date the investigation was conducted;
- d. the name(s) of the personnel who conducted the investigation; and

- e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

- a. a description of the corrective action;
- b. the date corrective action was completed;
- c. the date and time the deviation ended;
- d. the total period of time (in minutes) during which there was a deviation;
- e. the pressure drop readings immediately after the corrective action was implemented; and
- f. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

This range or limit on the pressure drop across the baghouse is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable PE rate for the controlled emissions unit. In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

- (3) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible PE from the roof monitors, windows, and/or doors serving this emissions unit. The presence or absence of any visible PE 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.

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify:

- a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
  - i. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the acceptable range;
  - ii. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the baghouse;
- b. the probable cause of each deviation (excursion);
- c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
- d. the magnitude and duration of each deviation (excursion).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

(2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be completed electronically and submitted via the Ohio EPA eBusiness Center: Air Services by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

The PE from this emissions unit shall not exceed 1.66 pounds of PE per ton of gray iron produced.

Applicable Compliance Method:

Compliance with the allowable PE limitation above shall be demonstrated as follows:

- i. multiply the US EPA WebFIRE version 6.25PE factor of 6.0 pounds of PE per ton of gray iron produced (SCC 30400352) by  $(1 - 0.80^*)$ ;
- ii. multiply the allowable 0.030 grain of PE 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 per hour divided by 7000 grains per pound, then divided by 2.3 tons of gray iron produced per hour; and
- iii. sum i + ii.

If required, compliance with the allowable PE limitation above shall be determined by using the test method(s) and procedures in Methods 1-5 of 40 CFR Part 60, Appendix A.

\*capture efficiency

b. Emission Limitation:

The PE from this emissions unit shall not exceed 7.70 tons per year, as a rolling, 12-month summation.

Applicable Compliance Method:

Compliance with the annual allowable PE limitation above shall be determined by multiplying the allowable PE limitation of 1.66 pounds of PE per ton of gray iron produced by the maximum allowable annual production rate (9274 tons per year, as a rolling, 12-month summation), then divided by 2000 pounds per ton.

c. Emission Limitation:

There shall be no visible PE from the exhaust stack(s).

Applicable Compliance Method:

If required, compliance with the allowable visible PE limitation above shall be determined in accordance with the test method and procedures specified in OAC rule 3745-17-03(B)(7).

d. Emission Limitation:

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

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Applicable Compliance Method:

If required, compliance with the allowable PE limitation above shall be determined by using the test method(s) and procedures specified in OAC rule 3745-17-03(B)(7).

e. Emission Limitation:

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

Applicable Compliance Method:

If required, compliance with the allowable visible PE limitations shall be determined in accordance with the test method and procedures specified in OAC rule 3745-17-03(B)(3).

g) Miscellaneous Requirements

(1) None.

**3. P002, Shot Blasting Unit**

**Operations, Property and/or Equipment Description:**

Shot Blasting Unit

- a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
  - (1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
    - a. None.
  - (2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
    - a. b)(1)b., d)(1), d)(2) and e)(1).
- b) Applicable Emissions Limitations and/or Control Requirements
  - (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

|    | Applicable Rules/Requirements   | Applicable Emissions Limitations/Control Measures   |
|----|---|---|
| a. | OAC rule 3745-31-05(A)(3)   | The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-11 and 3745-31-05(D).<br><br>The visible particulate emissions (PE) of from the baghouse/fabric filter outlet shall not exceed five percent opacity, as a six-minute average.  |
| b. | OAC rule 3745-31-05(D)<br>(Synthetic Minor to avoid Title V permitting) | The PE from this emissions unit shall not exceed 2.68 pounds of PE per ton of gray iron produced.<br><br>The PE from this emissions unit shall not exceed 12.4 tons per year, as a rolling, 12-month summation.<br><br>Compliance with the annual PE limitation above shall be achieved by restricting the facility's gray iron production rate. Therefore, no record keeping, reporting, |

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|    | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures   |
|----|-------------------------------|---|
|    |                               | nor emissions calculations are required to demonstrate compliance with this emission limitation.<br><br>See 2 through 4 of Section B. Facility-Wide Terms and Conditions. |
| c. | OAC rule 3745-17-07(A)        | The visible PE limitation specified by this rule is less stringent than the visible PE limitation established pursuant to OAC rule 3745-31-05(A)(3).                      |
| d. | OAC rule 3745-17-11           | The PE from this emissions unit shall not exceed 6.17 pounds per hour.  |

(2) Additional Terms and Conditions

- a. The PE shall be vented to a baghouse/fabric filter.
- b. The hourly PE limitation (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 limitation.

c) Operational Restrictions

- (1) The permittee shall only clean/finish gray iron that is produced at this facility.

d) Monitoring and/or Recordkeeping Requirements

- (1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range established for the pressure drop across the baghouse is between 2 to 10 inches of water.
- (2) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit is in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

Whenever the monitored value for the pressure drop deviates from the limit or range established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

- a. the date and time the deviation began;
- b. the magnitude of the deviation at that time;
- c. the date the investigation was conducted;
- d. the name(s) of the personnel who conducted the investigation; and
- e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

- a. a description of the corrective action;
- b. the date corrective action was completed;
- c. the date and time the deviation ended;
- d. the total period of time (in minutes) during which there was a deviation;
- e. the pressure drop readings immediately after the corrective action was implemented; and
- f. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

This range or limit on the pressure drop across the baghouse is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable PE rate for the controlled emissions unit. In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

- (3) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible PE from the stack serving this emissions unit. The presence or absence of any visible PE 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.

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify:

- a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
  - i. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the acceptable range;
  - ii. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the baghouse;
- b. the probable cause of each deviation (excursion);
- c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
- d. the magnitude and duration of each deviation (excursion).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

(2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be completed electronically and submitted via the Ohio EPA eBusiness Center: Air Services by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

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a. Emission Limitations:

The PE from this emissions unit shall not exceed 2.68 pounds of PE per ton of gray iron produced.

The PE from this emissions unit shall not exceed 6.17 pounds per hour.

Applicable Compliance Method:

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

b. Emission Limitation:

The PE from this emissions unit shall not exceed 12.4 tons per year, as a rolling, 12-month summation.

Applicable Compliance Method:

Compliance with the annual allowable PE limitation above shall be determined by multiplying the allowable PE limitation of 2.68 pounds of PE 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 pounds per ton.

c. Emission Limitation:

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

Applicable Compliance Method:

If required, compliance with the allowable visible PE limitation above shall be determined in accordance with the test method and procedures specified in OAC rule 3745-17-03(B)(1).

g) Miscellaneous Requirements

(1) None.

**4. R001, Mold/Core Wash**

**Operations, Property and/or Equipment Description:**

Mold/Core Wash

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

|    | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures  |
|----|-------------------------------|--|
| a. | OAC rule 3745-21-07(M)(4)     | The emissions of organic compounds (OC) from this emissions unit shall not exceed 3.0 pounds per hour and 15.0 pounds per day. |

(2) Additional Terms and Conditions

a. None.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall collect and record the following information each day for the mold/core washing operation:

- a. the amount of mold/core wash employed, in pounds;
- b. the OC content of the mold/core wash, in weight percent;
- c. the total number of hours the emissions unit was in operation;
- d. the OC emission rate for the mold/core wash, in pounds per day (i.e., ((a) times (b)/100) times 0.05\*); and
- e. the average hourly OC emission rate for the mold/core wash, in pounds per hour (average) (i.e., (d)/(c)).

\*From the application, 95% by weight of the OC emissions are combusted and 5% by weight of the OC emissions are emitted.

e) Reporting Requirements

- (1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be completed electronically and submitted via the Ohio EPA eBusiness Center: Air Services by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation:

The emissions of OC shall not exceed 3.0 pounds per hour and 15.0 pounds per day.

Applicable Compliance Method:

Compliance with the hourly and daily allowable OC emission limitations above shall be demonstrated through the record keeping requirements established in d)(1) above. Formulation data or USEPA Method 24 (for coatings) or 24A (for flexographic and rotogravure printing inks and related coatings) shall be used to determine the organic compound contents of the coatings.

g) Miscellaneous Requirements

- (1) None.

**5. Emissions Unit Group -Electric Induction Furnaces: F001,F002,**

| <b>EU ID</b> | <b>Operations, Property and/or Equipment Description</b> |
|--------------|--|
| F001         | Electric Induction Furnace No. 1                         |
| F002         | Electric Induction Furnace No. 2                         |

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. b)(1)b.

b) Applicable Emissions Limitations and/or Control Requirements

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

|    | <b>Applicable Rules/Requirements</b> | <b>Applicable Emissions Limitations/Control Measures</b>   |
|----|--------------------------------------|--|
| a. | OAC rule 3745-31-05(A)(3)            | <p>The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-08 and 3745-31-05(D).</p> <p>For emissions units F001 and F002: The particulate emissions (PE) from each emissions unit shall not exceed 13.1 pounds per hour.</p> <p>For emissions units F001 and F002: The emissions of lead from each emissions unit shall not exceed 0.23 pounds per hour.</p> <p>The natural gas combustion emissions from heating the ladle shall not exceed the following:</p> <p>2.94 pounds per hour and 12.88 tons per</p> |

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|    | Applicable Rules/Requirements   | Applicable Emissions Limitations/Control Measures   |
|----|---|---|
|    |   | <p>year of nitrogen oxides (NO<sub>x</sub>)</p> <p>2.47 pounds per hour and 10.82 tons per year of carbon monoxide (CO)</p> <p>0.22 pound per hour and 0.96 ton per year of PE</p> <p>0.02 pound per hour and 0.09 ton per year of sulfur dioxide (SO<sub>2</sub>)</p> <p>0.32 pound per hour and 1.40 tons per year of organic compounds (OC)</p> <p>There shall be no visible PE from any building openings.</p>  |
| b. | OAC rule 3745-31-05(D)<br>(Synthetic Minor to avoid Title V permitting) | <p>See 2 through 4 of Section B. Facility-Wide Terms and Conditions.</p> <p>For emissions units F001 and F002: The PE from each emissions unit shall not exceed 5.7 pounds of PE per ton of gray iron produced.</p> <p>For emissions units F001 and F002: The emissions of lead from each emissions unit shall not exceed 0.1 pound of lead per ton of gray iron produced.</p> <p>The PE for emissions units F001 and F002, combined, shall not exceed 26.43 tons per year, as a rolling, 12-month summation.</p> <p>The emissions of lead for emissions units F001 and F002, combined, shall not exceed 0.46 ton per year, as a rolling, 12-month summation.</p> <p>Compliance with the annual PE and lead emission limitations above shall be achieved by restricting the facility's gray iron production rate. Therefore, no record keeping, reporting, nor emissions calculations are required to demonstrate compliance with these emission limitations.</p> |

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|    | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures  |
|----|-------------------------------|--|
| c. | OAC rule 3745-17-07(B)        | The visible PE limitation specified by this rule is less stringent than the visible PE limitation established pursuant to OAC rule 3745-31-05(A)(3). |
| d. | OAC rule 3745-17-08           | See c)(1) below.   |

(2) Additional Terms and Conditions

- a. The above hourly emission limitations (regulated under OAC rule 3745-31-05(A)(3)) are based on the potential to emit for the emissions units listed above, 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 limitations.

c) Operational Restrictions

- (1) 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.

d) Monitoring and/or Recordkeeping Requirements

- (1) 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.
- (2) The permittee shall perform daily checks, when the emissions unit(s) is/are in operation and when the weather conditions allow, for any visible PE from the roof monitors, windows, and/or doors serving these emissions units. The presence or absence of any visible PE 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.

e) Reporting Requirements

- (1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be completed electronically and submitted via the Ohio EPA eBusiness Center: Air Services by the due date identified in the Authorization section of this permit.

The PER shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

For emissions units F001 and F002: The PE from each emissions unit shall not exceed 5.7 pounds of PE per ton of gray iron produced.

Applicable Compliance Method:

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

b. Emission Limitation:

For emissions units F001 and F002: The PE from each emissions unit shall not exceed 13.1 pounds per hour.

Applicable Compliance Method:

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

c. Emission Limitation:

The PE for emissions units F001 and F002, combined, shall not exceed 26.43 tons per year, as a rolling, 12-month summation.

Applicable Compliance Method:

Compliance with the annual allowable PE limitation above shall be determined by multiplying the allowable PE 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:

For emissions units F001 and F002: The emissions of lead from each emissions unit shall not exceed 0.1 pound of lead per ton of gray iron produced.

Applicable Compliance Method:

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

e. Emission Limitation:

For emissions units F001 and F002: The emissions of lead from each emissions unit shall not exceed 0.23 pounds per hour.

Applicable Compliance Method:

Compliance with the hourly allowable lead emission limitation above 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:

The emissions of lead for emissions units F001 and F002, combined, shall not exceed 0.46 ton per year, as a rolling, 12-month summation.

Applicable Compliance Method:

Compliance with the annual allowable lead emission limitation above 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 pounds per ton.

g. Emission Limitation:

There shall be no visible PE from any building openings.

Applicable Compliance Method:

If required, compliance with the requirement for no visible PE 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 pounds per hour of NO<sub>x</sub>

Applicable Compliance Method:

Compliance with the hourly allowable NO<sub>x</sub> emission limitation above shall be determined by multiplying the AP-42 NO<sub>x</sub> emission factor of 100 pounds of NO<sub>x</sub> 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:

2.47 pounds per hour of CO

Applicable Compliance Method:

Compliance with the hourly allowable CO emission limitation above shall be determined by multiplying the AP-42 CO emission factor of 84 pounds of CO 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.

j. Emission Limitation:

0.22 pound per hour of PE

Applicable Compliance Method:

Compliance with the hourly allowable PE limitation above shall be determined by multiplying the AP-42 PE factor of 7.6 pounds of PE 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.

k. Emission Limitation:

0.02 pound per hour of SO<sub>2</sub>

Applicable Compliance Method:

Compliance with the hourly allowable SO<sub>2</sub> emission limitation above shall be determined by multiplying the AP-42 SO<sub>2</sub> emission factor of 0.6 pound of SO<sub>2</sub> 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.

l. Emission Limitation:

0.32 pound per hour of OC

Applicable Compliance Method:

Compliance with the hourly allowable OC emission limitation above shall be determined by multiplying the AP-42 OC emission factor of 11 pounds of OC 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 Limitations:

12.88 tons per year of NO<sub>x</sub>

10.82 tons per year of CO

0.96 ton per year of PE

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0.09 ton per year of SO<sub>2</sub>

1.40 tons per year of OC

Applicable Compliance Method:

Compliance with the annual allowable emission limitations above shall be demonstrated by multiplying the hourly allowable emission limitation by 8760 hours per year, and then dividing by 2000 pounds per ton. Therefore, as long as compliance with the hourly allowable emission limitation is maintained, compliance with the annual allowable emission limitation shall be assumed.

g) Miscellaneous Requirements

(1) None.

**6. Emissions Unit Group -Mixers: P901,P902,**

| <b>EU ID</b> | <b>Operations, Property and/or Equipment Description</b> |
|--------------|--|
| P901         | Mold Sand Mixer No. 1, Mold Preparation                  |
| P902         | Core Sand Mixer No. 2, Core Preparation                  |

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. b)(1)b., d)(1), d)(2) and e)(1).

b) Applicable Emissions Limitations and/or Control Requirements

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

|    | <b>Applicable Rules/Requirements</b> | <b>Applicable Emissions Limitations/Control Measures</b>   |
|----|--------------------------------------|--|
| a. | OAC rule 3745-31-05(A)(3)            | <p>The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-08 and 3745-31-05(D).</p> <p>The particulate emissions (PE) from emissions unit P901 shall not exceed 0.58 pound per hour.</p> <p>The PE from emissions unit P902 shall not exceed 1.27 pounds per hour and 5.56 tons per year.</p> <p>For emissions units P901 and P902: The emissions of combined hazardous air pollutants (HAPs) from each emissions unit shall not exceed 7.7 pounds per day.</p> <p>For emissions units P901 and P902: The emissions of combined HAPs from each</p> |

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|    | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures  |
|----|-------------------------------|--|
|    |                               | <p>emissions unit shall not exceed 1.4 tons per year.</p> <p>For emissions units P901 and P902: The emissions of organic compounds (OC) from each emissions unit shall not exceed 7.3 tons per year.</p> <p>For emissions unit P902, the visible PE from the baghouse/fabric filter outlet shall not exceed five percent opacity, as a six-minute average.</p> <p>For emissions unit P901, there shall be no visible PE from any building openings.</p>  |
| b. | OAC rule 3745-31-05(D)        | <p>See 2 through 4 of Section B. Facility-Wide Terms and Conditions.</p> <p>The PE from emissions unit P901 shall not exceed 0.25 pound of PE per ton of gray iron produced.</p> <p>The PE from emissions unit P901 shall not exceed 1.16 tons per year, as a rolling, 12-month summation.</p> <p>Compliance with the annual PE limitation above shall be achieved by restricting the facility's gray iron production rate. Therefore, no record keeping, reporting, nor emissions calculations are required to demonstrate compliance with this emission limitation.</p> <p>The PE from emissions unit P902 shall not exceed 0.141 pound of PE per ton of cores produced.</p> |
| c. | OAC rule 3745-17-07(B)        | <p>For emissions unit P901, the visible PE limitation specified by this rule is less stringent than the visible PE limitation established pursuant to OAC rule 3745-31-05(A)(3).</p> <p>For emissions unit P902, visible PE from any fugitive dust source shall not exceed twenty percent opacity, as a three-minute average.</p>  |

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|    | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures   |
|----|-------------------------------|---|
| d. | OAC rule 3745-17-08           | For emissions units P901 and P902: The baghouse shall achieve an outlet emission rate of not greater than 0.030 grain of PE per dry standard cubic foot of exhaust gases. |

(2) Additional Terms and Conditions

- a. For emissions units P901 and P902, the PE shall be vented to a baghouse/fabric filter.
- b. For emissions unit P901, the mixer and mixer loading system shall be of an enclosed design in order to eliminate or minimize visible PE of fugitive dust. The moisture content of the sand shall be sufficient to eliminate or minimize visible PE of fugitive dust during mold formation.
- c. For emissions unit P902, the moisture content of the sand shall be sufficient to eliminate or minimize visible PE 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 PE of fugitive dust.
- d. The above hourly PE limitations (regulated under OAC rule 3745-31-05(A)(3)) are based on the potential to emit for the emissions units listed above, 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 these emission limitations.

c) Operational Restrictions

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

d) Monitoring and/or Recordkeeping Requirements

- (1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit for emissions unit P901, the acceptable range established for the pressure drop across the baghouse is between 2to10 inches of water.
- (2) For emissions unit P901, the permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit is/are in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

Whenever the monitored value for the pressure drop deviates from the limit or range established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

- a. the date and time the deviation began;
- b. the magnitude of the deviation at that time;
- c. the date the investigation was conducted;
- d. the name(s) of the personnel who conducted the investigation; and
- e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

- a. a description of the corrective action;
- b. the date corrective action was completed;
- c. the date and time the deviation ended;
- d. the total period of time (in minutes) during which there was a deviation;
- e. the pressure drop readings immediately after the corrective action was implemented; and
- f. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

This range or limit on the pressure drop across the baghouse is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable PE rate for the controlled emissions unit(s). In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

- (3) The permittee shall collect and record the following information each day for each emissions unit listed above:

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- 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 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 percent;
  - 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 the emissions units listed above, pounds per day (i.e., (b) plus (i)); and
  - l. the total combined HAPs emission rate for the emissions units listed above, pounds per day (i.e., (d) plus (j)).
- (4) For emissions unit P901, the permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible PE from the roof monitors, windows, and/or doors serving this emissions unit. The presence or absence of any visible PE 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.

- (5) For emissions unit P902, the permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible PE from the stack serving this emissions unit and for any visible PE from the roof monitors, windows, and/or doors serving this emissions unit. The presence or absence of any visible PE 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.

e) Reporting Requirements

- (1) For emissions unit P901, the permittee shall submit quarterly deviation (excursion) reports that identify:
- a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
    - i. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the acceptable range;
    - ii. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the baghouse;
  - b. the probable cause of each deviation (excursion);
  - c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
  - d. the magnitude and duration of each deviation (excursion).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted, electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be completed electronically and submitted via the Ohio EPA eBusiness Center: Air Services by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

The PE from emissions unit P901 shall not exceed 0.25 pound of PE per ton of gray iron produced.

Applicable Compliance Method:

Compliance with the allowable PE limitation above shall be demonstrated through the summation of the following Ohio RACM PE factors and the OAC rule 3745-17-08 allowable: Multiply the Ohio RACM PE 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 PE 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 PE 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 per hour divided by 7000 grains per pound, then divided by 2.3 tons of gray iron produced per hour.

\*capture efficiency

b. Emission Limitation:

The PE from emissions unit P901 shall not exceed 0.58 pound per hour.

Applicable Compliance Method:

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

c. Emission Limitation:

The PE from emissions unit P901 shall not exceed 1.16 tons per year, as a rolling, 12-month summation.

Applicable Compliance Method:

Compliance with the annual allowable PE limitation above shall be determined by multiplying the allowable PE 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:

For emissions units P901 and P902: The baghouse shall achieve an outlet emission rate of not greater than 0.030 grain of PE per dry standard cubic foot of exhaust gases.

Applicable Compliance Method:

If required, compliance with the allowable PE limitation above shall be determined by using the test method(s) and procedures specified in OAC rule 3745-17-03(B)(7).

e. Emission Limitation:

For emissions unit P901, there shall be no visible PE from any building openings.

Applicable Compliance Method:

If required, compliance with the requirement for no visible PE 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 Limitations:

For emissions units P901 and P902: The emissions of combined HAPs from each emissions unit shall not exceed 7.7 pounds per day.

For emissions units P901 and P902: The emissions of combined HAPs from each emissions unit shall not exceed 1.4 tons per year.

For emissions units P901 and P902: The emissions of OC from each emissions unit shall not exceed 7.3 tons per year.

Applicable Compliance Method:

Compliance with the daily and/or annual allowable OC and combined HAPs emission limitations above shall be demonstrated through the record keeping requirements established in (3) above. Formulation data shall be used to determine the OC content and the combined HAPs content of the material used in the emissions units listed above.

g. Emission Limitation:

The PE from emissions unit P902 shall not exceed 0.141 pound of PE per ton of cores produced.

Applicable Compliance Method:

Compliance with the allowable PE limitation above shall be demonstrated through the summation of the following Ohio RACM PE factor and the OAC rule 3745-17-08 allowable: Multiply the Ohio RACM PE 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 PE 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 per hour divided by 7000 grains per pound, then divided by 9.0 tons of cores produced per hour.

\*capture efficiency

h. Emission Limitation:

The PE from emissions unit P902 shall not exceed 1.27 pounds per hour.

Applicable Compliance Method:

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

i. Emission Limitation:

The PE from emissions unit P902 shall not exceed 5.56 tons per year.

Applicable Compliance Method:

Compliance with the annual allowable PE limitation above shall be demonstrated by multiplying the hourly allowable PE limitation by 8760 hours per year, and then dividing by 2000 pounds per ton. Therefore, as long as compliance with the hourly allowable emission limitation is maintained, compliance with the annual allowable emission limitation shall be assumed.

j. Emission Limitation:

For emissions unit P902, visible PE from any fugitivedust source shall not exceed twentypercent opacity, as a three-minuteaverage.

Applicable Compliance Method:

If required, compliance with the allowable visible PE limitation above shall be determined in accordance with the test method and procedures specified in OAC rule 3745-17-03(B)(3).

k. Emission Limitation:

For emissions unit P902, the visible PE from the baghouse/fabric filter outlet shall not exceed five percent opacity, as a six-minute average.

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Applicable Compliance Method:

If required, compliance with the allowable visible PE limitation shall be determined in accordance with the test method and procedures specified in OAC rule 3745-17-03(B)(1).

g) Miscellaneous Requirements

(1) None.

**7. Emissions Unit Group -Sand Storage Silos: P003,P004,P005,**

| <b>EU ID</b> | <b>Operations, Property and/or Equipment Description</b> |
|--------------|--|
| P003         | New Sand Storage Silo                                    |
| P004         | Reclaimed Core Sand Storage Silo                         |
| P005         | Reclaimed Mold Sand Storage Silo                         |

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. b)(1)b., d)(1), d)(2) and e)(1).

b) Applicable Emissions Limitations and/or Control Requirements

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

|    | <b>Applicable Rules/Requirements</b> | <b>Applicable Emissions Limitations/Control Measures</b>   |
|----|--------------------------------------|--|
| a. | OAC rule 3745-31-05(A)(3)            | <p>The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D).</p> <p>The particulate emissions (PE) from emissions unit P003 shall not exceed 0.45 pound per hour and 1.97 tons per year.</p> <p>The PE from emissions unit P004 shall not exceed 0.32 pound per hour and 1.40 tons per year.</p> <p>The PE from emissions unit P005 shall not exceed 1.08 pounds per hour and 4.73 tons per year.</p> |

**Draft Permit-to-Install and Operate**

Knapp Foundry Company Inc

**Permit Number:** P0108324

**Facility ID:** 1677010014

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|    | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures   |
|----|-------------------------------|---|
|    |                               | For emissions units P003, P004, and P005: The visible PE from the baghouse/fabric filteroutlet shall not exceed five percentopacity, as a six-minute average. |
| b. | OAC rule 3745-31-05(D)        | For emissions units P003, P004, and P005: The PE from each emissions unit shall not exceed 0.036 pound of PE per ton of sandhandled.                          |
| c. | OAC rule 3745-17-07(A)        | The visible PE limitationspecified by this rule is less stringentthan the visible PE limitationestablished pursuant to OAC rule3745-31-05(A)(3).              |
| d. | OAC rule 3745-17-11           | The emission limitation specified by this rule is less stringent than the emission limitation establishedpursuant to OAC rule3745-31-05(A)(3).                |

(2) Additional Terms and Conditions

- a. For the emissions units listed above, the PE shall be vented to a baghouse/fabric filter.
- b. The above hourly and yearly PE limitations (regulated under OAC rule 3745-31-05(A)(3)) are based on the potential to emit for the emissions units listed above, 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 limitations.

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit for emissions unit P005, the acceptable range established for the pressure drop across the baghouse is between 2 to 10 inches of water.
- (2) For emissions unit P005, the permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across thebaghouse when the controlled emissions unit(s) is/are in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across thebaghouse on daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

Whenever the monitored value for the pressure drop deviates from the limit or range established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

- a. the date and time the deviation began;
- b. the magnitude of the deviation at that time;
- c. the date the investigation was conducted;
- d. the name(s) of the personnel who conducted the investigation; and
- e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

- a. a description of the corrective action;
- b. the date corrective action was completed;
- c. the date and time the deviation ended;
- d. the total period of time (in minutes) during which there was a deviation;
- e. the pressure drop readings immediately after the corrective action was implemented; and
- f. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

This range or limit on the pressure drop across the baghouse is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable PE rate for the controlled emissions unit(s). In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

- (3) For emissions units P003, P004, and P005, the permittee shall perform daily checks, when the emissions unit(s) is/are in operation and when the weather conditions allow, for any visible PE from the stack serving these emissions units. The presence or absence of

any visible PE 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.

e) Reporting Requirements

(1) For emissions unit P005, the permittee shall submit quarterly deviation (excursion) reports that identify:

- a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
  - i. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the acceptable range;
  - ii. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the baghouse;
- b. the probable cause of each deviation (excursion);
- c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
- d. the magnitude and duration of each deviation (excursion).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

(2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be completed electronically and submitted via the Ohio EPA eBusiness Center: Air Services by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

For emissions units P003, P004, and P005: The PE from each emissions unit shall not exceed 0.036 pound of PE per ton of sand handled.

Applicable Compliance Method:

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

b. Emission Limitations:

The PE from emissions unit P003 shall not exceed 0.45 pound per hour.

The PE from emissions unit P004 shall not exceed 0.32 pound per hour.

The PE from emissions unit P005 shall not exceed 1.08 pounds per hour.

Applicable Compliance Method:

Compliance with the hourly allowable PE limitations above shall be determined by multiplying the allowable PE limitation of 0.036 pound of PE per ton of sand handled by the maximum tons of sand handled per hour.

c. Emission Limitations:

The PE from emissions unit P003 shall not exceed 1.97 tons per year.

The PE from emissions unit P004 shall not exceed 1.40 tons per year.

The PE from emissions unit P005 shall not exceed 4.73 tons per year.

Applicable Compliance Method:

Compliance with the annual allowable PE limitations above shall be demonstrated by multiplying the hourly allowable PE limitation by 8760 hours per year, and then dividing by 2000 pounds per ton. Therefore, as long as compliance with the hourly allowable emission limitation is maintained, compliance with the annual allowable emission limitation shall be assumed.

d. Emission Limitation

For emissions units P003, P004, P005: The visible PE from the baghouse/fabric filter outlet shall not exceed five percent opacity, as a six-minute average.

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Applicable Compliance Method

If required, compliance with the allowable visible PE limitation above shall be determined in accordance with the test method and procedure specified in OAC rule 3745-17-03(B)(1).

g) Miscellaneous Requirements

(1) None.