



Environmental Protection Agency

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

4/5/2011

Brian Culler  
Pentair Casting Center, Division of Pentair Pump Group  
1101 Myers Parkway  
Ashland, OH 44805

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

Facility ID: 0303010118  
Permit Number: P0107024  
Permit Type: Renewal  
County: Ashland

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
No	SYNTHETIC MINOR TO AVOID TITLE V
No	FEDERALLY ENFORCABLE PTIO (FEPTIO)

Dear Permit Holder:

Enclosed please find a final Air Pollution Permit-to-Install and Operate (PTIO) which will allow you to install, modify, and/or operate the described emissions unit(s) in the manner indicated in the permit. Because this permit contains conditions and restrictions, please read it very carefully. Please complete a survey at [www.epa.ohio.gov/dapc/permitsurvey.aspx](http://www.epa.ohio.gov/dapc/permitsurvey.aspx) and give us feedback on your permitting experience. We value your opinion.

The issuance of this PTI is a final action of the Director and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of \$70.00, made payable to "Ohio Treasurer Josh Mandel," which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission  
309 South Fourth Street, Room 222  
Columbus, OH 43215

If you have any questions, please contact Ohio EPA DAPC, Northwest District Office at (419)352-8461 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. This permit can be accessed electronically on the DAPC Web page, [www.epa.ohio.gov/dapc](http://www.epa.ohio.gov/dapc), by clicking the "Issued Air Pollution Control Permits" link.

Sincerely,

Michael W. Ahern, Manager  
Permit Issuance and Data Management Section, DAPC

Cc: Ohio EPA-NWDO





**FINAL**

**Division of Air Pollution Control  
Permit-to-Install and Operate  
for**

**Pentair Casting Center, Division of Pentair Pump Group**

Facility ID:	0303010118
Permit Number:	P0107024
Permit Type:	Renewal
Issued:	4/5/2011
Effective:	4/5/2011
Expiration:	2/25/2019





Division of Air Pollution Control
Permit-to-Install and Operate
for
Pentair Casting Center, Division of Pentair Pump Group

Table of Contents

Authorization ..... 1
A. Standard Terms and Conditions ..... 4
1. What does this permit-to-install and operate ("PTIO") allow me to do?..... 5
2. Who is responsible for complying with this permit? ..... 5
3. What records must I keep under this permit? ..... 5
4. What are my permit fees and when do I pay them?..... 5
5. When does my PTIO expire, and when do I need to submit my renewal application? ..... 5
6. What happens to this permit if my project is delayed or I do not install or modify my source? ..... 6
7. What reports must I submit under this permit? ..... 6
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? ..... 6
9. What are my obligations when I perform scheduled maintenance on air pollution control equipment? ... 6
10. Do I have to report malfunctions of emissions units or air pollution control equipment? If so, how must I report? ..... 7
11. Can Ohio EPA or my local air agency inspect the facility where the emission unit(s) is/are located? ..... 7
12. What happens if one or more emissions units operated under this permit is/are shut down permanently? ..... 7
13. Can I transfer this permit to a new owner or operator?..... 8
14. Does compliance with this permit constitute compliance with OAC rule 3745-15-07, "air pollution nuisance"? ..... 8
15. What happens if a portion of this permit is determined to be invalid? ..... 8
B. Facility-Wide Terms and Conditions..... 9
C. Emissions Unit Terms and Conditions ..... 11
1. P905, Sand Handling and Processing System ..... 12
2. Emissions Unit Group - Core Machines: F007, F008, F009, F012, F013, P907, P908, P911 ..... 20
3. Emissions Unit Group - Electric Induction Furnaces #1-3: F001, F002, F003..... 26
4. Emissions Unit Group - Mold Making Machines: F015, F016, F018 ..... 28
5. Emissions Unit Group - Pouring & Cooling Lines: F019, F020, F021 ..... 30
6. Emissions Unit Group - Shotblast Machines: P014, P015 ..... 32





## Authorization

Facility ID: 0303010118  
Application Number(s): A0040271, A0040580, A0041344  
Permit Number: P0107024  
Permit Description: PTIO Renewal permit for various gray iron foundry operations.  
Permit Type: Renewal  
Permit Fee: \$0.00  
Issue Date: 4/5/2011  
Effective Date: 4/5/2011  
Expiration Date: 2/25/2019  
Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

This document constitutes issuance to:

Pentair Casting Center, Division of Pentair Pump Group  
740 East 9th Street  
Ashland, OH 44805

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

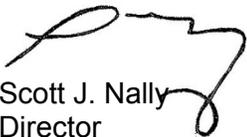
Ohio EPA District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Northwest District Office  
347 North Dunbridge Road  
Bowling Green, OH 43402  
(419)352-8461

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: P0107024  
Permit Description: PTIO Renewal permit for various gray iron foundry operations.

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

**Emissions Unit ID:** P905  
Company Equipment ID: Sand Handling and Processing System  
Superseded Permit Number: 03-244  
General Permit Category and Type: Not Applicable

**Group Name: Core Machines**

<b>Emissions Unit ID:</b>	<b>F007</b>
Company Equipment ID:	Small Blower Core Machine (#9020)
Superseded Permit Number:	03-244
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>F008</b>
Company Equipment ID:	Large Blower Core Machine
Superseded Permit Number:	03-244
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>F009</b>
Company Equipment ID:	Bench Core Machine
Superseded Permit Number:	03-244
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>F012</b>
Company Equipment ID:	Small Gas Core Machine
Superseded Permit Number:	03-244
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>F013</b>
Company Equipment ID:	SPO Core Machine
Superseded Permit Number:	03-244
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P907</b>
Company Equipment ID:	Large Gas Core Machine (#9007)
Superseded Permit Number:	03-244
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P908</b>
Company Equipment ID:	Dependable Core Machine (#2054)
Superseded Permit Number:	03-244
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P911</b>
Company Equipment ID:	New Redford 22 Core Machine
Superseded Permit Number:	03-244
General Permit Category and Type:	Not Applicable

**Group Name: Electric Induction Furnaces #1-3**

<b>Emissions Unit ID:</b>	<b>F001</b>
Company Equipment ID:	Electric Induction Furnace 1
Superseded Permit Number:	03-244
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>F002</b>

Company Equipment ID:	Electric Induction Furnace 2
Superseded Permit Number:	03-244
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>F003</b>
Company Equipment ID:	Electric Induction Furnace 3
Superseded Permit Number:	03-244
General Permit Category and Type:	Not Applicable

**Group Name:      Mold Making Machines**

<b>Emissions Unit ID:</b>	<b>F015</b>
Company Equipment ID:	Hunter 10-1 Line Mold Making
Superseded Permit Number:	03-244
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>F016</b>
Company Equipment ID:	Hunter 10-2 Line Mold Making
Superseded Permit Number:	03-244
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>F018</b>
Company Equipment ID:	Osborn Line Mold Making
Superseded Permit Number:	03-244
General Permit Category and Type:	Not Applicable

**Group Name:      Pouring & Cooling Lines**

<b>Emissions Unit ID:</b>	<b>F019</b>
Company Equipment ID:	Osborn Line Pouring and Cooling
Superseded Permit Number:	03-244
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>F020</b>
Company Equipment ID:	Hunter 10-1 Line Pouring and Cooling
Superseded Permit Number:	03-244
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>F021</b>
Company Equipment ID:	Hunter 10-2 Line Pouring and Cooling
Superseded Permit Number:	03-244
General Permit Category and Type:	Not Applicable

**Group Name:      Shotblast Machines**

<b>Emissions Unit ID:</b>	<b>P014</b>
Company Equipment ID:	Wheelabrator-Shotblast Cleaner #2226
Superseded Permit Number:	03-244
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P015</b>
Company Equipment ID:	Wheelabrator-Shotblast Cleaner #2223
Superseded Permit Number:	03-244
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 Ohio EPA DAPC, Northwest District Office 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.

---

<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**

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) 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 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. P905, Sand Handling and Processing System**

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

Sand Handling and Processing System consisting of Simpson Mulling Machine #2776 (2.85 ton/hr), Simpson Multi-Mill Muller #2713 (2.85 ton/hr), Sand Mold Shakeout (5.70 ton/hr), and Sand Handling (18.24 ton/hr). This emissions unit is made up of the emission units formerly known as P003, P012 and P013.

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 3745-31-05(A)(3)	0.02 grains particulate matter less than or equal to 10 microns in size (PM10)/dscf from the stack serving emissions units P014, P015 and P905 combined  69.83 tons PM10/yr from the stack serving emissions units P014, P015 and P905 combined  6.58 tons fugitive PM10/year from emissions unit P905  Visible particulate emissions (PE) of fugitive dust shall not exceed twenty percent opacity as a three-minute average from emissions unit P905 [See b)(2)c.]

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		Visible PE from the stack serving this emissions unit shall not exceed 10 percent opacity as a six-minute average  See b)(2)a. and b)(2)b.
b.	OAC rule 3745-17-07(A)	See b)(2)d.
c.	OAC rule 3745-17-07(B)	See b)(2)e.
d.	OAC rule 3745-17-08(B)	See b)(2)f.
e.	OAC rule 3745-17-11(B)	See b)(2)d.

(2) Additional Terms and Conditions

- a. Permits to Operate (PTO), effective October 23, 1992, were issued for the above mentioned operations as emissions units P003, P012 and P013. The terms of the PTO's contained short term particulate emission limitations for these sources. However, the purpose of this permit is to establish a combined emissions limitation for emissions units P014, P015 and P905 which are controlled by a common baghouse. Therefore, BAT is determined to be use of a baghouse and compliance with the terms and conditions of this permit.

[Note: Grinding operations (emissions unit P906) consist of seven grinding stations. Four of these stations are vented to the same baghouse controlling emissions units P014, P015 and P905. Since the uncontrolled potential to emit of emissions unit P906 is less than 10 lbs/day, the grinding operations are permit exempt in accordance with OAC rule 3745-15-05(B).]

- b. This facility is a gray iron foundry which is not listed as one of the PSD source categories and as such, fugitive emissions from these sources are not considered toward major source applicability in either the PSD or Title V programs.
- c. The visible PE limitation for emissions unit P905 shall apply to the following:
- i. the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit; and
  - ii. visible PE due solely to the operation of this emissions unit.
- d. The emission limitation specified by this rule is equivalent to or less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
- e. These emission units are exempt from the visible particulate emission limitations for fugitive dust, specified in OAC rule 3745-17-07(B), pursuant to OAC rule 3745-17-07(B)(11)(e), because the emissions units are not located within areas identified in "Appendix A" of OAC rule 3745-17-08.

- f. These emission units are not located within areas identified in "Appendix A" of OAC rule 3745-17-08, therefore, the requirements of OAC rule 3745-17-08(B), which requires the installation of reasonably available control measures to prevent fugitive dust, do not apply to these emission units pursuant to OAC rule 3745-17-08(A)(1).

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall perform weekly checks, when this emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions from the egress points (i.e., building windows, doors, roof monitors, etc.) serving emissions unit P905. The presence or absence of any visible fugitive emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - a. the location and 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 minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item d)(1)d. above or continue the weekly check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

- (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 units are in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on weekly basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The pressure drop across the baghouse shall be maintained within the range of 1-6 inches of water while the emissions unit is in operation.

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 particulate emission rate for the controlled emissions units. 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.

e) Reporting Requirements

- (1) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the director by the due date identified in the Authorization section of this permit. The permit evaluation report shall

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

- (2) The permittee shall identify the following information in the annual permit evaluation report in accordance with the monitoring requirements for visible emissions in term number d)(1) above:
  - a. all days during which any visible fugitive particulate emissions were observed; and
  - b. any corrective actions taken to minimize or eliminate the visible fugitive particulate emissions.
  
- (3) The permittee shall identify in the annual permit evaluation report the following information concerning the operations of the baghouse during the 12-month reporting period for these emissions units:
  - a. 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;
  - b. 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;
  - c. each incident of deviation described in e)(3)a. (above) where a prompt investigation was not conducted;
  - d. each incident of deviation described in e)(3)a. where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and
  - e. each incident of deviation described in e)(3)a. where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.

f) **Testing Requirements**

- (1) Compliance with the emission limitation(s) in Section b)(1) of these terms and conditions shall be determined in accordance with the following method(s):

- a. Emission Limitation:

0.02 grains particulate matter less than or equal to 10 microns in size (PM10)/dscf from the stack serving emissions units P014, P015 and P905 combined

Applicable Compliance Method:

The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- i. The emission testing shall be conducted to demonstrate compliance with the allowable PM10 limitation.

[Note: Pentair Casting Center, Division of Pentair Pump Group conducted emissions testing on June 25, 2010 at the request of the Division of Air Pollution Control, Northwest District Office in order to determine the PM emission rate from the baghouse controlling P014, P015, and P905. The results of this testing event shall be sufficient to meet the testing requirements of this permit.]

If required, additional testing may be required to further demonstrate compliance with the gr/dscf limitation.

- ii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

PM10, Methods 1-4, 201/201A and 202, of 40 CFR Part 51, Appendix M.

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

- iii. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

- b. Emission Limitation:

69.83 tons PM10/yr from the stack serving emissions units P014, P015 and P905 combined

Applicable Compliance Method:

The annual PM10 emission limitation was established by multiplying the short term emission rate of 0.02 grains PM10/dscf by a maximum baghouse flow rate of 93,000 dscf/min, by the maximum operating schedule of 8760 hrs/yr, and the conversion factor of 60 min/hr, then dividing by the conversion factors of 7000 grains/lb PM10 and 2000 lbs/ton. Therefore, provided compliance is shown with the short term emission limitation above, compliance with the annual emission limitation shall be demonstrated.

c. Emission Limitation:

6.58 tons fugitive PM10/year from emissions unit P905

Applicable Compliance Method:

The PM10 limitation was established by combining the emissions from the Simpson Mulling Machine #2776, Simpson Multi-Mill Muller #2713, Sand Mold Shakeout, and Sand Handling processes.

Simpson Mulling Machine #2776 and Simpson Multi-Mill Muller #2713 – Fugitive PM10 emissions from these processes are determined by multiplying an emission factor of 1.3 lbs PM10/ton [RACM for Fugitive Dust Sources, Table 2.7-1, 09/80] by a maximum iron throughput of 49,932 tons/yr (Simpson Mulling Machine #2776 and Simpson Multi-Mill Muller #2713 combined), applying a baghouse capture efficiency of 95%, and dividing by 2000 lbs/ton (1.62);

Sand Mold Shakeout – Fugitive PM10 emissions from this process is determined by multiplying an emissions factor of 2.24 lbs PM10/ton [AP-42, Table 12.10-9, 01/95] by a maximum iron throughput of 49,932 tons/yr, applying a baghouse capture efficiency of 95%, and dividing by 2000 lbs/ton (2.80).

Sand Handling – Fugitive PM10 emissions from this process is determined by multiplying an emissions factor of 0.54 lbs PM10/ton [WebFIRE 3-04-003-50] by a maximum sand throughput of 159,782 tons/yr, applying a baghouse capture efficiency of 95%, and dividing by 2000 lbs/ton (2.16).

Therefore, provided compliance is shown with the requirements of this permit to apply best available control measures, compliance with the ton per year PM10 limitation will be demonstrated.

d. Emission Limitation:

Visible PE of fugitive dust shall not exceed twenty percent opacity as a three-minute average from emissions unit P905

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance in accordance with USEPA Method 9 of 40 CFR, Part 60, Appendix A.

e. Emission Limitation:

Visible PE from the stack serving emissions unit P905 shall not exceed 10 percent opacity as a six-minute average

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance in accordance with USEPA Method 9 of 40 CFR, Part 60, Appendix A.

g) Miscellaneous Requirements

(1) None.

**2. Emissions Unit Group - Core Machines: F007, F008, F009, F012, F013, P907, P908, P911**

<b>EU ID</b>	<b>Operations, Property and/or Equipment Description</b>
F007	Small Blower Core Machine (#9028) - 3.80 ton/hr
F008	Large Blower Core Machine (#9018) - 3.80 ton/hr
F009	Bench Core Machine (#9016) - 3.36 ton/hr
F012	Small Gas Core Machine (#9028) - 0.35 ton/hr
F013	SPO Core Machine (#1824) - 0.078 ton/hr
P907	Large Gas Core Machine (#9007) - 0.95 ton/hr equipped with a capture hood
P908	Dependable Core Machine (#2054) - 0.77 ton/hr equipped with a capture hood
P911	New Redford 22 Core Machine (#8774B) - 1.40 ton/hr equipped with a capture hood

- 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. d)(2).
- (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 3745-31-05(A)(3), for emissions units F007, F008, F009, F012, F013, P907 and P908 only	See b)(2)a.
b.	OAC rule 3745-31-05(A)(3)	4.56 lbs volatile organic compounds (VOC)/hr from emissions unit P911 only  81.39 tons VOC/year from emissions units F007, F008, F009, F012, F013 P907, P908, P909, P910 and P911 combined  1.54 lbs particulate matter of 10 microns

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>or less in size (PM10)/hour from the stack serving emissions unit P911</p> <p>27.46 tons PM10/year from the stacks serving emissions units P907, P908, P909, P910 and P911 combined</p> <p>Visible particulate emissions from the stack serving emissions unit P911 shall not exceed 10 percent opacity as a six-minute average</p> <p>See b)(2)b. through b)(2)f.</p>
c.	OAC rule 3745-17-07(A), for emissions units P907, P908, and P911	See b)(2)g.
d.	OAC rule 3745-17-07(B), for emissions units F007, F008, F009, F012 and F013 only	See b)(2)h.
e.	OAC rule 3745-17-08(B), for emissions units F007, F008, F009, F012 and F013 only	See b)(2)i.
f.	OAC rule 3745-17-11(B), for emissions units P907, P908 and P911	See b)(2)j.

(2) Additional Terms and Conditions

- a. Permit to Install (PTI) #03-244, effective November 24, 1975, was issued for the three induction furnaces and associated process equipment at this facility. PTI #03-244 did not establish any limits for these emissions units. In addition, the purpose of this permit is a renewal action which does not involve a re-evaluation of Best Available Technology (BAT) for these sources. Therefore, BAT is determined to be compliance with the terms and conditions of this permit.
- b. PTI #03-17322, effective September 20, 2007, was issued for emissions unit P911 (formerly known as F014). Revised emission factors have been used to determine the short term emission limitations representing the potential to emit for this emissions unit. In addition, the annual potential iron production from emissions units F001 through F003 provides an inherent physical limitation on the VOC and PM10 emissions from all core machines. Therefore, the annual potential to emit of VOC and PM10 emissions are based on the maximum iron throughput associated with all core machines combined [See b)(2)e.]. Therefore, no monitoring and recordkeeping is necessary to show compliance with the hourly or annual limitations.

- c. Due to the nature of these machines, the potential to emit of VOC for all core machines has been based on historical data (highest average annual value for 2008-2010), provided by the company, of the actual binder resin usage, actual core oil usage, and actual core dip material usage in relation to actual iron production during the same time period. This ratio (lbs VOC/ton iron melted), along with the maximum operating rate\* for this machine, was used to determine the potential to emit for this machine.

The VOC emission rate from no-bake, phenolic binder resin use is calculated by multiplying an emission factor of 6 lbs VOC/100 lbs binder (Ohio EPA/OCMA MOU, dated February 16, 1998) by a historical binder usage rate of 18.46 lbs binder/ton iron melted (1.11 lbs VOC/ton iron melted).

The VOC emission rate from core oil use is calculated by multiplying a usage rate of 0.16 lbs oil/ton iron melted (company supplied historical data) by a VOC content of 10 lbs VOC/100 lbs oil (0.02 lbs VOC/ton iron melted).

The core dip is comprised of two different VOC containing materials. The VOC emission rate from core dip material use is calculated by multiplying a usage rate of 2.29 lbs material/ton iron melted (company supplied historical data) by a VOC content of 15 lbs VOC/100 lbs material, in addition to, multiplying a usage rate of 1.83 lbs material/ton iron melted (company supplied historical data) by a VOC content of 98 lbs VOC/100 lbs material (2.13 lbs VOC/ton iron melted).

[The potential to emit of VOC for emissions unit P911 is calculated by multiplying the maximum hourly operating rate\* of 1.40 tons of iron/hr by the combined VOC emission rates calculated above (1.40 ton iron/hr x 3.26 lb VOC/ton = 4.56 lbs VOC/hr).

The potential to emit of PM10 for emission unit P911 is calculated by multiplying the maximum hourly operating rate\* of 1.40 tons of iron/hr by an AP-42, Table 12.10.7 emission factor of 1.1 lbs PM10/ton of iron.]

\*The maximum operating rate for these emissions units represents the highest value obtained by multiplying the maximum number of cores that can be processed within an hour by the weight iron associated with of the specific core. The resulting rate is expressed in terms of tons of iron processed per hour, even though the core machine processes only sand.

- d. This facility is a gray iron foundry which is not listed as one of the PSD source categories and as such, fugitive emissions from these sources are not considered toward major source applicability in either the PSD or Title V programs.
- e. The core machines at this facility consist of 10 total machines, with five of these considered as point sources due to the use of capture hoods with direct ventilation of uncontrolled emissions through a stack, and five machines that are considered fugitive in nature. Therefore, for the purpose of determining the PM10 facility-wide potential to emit and establishment of conservative fugitive and point source emission limitations, it is assumed that the entire iron production in emission units F001 through F003 will be processed utilizing cores

from only the fugitive core machines F007, F008, F009, F012, and F013. Likewise, it is assumed that the entire iron production in emission units F001 through F003 will be processed utilizing cores from only the core machines employing the use a capture hoods for direct ventilation, separately. These machines are emission units P907, P908, P909, P910, and P911.

- f. The fugitive particulate emissions from emissions units P907, P908 and P911 are negligible and therefore, a fugitive visible emission limitation is not necessary for these sources.
  - g. These emissions units are exempt from the visible emissions limitations specified in OAC rule 3745-17-07(A), pursuant to OAC rule 3745-17-07(A)(3)(h), because OAC rule 3745-17-11 is not applicable.
  - h. These emission units are exempt from the visible particulate emission limitations for fugitive dust, specified in OAC rule 3745-17-07(B), pursuant to OAC rule 3745-17-07(B)(11)(e), because the emissions units are not located within areas identified in "Appendix A" of OAC rule 3745-17-08.
  - i. These emission units are not located within areas identified in "Appendix A" of OAC rule 3745-17-08, therefore, the requirements of OAC rule 3745-17-08(B), which requires the installation of reasonably available control measures to prevent fugitive dust, do not apply to these emission units pursuant to OAC rule 3745-17-08(A)(1).
  - j. The uncontrolled mass rate of particulate emissions from each of these emissions units is less than 10 lbs/hr. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. Also, pursuant to OAC rule 3745-17-11(A)(2)(b)(ii), Table 1 does not apply because the facility is located in Ashland County.
- c) Operational Restrictions
- (1) None.
- d) Monitoring and/or Recordkeeping Requirements
- (1) The permittee shall perform weekly checks, when emissions unit P911 is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving emissions unit P911. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
    - a. the location and 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 minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item d)(1)d. above or continue the weekly check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

- (2) Modeling to demonstrate compliance with, the "Toxic Air Contaminant Statute", ORC 3704.03(F)(4)(b), was not necessary because the maximum annual emissions for each toxic air contaminant, as defined in OAC rule 3745-114-01, from emissions unit P911 will be less than 1.0 ton per year. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

e) Reporting Requirements

- (1) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the director by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.
- (2) The permittee shall identify the following information in the annual permit evaluation report in accordance with the monitoring requirements for visible emissions in term number d)(1) above:
  - a. all days during which any visible particulate emissions were observed from the stack serving emissions unit P911; and
  - b. any corrective actions taken to minimize or eliminate the visible particulate emissions.

f) Testing Requirements

- a. Emission Limitation:  
81.39 tons VOC/year from emissions units F007, F008, F009, F012, F013 P907, P908, P909, P910 and P911 combined

Applicable Compliance Method:

This limit represents the potential to emit\* for these sources. Therefore, no monitoring and recordkeeping is required to show compliance with this limitation.

\*The potential to emit is determined by multiplying a facility-maximum iron throughput of 49,932 tons/yr by a core machine emission factor of 3.26 lbs VOC/ton of iron [See b)(2)c.] and dividing by a conversion factor of 2000 lbs/ton.

b. Emission Limitation:

27.46 tons PM10/year from the stacks serving emissions units P907, P908, P909, P910 and P911 combined

Applicable Compliance Method:

This limit represents the potential to emit\* for these sources. Therefore, no monitoring and recordkeeping is required to show compliance with this limitation.

\*The potential to emit is determined by multiplying a facility-maximum iron throughput of 49,932 tons/yr by an emission factor of 1.1 lbs PE/ton of iron [AP-42, Table 12.10-7 (01/95)] and dividing by a conversion factor of 2000 lbs/ton. The emissions are then assigned to the group of all core machines with capture hoods. [See b)(2)e].

c. Emission Limitation:

Visible PE from the stack serving emissions unit P911 shall not exceed 10 percent opacity as a six-minute average

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance in accordance with USEPA Method 9 of 40 CFR, Part 60, Appendix A.

g) Miscellaneous Requirements

- (1) None.

**3. Emissions Unit Group - Electric Induction Furnaces #1-3: F001, F002, F003**

EU ID	Operations, Property and/or Equipment Description
F001	Electric Induction Furnace 1
F002	Electric Induction Furnace 2
F003	Electric Induction Furnace 3

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 3745-31-05(A)(3)	See b)(2)a. through b)(2)c.
b.	OAC rule 3745-17-07(B)	See b)(2)d.
c.	OAC rule 3745-17-08(B)	See b)(2)e.

(2) Additional Terms and Conditions

a. Permit to Install (PTI) #03-244, effective November 24, 1975, was issued for the three induction furnaces and associated process equipment at this facility. PTI #03-244 did not establish any limits for these emissions units. In addition, the purpose of this permit is a renewal action which does not involve a re-evaluation of Best Available Technology (BAT) for these sources. Therefore, BAT is determined to be compliance with the terms and conditions of this permit.

b. This facility is a gray iron foundry which is not listed as one of the PSD source categories and as such, fugitive emissions from these sources are not considered toward major source applicability in either the PSD or Title V programs.

- c. Pentair Casting Center, Division of Pentair Pump Group currently controls lead emissions by purchasing scrap with a total lead concentration of less than 0.001%. Therefore, for conservative purposes, the potential to emit of lead emissions is calculated by multiplying a maximum lead concentration of 0.001% in all purchased scrap by the maximum iron production of 49,932 tons/year (0.50 TPY).
  - d. These emission units are exempt from the visible particulate emission limitations for fugitive dust, specified in OAC rule 3745-17-07(B), pursuant to OAC rule 3745-17-07(B)(11)(e), because the emissions units are not located within areas identified in "Appendix A" of OAC rule 3745-17-08.
  - e. These emission units are not located within areas identified in "Appendix A" of OAC rule 3745-17-08, therefore, the requirements of OAC rule 3745-17-08(B), which requires the installation of reasonably available control measures to prevent fugitive dust, do not apply to these emission units pursuant to OAC rule 3745-17-08(A)(1).
- c) Operational Restrictions
    - (1) None.
  - d) Monitoring and/or Recordkeeping Requirements
    - (1) None.
  - e) Reporting Requirements
    - (1) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the director by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.
  - f) Testing Requirements
    - (1) None.
  - g) Miscellaneous Requirements
    - (1) None.

**4. Emissions Unit Group - Mold Making Machines: F015, F016, F018**

EU ID	Operations, Property and/or Equipment Description
F015	Hunter 10-1 Line Mold Making - 1.05 ton/hr
F016	Hunter 10-2 Line Mold Making - 1.05 ton/hr
F018	Osborn Line Mold Making - 5.70 ton/hr

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 3745-31-05(A)(3)	See b)(2)a. and b)(2)b.
b.	OAC rule 3745-17-07(B)	See b)(2)c.
c.	OAC rule 3745-17-08(B)	See b)(2)d.

(2) Additional Terms and Conditions

a. Permit to Install (PTI) #03-244, effective November 24, 1975, was issued for the three induction furnaces and associated process equipment at this facility. PTI #03-244 did not establish any limits for these emissions units. In addition, the purpose of this permit is a renewal action which does not involve a re-evaluation of Best Available Technology (BAT) for these sources. Therefore, BAT is determined to be compliance with the terms and conditions of this permit.

b. This facility is a gray iron foundry which is not listed as one of the PSD source categories and as such, fugitive emissions from these sources are not considered toward major source applicability in either the PSD or Title V programs.

- c. These emission units are exempt from the visible particulate emission limitations for fugitive dust, specified in OAC rule 3745-17-07(B), pursuant to OAC rule 3745-17-07(B)(11)(e), because the emissions units are not located within areas identified in "Appendix A" of OAC rule 3745-17-08.
- d. These emission units are not located within areas identified in "Appendix A" of OAC rule 3745-17-08, therefore, the requirements of OAC rule 3745-17-08(B), which requires the installation of reasonably available control measures to prevent fugitive dust, do not apply to these emission units pursuant to OAC rule 3745-17-08(A)(1).

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) None.

e) Reporting Requirements

- (1) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the director by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.

f) Testing Requirements

- (1) None.

g) Miscellaneous Requirements

- (1) None.

**5. Emissions Unit Group - Pouring & Cooling Lines: F019, F020, F021**

<b>EU ID</b>	<b>Operations, Property and/or Equipment Description</b>
F019	Osborn Line Pouring and Cooling - 5.70 ton/hr
F020	Hunter 10-1 Line Pouring and Cooling - 1.05 ton/hr
F021	Hunter 10-2 Line Pouring and Cooling - 1.05 ton/hr

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 3745-31-05(A)(3)	See b)(2)a. and b)(2)b.
b.	OAC rule 3745-17-07(B)	See b)(2)c.
c.	OAC rule 3745-17-08(B)	See b)(2)d.

(2) Additional Terms and Conditions

a. Permit to Install (PTI) #03-244, effective November 24, 1975, was issued for the three induction furnaces and associated process equipment at this facility. In addition, the purpose of this permit is to establish a federally enforceable restriction on the annual iron production which does not involve a re-evaluation of Best Available Technology (BAT) for these sources. Therefore, BAT is determined to be compliance with the terms and conditions of this permit.

b. This facility is a gray iron foundry which is not listed as one of the PSD source categories and as such, fugitive emissions from these sources are not considered toward major source applicability in either the PSD or Title V programs.

- c. These emission units are exempt from the visible particulate emission limitations for fugitive dust, specified in OAC rule 3745-17-07(B), pursuant to OAC rule 3745-17-07(B)(11)(e), because the emissions units are not located within areas identified in "Appendix A" of OAC rule 3745-17-08.
- d. These emission units are not located within areas identified in "Appendix A" of OAC rule 3745-17-08, therefore, the requirements of OAC rule 3745-17-08(B), which requires the installation of reasonably available control measures to prevent fugitive dust, do not apply to these emission units pursuant to OAC rule 3745-17-08(A)(1).

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) None.

e) Reporting Requirements

- (1) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the director by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit.

f) Testing Requirements

- (1) None.

g) Miscellaneous Requirements

- (1) None.

**6. Emissions Unit Group - Shotblast Machines: P014, P015**

EU ID	Operations, Property and/or Equipment Description
P014	Wheelabrator-Shotblast Cleaner #2226 - 1.50 ton/hr controlled by a baghouse
P015	Wheelabrator-Shotblast Cleaner #2223 - 1.92 ton/hr controlled by a baghouse

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 3745-31-05(A)(3)	0.02 grains particulate matter less than or equal to 10 microns in size (PM10)/dscf from the stack serving emissions units P014, P015 and P905 combined  69.83 tons PM10/yr from the stack serving emissions units P014, P015 and P905 combined  2.12 tons fugitive PM10/year from P014 and P015 combined  Visible particulate emissions (PE) of fugitive dust shall not exceed twenty percent opacity as a three-minute average from emissions units P014 and P015, separately [See b)(2)c.]  Visible PE from the stack serving

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		emissions units P014 and P015 shall not exceed 10 percent opacity as a six-minute average  See b)(2)a. through b)(2)c.
b.	OAC rule 3745-17-07(A)	See b)(2)d.
c.	OAC rule 3745-17-07(B)	See b)(2)e.
d.	OAC rule 3745-17-08(B)	See b)(2)f.
e.	OAC rule 3745-17-11(B)	See b)(2)d.

(2) Additional Terms and Conditions

- a. Permits to Operate (PTO), effective October 23, 1992 and November 25, 1992, were issued for P014 and P015 respectively. The terms of the PTO's contained short term particulate emission limitations for these sources. However, the purpose of this permit is to establish a combined emissions limitation for emissions units P014, P015 and P905 which are controlled by a common baghouse. Therefore, BAT is determined to be use of a baghouse and compliance with the terms and conditions of this permit.

[Note: Grinding operations (emissions unit P906) consist of seven grinding stations. Four of these stations are vented to the same baghouse controlling emissions units P014, P015 and P905. Since the uncontrolled potential to emit of emissions unit P906 is less than 10 lbs/day, the grinding operations are permit exempt in accordance with OAC rule 3745-15-05(B).]

- b. This facility is a gray iron foundry which is not listed as one of the PSD source categories and as such, fugitive emissions from these sources are not considered toward major source applicability in either the PSD or Title V programs.
- c. The visible PE limitation for emissions units P014 and P015, separately, shall apply to the following:
- i. the egress points (i.e., building windows, doors, roof monitors, etc.) serving each emissions unit; and
  - ii. visible PE due solely to the operation of each emissions unit.
- d. The emission limitation specified by this rule is equivalent to or less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
- e. These emission units are exempt from the visible particulate emission limitations for fugitive dust, specified in OAC rule 3745-17-07(B), pursuant to OAC rule 3745-17-07(B)(11)(e), because the emissions units are not located within areas identified in "Appendix A" of OAC rule 3745-17-08.

- f. These emission units are not located within areas identified in "Appendix A" of OAC rule 3745-17-08, therefore, the requirements of OAC rule 3745-17-08(B), which requires the installation of reasonably available control measures to prevent fugitive dust, do not apply to these emission units pursuant to OAC rule 3745-17-08(A)(1).

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall perform weekly checks, when each emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions from the egress points (i.e., building windows, doors, roof monitors, etc.) serving emissions units P014 and P015, separately. The presence or absence of any visible fugitive emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - a. the location and 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 minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item d)(1)d. above or continue the weekly check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

- (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 units are in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on weekly basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The pressure drop across the baghouse shall be maintained within the range of 1-6 inches of water while the emissions unit is in operation.

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 particulate emission rate for the controlled emissions units. 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.

e) Reporting Requirements

- (1) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the director by the due date identified in the Authorization section of this permit. The permit evaluation report shall

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

- (2) The permittee shall identify the following information in the annual permit evaluation report in accordance with the monitoring requirements for visible emissions in term number d)(1) above:
  - a. all days during which any visible fugitive particulate emissions were observed; and
  - b. any corrective actions taken to minimize or eliminate the visible fugitive particulate emissions.
  
- (3) The permittee shall identify in the annual permit evaluation report the following information concerning the operations of the baghouse during the 12-month reporting period for these emissions units:
  - a. 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;
  - b. 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;
  - c. each incident of deviation described in e)(3)a. (above) where a prompt investigation was not conducted;
  - d. each incident of deviation described in e)(3)a. where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and
  - e. each incident of deviation described in e)(3)a. where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.

f) **Testing Requirements**

- (1) Compliance with the emission limitation(s) in Section b)(1) of these terms and conditions shall be determined in accordance with the following method(s):

- a. Emission Limitation:

0.02 grains particulate matter less than or equal to 10 microns in size (PM10)/dscf from the stack serving emissions units P014, P015 and P905 combined

- Applicable Compliance Method:

The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- i. The emission testing shall be conducted to demonstrate compliance with the allowable PM10 limitation.

[Note: Pentair Casting Center, Division of Pentair Pump Group conducted emissions testing on June 25, 2010 at the request of the Division of Air Pollution Control, Northwest District Office in order to determine the PM emission rate from the baghouse controlling P014, P015, and P905. The results of this testing event shall be sufficient to meet the testing requirements of this permit.]

If required, additional testing may be required to further demonstrate compliance with the gr/dscf limitation.

- ii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

PM10, Methods 1-4, 201/201A and 202, of 40 CFR Part 51, Appendix M.

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

- iii. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

- b. Emission Limitation:

69.83 tons PM10/yr from the stack serving emissions units P014, P015 and P905 combined

Applicable Compliance Method:

The annual PM10 emission limitation was established by multiplying the short term emission rate of 0.02 grains PM10/dscf, by a maximum baghouse flow rate of 93,000 dscf/min, by the maximum operating schedule of 8760 hrs/yr, and the conversion factor of 60 min/hr, then dividing by the conversion factors of 7000 grains/lb PM10 and 2000 lbs/ton. Therefore, provided compliance is shown with the short term emission limitation above, compliance with the annual emission limitation shall be demonstrated.

c. Emission Limitation:

2.12 tons fugitive PM10/year from emissions units P014 and P015 combined

Applicable Compliance Method:

The fugitive PM10 limitation was established by multiplying emission factor of 1.7 lbs/ton [WebFIRE, SCC 3-04-003-40] by a maximum iron throughput of 49,932 tons/year, applying a baghouse capture efficiency of 95%, and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the requirements of this permit to apply best available control measures, compliance with the ton per year PM10 limitation will be demonstrated.

d. Emission Limitation:

Visible PE of fugitive dust shall not exceed twenty percent opacity as a three-minute average from emissions units P014 and P015, separately

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance in accordance with USEPA Method 9 of 40 CFR, Part 60, Appendix A.

e. Emission Limitation:

Visible PE from the stack serving emissions units P014 and P015 shall not exceed 10 percent opacity as a six-minute average

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance in accordance with USEPA Method 9 of 40 CFR, Part 60, Appendix A.

g) Miscellaneous Requirements

(1) None.