State of Ohio Environmental Protection Agency

Street Address:
Lazarus Gov. Center
122 S. Front Street
Columbus, OH 43215

TELE: (614) 644-3020 **FAX:** (614) 644-2329

Mailing Address:
Lazarus Gov. Center
P.O. Box 1049
Columbus, OH 43216-1049

04/23/03

CERTIFIED MAIL

RE: Final Title V Chapter 3745-77 permit

14-31-23-3202
Harrison Ironworks
Robert L. Pranger
200 Industrial Dr.
Harrison, OH 45030-1487

Dear Robert L. Pranger:

Enclosed is the Title V permit that allows you to operate the facility in the manner indicated in the permit. Because this permit may contain several conditions and restrictions, we urge you to read it carefully.

The Ohio EPA is encouraging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Pollution Prevention at (614) 644-3469.

You are hereby notified that this action of the Director is final 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. It must be filed with the Environmental Review Appeals Commission within thirty (30) days after notice of the Director's action. A copy of the appeal must be served on the Director of the Ohio Environmental Protection Agency within three (3) days of filing with the Commission. It is also requested by the Director that a copy of the appeal be served upon the Environmental Enforcement Section of the Office of the Attorney General. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

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

If you have any questions, please contact Hamilton County Dept. of Environmental Services.

Very truly yours,

Michael W. Ahern

Michael W. Ahern, Supervisor
Field Operations and Permit Section
Division of Air Pollution Control

cc: Hamilton County Dept. of Environmental Services
File, DAPC PMU

State of Ohio Environmental Protection Agency

FINAL TITLE V PERMIT

Issue Date: **04/23/03**	Effective Date: **05/13/03**	Expiration Date: **05/13/08**

This document constitutes issuance of a Title V permit for Facility ID: 14-31-23-3202 to:
Harrison Ironworks
200 Industrial Dr.
Harrison, OH 45030-1487

Emissions Unit ID (Company ID)/Emissions Unit Activity Description

F001 (#1 Electrical Induction Furnace)
7.5 ton Inductotherm coreless furnace #1 rated at 1850 Kw

F002 (#2 Electrical Induction Furnace)
7.5 ton Inductotherm coreless furnace #2 rated at 1850 Kw

F003 (#3 Electrical Induction Furnace)
7.5 ton Inductotherm coreless furnace #3 rated at 1850 Kw

F006 (Ductile Iron Inoculation)
Flotret ductile iron treatment

F007 (Shell Core Machines (Core Line #1))
3 Dependable 400 shell core machines (20"x26"x20") and 2 Dependable 200 shell core machines (14"x16"x16").

F008 (Cold box and air set core machines (Core Line #3))
1 Isocure sand mixer, 2 Redford CB-22 core machines, 2 Redford CB-16 core machines, 1 Redford cartridge blower, 1 Interel wet scrubber.

F016 (#4 Electrical Induction Furnace)
18 ton Inductotherm coreless furnace rated at 3000 Kw

F018 (Disa Pour & Cool)
Disa Forma Pour and Cool Line

P001 (Scrap Pre-Heater)
1 Venetta gas-fired pre-heater to 1000 degrees F with scrap bins and weigh scale

P002 (Casting Shakeout)
Casting shakeout - enclosed vibratory conveyor with Fuller baghouse

P007 (BMD Shot Blast)
BMD 28 cubic foot shot blast, DTC 2-250 with cartridge filter

P008 (Pangborn Tumbleblast, 26 CF)
26 cubic foot Pangborn Tumblast shot blast with cartridge filter

P009 (Pangborn Spin Blast (Rotoblast cabinet))
Pangborn spinner shotblast (rotoblast cabinet) with cartridge filter

P901 (Sand Unloading and Handling)
Sand storage silos and muller, associated pneumatic transfer and conveying equipment, baghouse

P904 (Disa-Forma Mold Making)
Disa-Forma 3030 molding machine

P906 (Sinto Pour & Cool)
Roberts - Sinto Pour and Cool Line With Fabric Filter Control

P907 (CB-16 Core Mach 1
)
CB-16 Core Machine # 1

You will be contacted approximately eighteen (18) months prior to the expiration date regarding the renewal of this permit. If you are not contacted, please contact the appropriate Ohio EPA District Office or local air agency listed below. This permit and the authorization to operate the air contaminant sources (emissions units) at this facility shall expire at midnight on the expiration date shown above. If a renewal permit is not issued prior to the expiration date, the permittee may continue to operate pursuant to OAC rule 3745-77-08(E) and in accordance with the terms of this permit beyond the expiration date, provided that a complete renewal application is submitted no earlier than eighteen (18) months and no later than one-hundred eighty (180) days prior to the expiration date.

Described below is the current Ohio EPA District Office or local air agency that is responsible for processing and administering your Title V permit:

Hamilton County Dept. of Environmental Services
250 William Howard Taft Rd
Cincinnati, OH 45219-2660
(513) 946-7777

OHIO ENVIRONMENTAL PROTECTION AGENCY

Christopher Jones
Director

PART I - GENERAL TERMS AND CONDITIONS

A. State and Federally Enforceable Section

1. Monitoring and Related Record Keeping and Reporting Requirements

a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:

i. The date, place (as defined in the permit), and time of sampling or measurements.
ii. The date(s) analyses were performed.
iii. The company or entity that performed the analyses.
iv. The analytical techniques or methods used.
v. The results of such analyses.
vi. The operating conditions existing at the time of sampling or measurement.
(Authority for term: OAC rule 3745-77-07(A)(3)(b)(i))

b. Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
(Authority for term: OAC rule 3745-77-07(A)(3)(b)(ii))

c. The permittee shall submit required reports in the following manner:

i. Reports of any required monitoring and/or record keeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
(Authority for term: OAC rule 3745-77-07(A)(3)(c))

ii. **All reporting required in accordance with the OAC rule 3745-77-07(A)(3)(c) with respect to emission limitations, operational restrictions, and control device operating parameter limitations shall be submitted in the following manner:**

(a) Written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations ; (ii) the probable cause of such deviations; and (iii) any corrective actions or preventive measures taken, shall be promptly made to the appropriate Ohio EPA District Office or local air agency. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, i.e., in Part III of this Title V permit, the written reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year, and shall cover the previous calendar quarters. In identifying each deviation,

the permittee shall specify the applicable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. These written reports shall satisfy the requirements (in part) of OAC rule 3745-77-07(A)(3)(c)(i) and (ii) pertaining to the submission of monitoring reports every six months and the requirements (in part) of OAC rule 3745-77-07(A)(3)(c)(iii) pertaining to the prompt reporting of all deviations. See B.6 below if no deviations occurred during the quarter.
(Authority for term: OAC rules 3745-77-07(A)(3)(c)(i) ,(ii) and (iii))

(b) Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be promptly reported to the Ohio EPA in accordance with OAC rule 3745-15-06. In addition, to fulfill the deviation reporting requirements for this Title V permit, written reports that identify each malfunction that occurred during each calendar quarter shall be submitted, at a minimum, quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year, and shall cover the previous calendar quarters.

In identifying each deviation caused by a malfunction, the permittee shall specify the applicable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. For a specific malfunction, if this information has been provided in a written report that was submitted in accordance with OAC rule 3745-15-06, the permittee may simply reference that written report to identify the deviation. Also, if a deviation caused by a malfunction is identified in a written report submitted pursuant to paragraph (a) above, a separate report is not required for that malfunction pursuant to this paragraph. Nevertheless, all malfunctions, including those reported only verbally in accordance with OAC rule 3745-15-06, must be reported in writing, at a minimum, on a quarterly basis.

Any scheduled maintenance, as defined in OAC rule 3745-15-06(A)(1), that results in a deviation from a federally enforceable emission limitation, operational restriction, and control device operating parameter limitation shall be reported in the same manner as described above for malfunctions. These written reports for malfunctions (and scheduled maintenance projects, if appropriate) shall satisfy the requirements (in part) of OAC rule 3745-77-07(A)(3)(c)(iii) pertaining to the prompt reporting of all deviations.
(Authority for term: OAC rules 3745-77-07(A)(3)(c)(iii))

iii. **For monitoring, record keeping, and reporting requirements:**
Written reports that identify any deviations from the federally enforceable monitoring, record keeping, and reporting requirements contained in this permit shall be submitted to the appropriate Ohio EPA District Office or local air agency every six months, i.e., by January 31 and July 31 of each year, for the previous six calendar months. In

identifying each deviation, the permittee shall specify the applicable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. These semi-annual written reports shall satisfy the requirements of OAC rule 3745-77-07(A)(3)(c)(i) and (ii) pertaining to the reporting of any deviations related to the monitoring, record keeping, and reporting requirements. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report which states that no deviations occurred during that period.
(Authority for term: OAC rules 3745-77-07(A)(3)(c)(i) and (ii))

iv. Each written report shall be signed by a responsible official certifying that, "based on information and belief formed after reasonable inquiry, the statements and information in the report (including any written malfunction reports required by OAC rule 3745-15-06 that are referenced in the deviation reports) are true, accurate, and complete."
(Authority for term: OAC rule 3745-77-07(A)(3)(c)(iv))

2. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction of any emissions unit(s) or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. Except as provided in OAC rule 3745-15-06, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s).
(Authority for term: OAC rule 3745-77-07(A)(3)(c)(iii))

3. Risk Management Plans

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. 7401 et seq. ("Act"), the permittee shall comply with the requirement to register such a plan.
(Authority for term: OAC rule 3745-77-07(A)(4))

4. Title IV Provisions

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain, the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.
(Authority for term: OAC rule 3745-77-07(A)(5))

5. Severability Clause

A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.

(Authority for term: OAC rule 3745-77-07(A)(6))

6. General Requirements

a. The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and reissuance, or modification, or for denial of a permit renewal application.

b. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.

c. This permit may be modified, reopened, revoked, or revoked and reissued, for cause, in accordance with A.10 below. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.

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

e. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

(Authority for term: OAC rule 3745-77-07(A)(7))

7. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78.

(Authority for term: OAC rule 3745-77-07(A)(8))

8. Marketable Permit Programs

No revision of this permit is required under any approved economic incentive, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in this permit.

(Authority for term: OAC rule 3745-77-07(A)(9))

9. Reasonably Anticipated Operating Scenarios

The permittee is hereby authorized to make changes among operating scenarios authorized in this permit without notice to the Ohio EPA, but, contemporaneous with making a change from one operating scenario to another, the permittee must record in a log at the permitted facility the scenario under which the permittee is operating. The permit shield provided in these general terms and conditions shall apply to all operating scenarios authorized in this permit.
(Authority for term: OAC rule 3745-77-07(A)(10))

10. Reopening for Cause

This Title V permit will be reopened prior to its expiration date under the following conditions:

a. Additional applicable requirements under the Act become applicable to one or more emissions units covered by this permit, and this permit has a remaining term of three or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to paragraph (E)(1) of OAC rule 3745-77-08.

b. This permit is issued to an affected source under the acid rain program and additional requirements (including excess emissions requirements) become applicable. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the permit, and shall not require a reopening of this permit.

c. The Director of the Ohio EPA or the Administrator of the U.S. EPA determines that the federally applicable requirements in this permit are based on a material mistake, or that inaccurate statements were made in establishing the emissions standards or other terms and conditions of this permit related to such federally applicable requirements.

d. The Administrator of the U.S. EPA or the Director of the Ohio EPA determines that this permit must be revised or revoked to assure compliance with the applicable requirements.

(Authority for term: OAC rules 3745-77-07(A)(12) and 3745-77-08(D))

11. Federal and State Enforceability

Only those terms and conditions designated in this permit as federally enforceable, that are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA, the State, and citizens under the Act. All other terms and conditions of this permit shall not be federally enforceable and shall be enforceable under State law only.
(Authority for term: OAC rule 3745-77-07(B))

12. Compliance Requirements

a. Any document (including reports) required to be submitted and required by a federally applicable requirement in this Title V permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.

b. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:

   i. At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
   ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with paragraph (E) of OAC rule 3745-77-03.
   iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
   iv. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.

c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually, or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:

   i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
   ii. An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

d. Compliance certifications concerning the terms and conditions contained in this permit that are federally enforceable emission limitations, standards, or work practices, shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) and the Administrator of the U.S. EPA in the following manner and with the following content:

   i. Compliance certifications shall be submitted annually on a calendar year basis. The annual certification shall be submitted on or before April 30th of each year during the permit term.
   ii. Compliance certifications shall include the following:

(a) An identification of each term or condition of this permit that is the basis of the certification.
(b) The permittee's current compliance status.
(c) Whether compliance was continuous or intermittent.
(d) The method(s) used for determining the compliance status of the source currently and over the required reporting period.
(e) Such other facts as the Director of the Ohio EPA may require in the permit to determine the compliance status of the source.

iii. Compliance certifications shall contain such additional requirements as may be specified pursuant to sections 114(a)(3) and 504(b) of the Act.

(Authority for term: OAC rules 3745-77-07(C)(1),(2),(4) and (5) and ORC section 3704.03(L))

13. Permit Shield

a. Compliance with the terms and conditions of this permit (including terms and conditions established for alternate operating scenarios, emissions trading, and emissions averaging, but excluding terms and conditions for which the permit shield is expressly prohibited under OAC rule 3745-77-07) shall be deemed compliance with the applicable requirements identified and addressed in this permit as of the date of permit issuance.

b. This permit shield provision shall apply to any requirement identified in this permit pursuant to OAC rule 3745-77-07(F)(2), as a requirement that does not apply to the source or to one or more emissions units within the source.

(Authority for term: OAC rule 3745-77-07(F))

14. Operational Flexibility

The permittee is authorized to make the changes identified in OAC rule 3745-77-07(H)(1)(a) to (H)(1)(c) within the permitted stationary source without obtaining a permit revision, if such change is not a modification under any provision of Title I of the Act [as defined in OAC rule 3745-77-01(JJ)], and does not result in an exceedance of the emissions allowed under this permit (whether expressed therein as a rate of emissions or in terms of total emissions), and the permittee provides the Administrator of the U.S. EPA and the appropriate Ohio EPA District Office or local air agency with written notification within a minimum of seven days in advance of the proposed changes, unless the change is associated with, or in response to, emergency conditions. If less than seven days notice is provided because of a need to respond more quickly to such emergency conditions, the permittee shall provide notice to the Administrator of the U.S. EPA and the appropriate District Office of the Ohio EPA or local air agency as soon as possible after learning of the need to make the change. The notification shall contain the items required under OAC rule 3745-77-07(H)(2)(d).

(Authority for term: OAC rules 3745-77-07(H)(1) and (2))

15. Emergencies

The permittee shall have an affirmative defense of emergency to an action brought for noncompliance with technology-based emission limitations if the conditions of OAC rule 3745-77-07(G)(3) are met.

This emergency defense provision is in addition to any emergency or upset provision contained in any applicable requirement.
(Authority for term: OAC rule 3745-77-07(G))

16. Off-Permit Changes

The owner or operator of a Title V source may make any change in its operations or emissions at the source that is not specifically addressed or prohibited in the Title V permit, without obtaining an amendment or modification of the permit, provided that the following conditions are met:

a. The change does not result in conditions that violate any applicable requirements or that violate any existing federally enforceable permit term or condition.

b. The permittee provides contemporaneous written notice of the change to the Director and the Administrator of the U.S. EPA, except that no such notice shall be required for changes that qualify as insignificant emission levels or activities as defined in OAC rule 3745-77-01(U). Such written notice shall describe each such change, the date of such change, any change in emissions or pollutants emitted, and any federally applicable requirement that would apply as a result of the change.

c. The change shall not qualify for the permit shield under OAC rule 3745-77-07(F).

d. The permittee shall keep a record describing all changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes.

e. The change is not subject to any applicable requirement under Title IV of the Act or is not a modification under any provision of Title I of the Act.

Paragraph (I) of rule 3745-77-07 of the Administrative Code applies only to modification or amendment of the permittee's Title V permit. The change made may require a permit to install under Chapter 3745-31 of the Administrative Code if the change constitutes a modification as defined in that Chapter. Nothing in paragraph (I) of rule 3745-77-07 of the Administrative Code shall affect any applicable obligation under Chapter 3745-31 of the Administrative Code.

(For purposes of clarification, the permittee can refer to Engineering Guide #63 that is available in the STARSHIP software package.)
(Authority for term: OAC rule 3745-77-07(I))

17. Compliance Method Requirements

Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defenses otherwise available to the

permittee, including but not limited to, any challenge to the Credible Evidence Rule (see 62 Fed. Reg. 8314, Feb. 24, 1997), in the context of any future proceeding.
(This term is provided for informational purposes only.)

18. Insignificant Activities

Each insignificant activity that has one or more applicable requirements shall comply with those applicable requirements.
(Authority for term: OAC rule 3745-77-07(A)(1))

19. Permit to Install Requirement

Prior to the "installation" or "modification" of any "air contaminant source," as those terms are defined in OAC rule 3745-31-01, a permit to install must be obtained from the Ohio EPA pursuant to OAC Chapter 3745-31.
(Authority for term: OAC rule 3745-77-07(A)(1))

20. Air Pollution Nuisance

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.
(Authority for term: OAC rule 3745-77-07(A)(1))

B. *State Only Enforceable Section*

1. Reporting Requirements Related to Monitoring and Record Keeping Requirements

The permittee shall submit required reports in the following manner:

a. Reports of any required monitoring and/or record keeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.

b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (i) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and record keeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. In identifying each deviation, the permittee shall specify the applicable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31

of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

2. Records Retention Requirements

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

3. Inspections and Information Requests

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

4. Scheduled Maintenance/Malfunction Reporting

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

5. Permit Transfers

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

6. Additional Reporting Requirements When There Are No Deviations of <u>Federally Enforceable</u> Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations (See Section A of This Permit)

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

Part II - Specific Facility Terms and Conditions

A. State and Federally Enforcable Section

None

B. State Only Enforceable Section

1. The following insignificant emissions units are located at this facility:

B001 - 4.0 MMBtu/hr Gas-Fired Annealing Oven
P006 - Grinders and Finishing Castings
P010 - Core Making Machine with Packed Tower Scrubber
P905 - Core Making and Sand Mixing

Each insignificant emissions unit at this facility must comply with all applicable State and federal regulations, as well as any emission limitations and/or control requirements contained within a permit to install for the emissions unit.

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: #1 Electrical Induction Furnace (F001)

Activity Description: 7.5 ton Inductotherm coreless furnace #1 rated at 1850 Kw

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
coreless induction melting furnace No. 1	OAC rule 3745-17-07(B)(1)	Visible emissions of fugitive dust shall not exceed 20% opacity, as a three-minute average.
	OAC rule 3745-17-08(B)*	Reasonably available control measures to minimize or eliminate visible emissions of fugitive dust. (No control measures have been identified as being reasonably available for this emissions unit.) * This emissions unit is located in a non-Appendix A area, but is subject to this rule per OAC rule 3745-17-08(A)(2).

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust escaping from the building containing this emissions unit. 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 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.

III. Monitoring and/or Record Keeping Requirements (continued)

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) above or continue the daily 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.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which any visible emissions of fugitive dust were observed escaping from the building containing this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible emissions. These reports shall be submitted to the Hamilton County Department of Environmental Services by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitation specified in Section A.I shall be determined in accordance with the following method:

Emission Limitation: Visible emissions of fugitive dust shall not exceed 20% opacity, as a three-minute average.

Applicable Compliance Method: Compliance with the visible emission limitation shall be determined by the method specified in OAC rule 3745-17-03(B)(3).

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: #2 Electrical Induction Furnace (F002)

Activity Description: 7.5 ton Inductotherm coreless furnace #2 rated at 1850 Kw

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
coreless induction melting furnace No. 2	OAC rule 3745-17-07(B)(1)	Visible emissions of fugitive dust shall not exceed 20% opacity, as a three-minute average.
	OAC rule 3745-17-08(B)*	Reasonably available control measures to minimize or eliminate visible emissions of fugitive dust. (No control measures have been identified as being reasonably available for this emissions unit.) * This emissions unit is located in a non-Appendix A area, but is subject to this rule per OAC rule 3745-17-08(A)(2).

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust escaping from the building containing this emissions unit. 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 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.

III. Monitoring and/or Record Keeping Requirements (continued)

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) above or continue the daily 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.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which any visible emissions of fugitive dust were observed escaping from the building containing this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible emissions. These reports shall be submitted to the Hamilton County Department of Environmental Services by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitation specifed in Section A.I shall be determined in accordance with the following method:

Emission Limitation: Visible emissions of fugitive dust shall not exceed 20% opacity, as a three-minute average.

Applicable Compliance Method: Compliance with the visible emission limitation shall be determined by the method specified in OAC rule 3745-17-03(B)(3).

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: #3 Electrical Induction Furnace (F003)

Activity Description: 7.5 ton Inductotherm coreless furnace #3 rated at 1850 Kw

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
coreless induction melting furnace No. 3	OAC rule 3745-17-07(B)(1)	Visible emissions of fugitive dust shall not exceed 20% opacity, as a three-minute average.
	OAC rule 3745-17-08(B)*	Reasonably available control measures to minimize or eliminate visible emissions of fugitive dust. (No control measures have been identified as being reasonably available for this emissions unit.) * This emissions unit is located in a non-Appendix A area, but is subject to this rule per OAC rule 3745-17-08(A)(2).

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust escaping from the building containing this emissions unit. 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 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.

III. Monitoring and/or Record Keeping Requirements (continued)

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) above or continue the daily 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.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which any visible emissions of fugitive dust were observed escaping from the building containing this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible emissions. These reports shall be submitted to the Hamilton County Department of Environmental Services by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitation specifed in Section A.I shall be determined in accordance with the following method:

Emission Limitation: Visible emissions of fugitive dust shall not exceed 20% opacity, as a three-minute average.

Applicable Compliance Method: Compliance with the visible emission limitation shall be determined by the method specified in OAC rule 3745-17-03(B)(3).

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Ductile Iron Inoculation (F006)

Activity Description: Flotret ductile iron treatment

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
ductile iron inoculation	OAC rule 3745-17-07(B)(1)	Visible emissions of fugitive dust shall not exceed 20% opacity, as a three-minute average.
	OAC rule 3745-17-08(B)*	Reasonably available control measures to minimize or eliminate visible emissions of fugitive dust. (No control measures have been identified as being reasonably available for this emissions unit.) * This emissions unit is located in a non-Appendix A area, but is subject to this rule per OAC rule 3745-17-08(A)(2).

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust escaping from the building containing this emissions unit. 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 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.

III. Monitoring and/or Record Keeping Requirements (continued)

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) above or continue the daily 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.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which any visible emissions of fugitive dust were observed escaping from the building containing this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible emissions. These reports shall be submitted to the Hamilton County Department of Environmental Services by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitation specified in Section A.I shall be determined in accordance with the following method:

Emission Limitation: Visible emissions of fugitive dust shall not exceed 20% opacity, as a three-minute average.

Applicable Compliance Method: Compliance with the visible emission limitation shall be determined by the method specified in OAC rule 3745-17-03(B)(3).

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Shell Core Machines (Core Line #1) (F007)

Activity Description: 3 Dependable 400 shell core machines (20"x26"x20") and 2 Dependable 200 shell core machines (14"x16"x16").

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
core making machines	OAC rule 3745-17-07(B)(1)	Visible emissions of fugitive dust shall not exceed 20% opacity, as a three-minute average.
	OAC rule 3745-17-08(B)*	Reasonably available control measures to minimize or eliminate visible PE of fugitive dust. (No control measures have been identified as being reasonably available for this emissions unit.) * This emissions unit is located in a non-Appendix A area, but is subject to this rule per OAC rule 3745-17-08(A)(2).
	OAC rule 3745-21-07(G)(2)	Emissions of organic compounds (OC) shall not exceed 8 lbs/hr and 40 lbs/day, unless reduced by at least 85%, on each day when any photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5), is employed.

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall keep the following records for all the core making machines for each day when any photochemically reactive material is employed in any of the machines:

a. the company identification of each liquid organic material used;

b. the total amount, in pounds, of each liquid organic material and sand mixed;

c. the number of hours during the day during which one or more core machines were in operation (not to exceed 24);

d. the daily OC emission rate, in pounds, using an emission factor of 1.17 pounds of OC per ton of sand employed* [1.17 x (b) total pounds of sand mixed x 1 ton/2,000 lbs]; and

e. the average hourly OC emission rate, in pounds, (d/c).

* The emission factor of 1.17 lbs of OC per ton of sand, for a phenolic urethane no-bake binder system, is obtained from the Ohio Cast Metals Association study.

2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust escaping from the building containing this emissions unit. 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 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) above or continue the daily 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.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that include the following information:

a. an identification of each day during which the average hourly OC emission rate exceeded 8 pounds per hour, and the actual average hourly OC emission rate for each such day; and

b. an identification of each day during which the OC emission rate exceeded 40 pounds per day, and the actual OC emission rate for each such day.

2. The quarterly deviation reports shall be submitted in accordance with paragraph A.1.c.ii of the General Terms and Conditions of this permit.

3. The permittee shall submit semiannual written reports that (a) identify all days during which any visible emissions of fugitive dust were observed escaping from the building containing this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible emissions. These reports shall be submitted to the Hamilton County Department of Environmental Services by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitations specified in Section A.I shall be determined in accordance with the following methods:

1.a Emission Limitation: Visible emissions of fugitive dust shall not exceed 20% opacity, as a three-minute average.

Applicable Compliance Method: Compliance with the visible emission limitation shall be determined by the method specified in OAC rule 3745-17-03(B)(3).

1.b Emission Limitations: 8 lbs of OC emissions/hour; 40 lbs of OC emissions/day

Applicable Compliance Method: Compliance with the hourly and daily OC emission limitations shall be determined by the record keeping requirements specified in Section A.lll.1.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Cold box and air set core machines (Core Line #3) (F008)

Activity Description: 1 Isocure sand mixer, 2 Redford CB-22 core machines, 2 Redford CB-16 core machines, 1 Redford cartridge blower, 1 Interel wet scrubber.

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
core making machines, equipped with a wet scrubber	OAC rule 3745-17-07(A)(1)	Visible particulate emissions (PE) from any stack shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
	OAC rule 3745-17-07(B)(1)	Visible emissions of fugitive dust shall not exceed 20% opacity, as a three-minute average.
	OAC rule 3745-17-08(B)*	Reasonably available control measures to minimize or eliminate visible emissions of fugitive dust. (No control measures have been identified as being reasonably available for this emissions unit.) * This emissions unit is located in a non-Appendix A area, but is subject to this rule per OAC rule 3745-17-08(A)(2).
	OAC rule 3745-17-11(B)	6.52 lbs of PE/hr from the stack (based on Table I of OAC rule 3745-17-11)
	OAC rule 3745-21-07(G)(2)	Emissions of organic compounds (OC) shall not exceed 8 lbs/hr and 40 lbs/day, unless reduced by at least 85%, on each day when any photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5), is employed.

2. Additional Terms and Conditions

None

II. Operational Restrictions

1. The pH of the scrubber liquor shall be maintained at or below a value of 4.0 at all times while the emissions unit is in operation.

2. The pressure drop across the scrubber shall be continuously maintained within the range of 1 to 6 inches of water at all times while the emissions unit is in operation.

3. All emissions from the core machines shall be vented to the wet scrubber.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to continuously monitor and record the pH of the scrubber liquor while the emissions unit is in operation. The pH monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall collect and record the following information each day:

a. the pH of the scrubber liquor, on a once per day basis; and

b. a log or record of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.

2. The permittee shall properly operate and maintain equipment to continuously monitor the static pressure drop across the scrubber while the emissions unit is in operation. The monitoring device and any recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall collect and record the following information each day:

a. the pressure drop across the scrubber, in inches of water, on a once per day basis; and

b. the operating times for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.

3. The permittee shall keep the following records for all the core making machines for each day when any photochemically reactive material is employed in any of the machines:

a. the company identification of each liquid organic material used;

b. the total amount, in pounds, of each liquid organic material and sand mixed;

c. the number of hours during the day during which one or more core machines were in operation (not to exceed 24);

d. the daily OC emission rate, in pounds, using an emission factor of 1.17 pounds of OC per ton of sand employed* [1.17 x (b) total pounds of sand mixed x 1 ton/2,000 lbs]; and

e. the average hourly OC emission rate, in pounds, (d/c).

* The emission factor of 1.17 lbs of OC per ton of sand, for a phenolic urethane no-bake binder system, is obtained from the Ohio Cast Metals Association study.

III. Monitoring and/or Record Keeping Requirements (continued)

4. 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 emissions of fugitive dust escaping from the building containing this emissions unit. 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 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) above or continue the daily 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.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify the following information:

a. all periods of time during which the scrubber liquor pH did not comply with the pH restriction specified above;

b. all periods of time during which the pressure drop across the scrubber was not maintained within the required range;

c. each day during which any photochemically reactive materials were used and the average hourly OC emission rate exceeded 8 pounds per hour, and the actual average hourly OC emission rate for each such day; and

d. each day during which any photochemically reactive materials were used and the OC emission rate exceeded 40 pounds per day, and the actual OC emission rate for each such day.

2. The quarterly deviation reports shall be submitted in accordance with paragraph A.1.c.ii of the General Terms and Conditions of this permit.

3. The permittee shall submit semiannual written reports that (a) identify all days during which any visible PE from the stack serving this emissions unit and/or any visible emissions of fugitive dust escaping from the building containing this emissions unit were observed and (b) describe any corrective actions taken to minimize or eliminate the visible emissions. These reports shall be submitted to the Hamilton County Department of Environmental Services by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitations specified in Section A.I shall be determined in accordance with the following methods:

1.a Emission Limitation: Visible PE from any stack shall not exceed 20% opacity, as a six-minute average, except as specified by rule.

Applicable Compliance Method: Compliance shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996.

V. Testing Requirements (continued)

1.b Emission Limitation: Visible emissions of fugitive dust shall not exceed 20% opacity, as a three-minute average.

Applicable Compliance Method: Compliance with the visible emission limitation shall be determined by the method specified in OAC rule 3745-17-03(B)(3).

1.c Emission Limitation: 6.52 lbs of PE/hr (based on Table I of OAC rule 3745-17-11)

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the hourly particulate emission limitation through emission tests performed in accordance with 40 CFR, Appendix A, Methods 1-5.

1.d Emission Limitation: 8 lbs of OC emissions/hr; 40 lbs of OC emissions/day

Applicable Compliance Method: Compliance with the daily OC emission rate shall be determined by the record keeping requirements specified in Section A.III.3.

If required, the permittee shall demonstrate compliance with the hourly OC emission limitation through emission tests performed in accordance with 40 CFR, Appendix A, Methods 1-4, 18 and 25.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: #4 Electrical Induction Furnace (F016)

Activity Description: 18 ton Inductotherm coreless furnace rated at 3000 Kw

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
coreless induction melting furnace No. 4	OAC rule 3745-31-05(A)(3) (PTI 14-1995)	3.83 lbs of particulate emissions (PE)/hr*, 9.0 tons per year (TPY) of P The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(B)(1) and 3745-17-08(B). * The hourly PE limitation represents the emissions unit's potential to emit. Therefore, no daily monitoring, record keeping or reporting is required to demonstrate compliance with this emission limitation.
	OAC rule 3745-17-07(B)(1)	Visible emissions of fugitive dust shall not exceed 20% opacity, as a three-minute average.
	OAC rule 3745-17-08(B)**	Reasonably available control measures to minimize or eliminate visible emissions of fugitive dust. (No control measures have been identified as being reasonably available for this emissions unit.) ** This emissions unit is located in a non-Appendix A area, but is subject to this rule per OAC rule 3745-17-08(A)(2).

2. Additional Terms and Conditions

None

II. Operational Restrictions

1. The maximum throughput of iron for this emissions unit shall not exceed 20,000 TPY.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust escaping from the building containing this emissions unit. 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 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) above or continue the daily 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 maintain monthly records of the total amount of iron processed each month, in tons.

3. The permittee shall maintain annual records of the total amount of iron processed for the calendar year, in tons (summation of A.III.2 for all months of the calendar year).

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which any visible emissions of fugitive dust were observed escaping from the building containing this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible emissions. These reports shall be submitted to the Hamilton County Department of Environmental Services by January 31 and July 31 of each year and shall cover the previous 6-month period.

2. The permittee shall submit annual reports to the Hamilton County Department of Environmental Services that specify the total amount, in tons, of iron processed for the calendar year. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

V. Testing Requirements

1. Compliance with the emission limitations and production rate restriction specified in Sections A.I and A.III.2 shall be determined in accordance with the following methods:

1.a Emission Limitation: Visible emissions of fugitive dust shall not exceed 20% opacity, as a three-minute average.

Applicable Compliance Method: Compliance with the visible emission limitation shall be determined using the method specified in OAC rule 3745-17-03(B)(3).

V. Testing Requirements (continued)

1.b Emission Limitations: 3.83 lbs of PE/hr; 9.0 TPY of PE

Applicable Compliance Method: The hourly PE limitation represents the emission unit's potential to emit and was established by the following methodology:

Hourly PE = (A) x (B)

where:

A = the maximum hourly throughput of iron (4.25 tons/hour)
B = the PE factor (0.90 lb of PE/ton of iron*)

* The PE factor was obtained from U.S. EPA reference document AP-42, Chapter 12.10, Table 12.10-3, dated January 1995.

Compliance with the annual PE limitation is ensured if compliance is maintained with the annual iron production restriction [i.e., (20,000 TPY) x (0.90 lbs of PE/ton) x (1 ton/2,000 lbs) = 9.0 TPY].

1.c Production Rate Restriction: 20,000 TPY of iron

Applicable Compliance Method: Compliance with the annual iron production rate restriction shall be determined by the record keeping requirements specified in Section A.III.3.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Disa Pour & Cool (F018)

Activity Description: Disa Forma Pour and Cool Line

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
gray iron pouring and cooling line, equipped with a fabric filter	OAC rule 3745-31-05(A)(3) (PTI 14-4107)	See Section A.I.2 below.
	OAC rule 3745-17-07(A)(1)	The visible particulate emission (PE) limitation specified by this rule is less stringent the the visible PE limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-07(B)(1)	The visible emission limitation for fugitive dust specified by this rule is less stringent than the visible emission limitation for fugitive dust established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-08(B)*	The control measures specified by this rule are less stringent than the control measures established pursuant to OAC rule 3745-31-05(A)(3). * This emissions unit is located in a non-Appendix A area, but is subject to this rule per OAC rule 3745-17-08(A)(2).
	OAC rule 3745-17-11(B)(1)	The PE limitation specified by this rule is less stringent than the PE limitation established by OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

2.a PE and particulate matter emissions with a diameter of 10 microns or less (PM10 emissions) from the fabric filter serving this emissions unit shall not exceed the following:

i. 6.43 lbs of PE/hr and 14.28 tons per year (TPY) of PE; and
ii. 3.15 lbs of PM10 emissions/hr and 7.00 TPY of PM10 emissions.

2.b Emissions from this emissions unit shall be captured to the extent possible with good engineering design and vented to a fabric filter. The capture and control system shall have an overall efficiency of at least 83% for PE and for PM10 emissions.

Mass emissions from the fabric filter serving this emissions unit shall not exceed the following:

0.18 lb of sulfur dioxide (SO2) emissions/hr and 0.40 ton of SO2 emissions/yr;
0.09 lb of nitrogen oxide (NOx) emissions/hr and 0.20 TPY of NOx emissions/yr;
3.77 lbs of organic compound (OC) emissions/hr and 8.39 TPY of OC emissions;
0.03 lb ammonia emissions/hr and 0.07 TPY of ammonia emissions/yr;
0.22 lb hydrogen sulfide (H2S) emissions/hr and 0.49 TPY of H2S emissions;
0.01 lb chromium emissions/hr and 0.03 TPY of chromium emissions;
0.02 lb manganese emissions/hr and 0.03 TPY manganese emissions; and
0.02 lb nickel emissions/hr and 0.05 TPY of nickel emissions.

2.c PE from the fabric filter shall not exceed zero percent opacity, as a three-minute average.

2.d There shall be no visible emissions from the roof vents exhausting emissions from this emissions unit.

II. Operational Restrictions

1. The pressure drop across the fabric filter shall be maintained within the range of 2 to 6 inches of water while the emissions unit is in operation.

2. The total amount of iron poured in this emissions unit shall not exceed 40,000 tons per year based on a rolling, twelve-month summation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the fabric filter while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the fabric filter on a daily basis.

2. This facility shall maintain monthly records of the following:

a. the amount of iron poured in this emissions unit each calendar month, in tons; and

b. the rolling, 12-month summation of iron poured, in tons (the amount for the current month plus the preceding eleven calendar months).

III. Monitoring and/or Record Keeping Requirements (continued)

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 fabric filter and for any visible emissions of fugitive dust escaping from the building containing this emissions unit. 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 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.

IV. Reporting Requirements

1. The permittee shall submit semiannual deviation (excursion) reports that identify all periods of time during which the pressure drop across the fabric filter did not comply with the allowable range specified above. These reports shall be submitted to the Hamilton County Department of Environmental Services by January 31 and July 31 of each year and cover the previous six calendar months.

2. The permittee shall submit semiannual reports to the Hamilton County Department of Environmental Services that contain monthly summaries of the rolling, 12-month summations of iron poured, in tons, from this emissions unit. These reports shall be submitted by January 31 and July 31 of each year and shall cover the previous six calendar months.

3. The permittee shall submit semiannual written reports that (a) identify all days during which any visible PE from the fabric filter and/or any visible emissions of fugitive dust escaping from the building containing this emissions unit were observed and (b) describe any corrective actions taken to eliminate the visible emissions. These reports shall be submitted to the Hamilton County Department of Environmental Services by January 31 and July 31 of each year and shall cover the previous 6-month period.

4. The permittee shall submit annual reports to the Hamilton County Department of Envirnmental Services that specify the total PE and PM10 emissions, in tons, for the calendar year for this emissions unit. Each report shall be submitted by January 31 of each year and cover the previous calendar year.

V. Testing Requirements

1. Compliance with the emission limitations specified in Section A.I shall be determined in accordance with the following methods:

1.a Emission Limitation: 0% opacity from the discharge stack of this emissions unit

Applicable Compliance Method: Compliance shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996, except that three-minute averages of opacity readings shall be employed in lieu of six-minute averages.

1.b Emission Limitation: no visible emissions from roof vents exhausting this emissions unit

Applicable Compliance Method: Compliance with the no visible emissions from roof vents limitation shall be determined in accordance with Test Method 22 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(4)(a) through (B)(4)(d) of OAC rule 3745-17-03.

V. Testing Requirements (continued)

1.c Emission Limitation:

6.43 lbs of PE/hr and 14.28 TPY of PE;
3.15 lbs of PM10 emissions/hr and 7.00 TPY of PM10 emissions

Applicable Compliance Method: The PE and PM10 emission limitations were established by using the following methodology:

lbs of PE/hr = (A) x (C) x (100 - E)/100
lbs of PM10 emissions/hr = (B) x (C) x (100 - E)/100 x (100 - F)/100

TPY of PE = (A) x (D) x (100 - E)/100 x (1 ton/2,000 lbs)
TPY of PM10 emissions = (B) x (D) x (100 - E)/100) x (100 - F)/100 x (1 ton/2,000 lbs)

where:

A = PE factor (4.2 lbs/ton)*;
B = PM10 emission factor (4.2 lbs/ton)*;
C = maximum hourly iron production rate (9.0 tons/hr);
D = annual iron production rate restriction (40,000 tons/year, based on a rolling, twelve-month summation);
E = the overall control efficiency of the control system (83%); and
F = the percent PE emitted as PM10 emissions (49%)**

* The PE and PM10 emissions factors were obtained from U.S. EPA reference document AP-42, Chapter 12.10, Table 12.10-7, dated January 1995.

** The percentage of PM10 emissions were obtained from U.S. EPA reference document AP-42, Chapter 12.10, Table 12.10-8, dated January 1995.

In addition, compliance with the annual PE and PM10 emission limitations are ensured if compliance is maintained with the annual iron production restriction and employment of a control system with a overall control efficiency of 83%.

If required, the permittee shall demonstrate compliance with the hourly PE limitation through emission tests performed in accordance with 40 CFR, Appendix A, Methods 1-5.

If required, the permittee shall demonstrate compliance with the hourly PM10 emission limitation through emission tests performed in accordance with 40 CFR, Appendix A, Method 201.

V. Testing Requirements (continued)

1.d Emission Limitations: Mass emissions from the fabric filter serving this emissions unit shall not exceed the following:

0.18 lb of SO2 emissions/hr and 0.40 ton of SO2 emissions/yr;
0.09 lb of NOx emissions/hr and 0.20 TPY of NOx emissions/yr;
3.77 lbs of OC emissions/hr and 8.39 TPY of OC emissions;
0.03 lb ammonia emissions/hr and 0.07 TPY of ammonia emissions/yr;
0.22 lb H2S emissions/hr and 0.49 TPY of H2S emissions;
0.01 lb chromium emissions/hr and 0.03 TPY of chromium emissions;
0.02 lb manganese emissions/hr and 0.03 TPY manganese emissions; and
0.02 lb nickel emissions/hr and 0.05 TPY of nickel emissions.

Applicable Compliance Method: The mass emission limitations were established using the following methodology:

for SO2, NOx, OC, ammonia and H2S emissions:

lbs of emissions/hr = (A) x (B)
TPY of emissions = (A) x (C) x (1 ton/2,000 lbs)

for chromium, manganese and nickel emissions:

lbs of emissions/hr = (A) x (B) x (100 - D)/100
TPY of emissions = (A) x (C) x (100 - D)/100 x (1 ton/2,000 lbs)

where:

A = the emission factor, in lbs/ton of iron poured, and specified as follows:

SO2: 0.02
NOx: 0.01
OC: 0.4193
H2S: 0.0243
ammonia: 0.0037
chromium: 0.0081
manganese: 0.0099
nickel: 0.0135

B = hourly iron production rate (9.0 tons/hr)
C = annual iron production rate restriction (40,000 tons/year)
D = the overall control efficiency of the fabric filter (assumed to be 83%)

In addition, compliance with the annual chromium, manganese and nickel emission limitations are ensured if compliance is maintained with the annual iron production restriction and employment of a control system with an overall control efficiency of 83%.

If required, the permittee shall demonstrate compliance with the hourly emission limitations through emission tests performed in accordance with the following methods:

SO2: 40 CFR, Part 60, Appendix A, Method 6
NOx: 40 CFR, Part 60, Appendix A, Method 7
OC: 40 CFR, Part 60, Appendix A, Method 25
ammonia: 40 CFR Part 60, Appendix A, Method 206
hydrogen sulfide: 40 CFR Part 60, Appendix A, Method 15
chromium, manganese, nickel: 40 CFR Part 60, Appendix A, Method 29

V. Testing Requirements (continued)

1.e Production Rate Restriction: The total amount of iron poured in this emissions unit shall not exceed 40,000 tons per year based on a rolling, twelve-month summation.

Applicable Compliance Method: Compliance with the annual iron production rate restriction shall be determined by the record keeping requirements specified in Section A.lll.2.

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

a. The emission testing shall be conducted within 1 year after permit issuance and within 6 months prior to permit expiration.

b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for PE and PM10, and the overall control efficiency of 79 percent (assuming 80% capture efficiency for PE and for PM10).

c. The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined by simultaneous testing at the inlet and outlet of the control system (assuming 80% capture efficiency).

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

PE: Methods 1-5 of 40 CFR Part 60, Appendix A; and
PM10 emissions: Methods 1-4 and 201.

Alternative U.S. EPA-approved test methods may be used with prior approval from the Hamilton County Department of Environmental Services.

e. The testing shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Hamilton County Department of Environmental Services.

3. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services. 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 Hamilton County Department of Environmental Services' refusal to accept the results of the emission test(s).

Personnel from the Hamilton County Department of Environmental Services 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 Hamilton County Department of Environmental Services 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 Hamilton County Department of Environmental Services

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Scrap Pre-Heater (P001)

Activity Description: 1 Venetta gas-fired pre-heater to 1000 degrees F with scrap bins and weigh scale

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
natural gas fired scrap pre-heater	OAC rule 3745-17-07(B)(1)	Visible emissions of fugitive dust shall not exceed 20% opacity, as a three-minute average.
	OAC rule 3745-17-08(B)*	Reasonably available control measures to minimize or eliminate visible emissions of fugitive dust. (No control measures have been identified as being reasonably available for this emissions unit.) * This emissions unit is located in a non-Appendix A area, but is subject to this rule per OAC rule 3745-17-08(A)(2).

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust escaping from the building containing this emissions unit. 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 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) above or continue the daily 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.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which any visible emissions of fugitive dust were observed escaping from the building containing this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible emissions. These reports shall be submitted to the Hamilton County Department of Environmental Services by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1.a Compliance with the emission limitation specified in Section A.I shall be determined in accordance with the following methods:

Emission Limitation: Visible emissions of fugitive dust shall not exceed 20% opacity, as a three-minute average.

Applicable Compliance Method: Compliance with the visible emission limitation shall be determined by the method specified in OAC rule 3745-17-03(B)(3).

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Casting Shakeout (P002)

Activity Description: Casting shakeout - enclosed vibratory conveyor with Fuller baghouse

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
casting shakeout, equipped with a fabric filter	OAC rule 3745-17-07(A)(1)	Visible particulate emissions (PE) from any stack shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	PE shall not exceed 6.96 lbs/hr (based on Figure II of OAC rule 3745-17-11).

2. Additional Terms and Conditions

None

II. Operational Restrictions

1. The pressure drop across the fabric filter shall be maintained within the range of 4 to 6 inches of water while this emissions unit is in operation.

2. All PE from this emissions unit shall be captured and vented to the fabric filter.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the fabric filter while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the fabric filter on a daily basis.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the pressure drop across the fabric filter did not comply with the allowable range specified above.

2. The quarterly deviation reports shall be submitted in accordance with paragraph A.1.c.ii of the General Terms and Conditions of this permit.

V. Testing Requirements

1. Compliance with the emission limitations specified in Section A.I shall be determined in accordance with the following methods:

1.a Emission Limitation: Visible PE from any stack shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

Applicable Compliance Method: Compliance shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996.

1.b Emission Limitation: 6.96 lbs of PE/hr (based on Figure II of OAC rule 3745-17-11).

Applicable Compliance Method: Compliance with the hourly PE limitation may be determined by using the following methodology:

lbs of PE/hr = (A) x (B) x (100 - C)/100

where:

A = PE factor (3.2 pounds per ton, of iron castings throughput*);
B = maximum hourly iron production rate (14.75 tons/hr); and
C = control efficiency of fabric filter (assumed to be 99%)

* The PE factor was obtained from U.S. EPA reference document AP-42, Chapter 12.10, Table 12.10-7, dated January 1995.

If required, the permittee shall demonstrate compliance with the hourly PE emission limitation through emission tests performed in accordance with 40 CFR, Appendix A, Methods 1-5.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: BMD Shot Blast (P007)

Activity Description: BMD 28 cubic foot shot blast, DTC 2-250 with cartridge filter

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
shotblaster, equipped with a fabric filter	OAC rule 3745-31-05(A)(3) (PTI 14-1995)	0.60 lb of particulate emissions (PE)/hr Visible PE shall not exceed 10% opacity, as a six-minute average, at fabric filter outlet.
	OAC rule 3745-17-07(A)(1)	The visible particulate emission (PE) limitation specified by this rule is less stringent than the visible PE limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-11(B)(1)	The PE limitation specified by this rule is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

None

II. Operational Restrictions

1. The pressure drop across the fabric filter shall be maintained within the range of 4 to 6 inches of water while this emissions unit is in operation.

2. All PE from this emissions unit shall be captured and vented to the fabric filter.

3. The outlet vent of the fabric filter shall be equipped with a device that will alert operators of bag failure or breakthrough.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the fabric filter while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the fabric filter on daily basis.

III. Monitoring and/or Record Keeping Requirements (continued)

2. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible PE from the fabric filter serving this emissions unit. 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 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.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the pressure drop across the fabric filter did not comply with the allowable range specified above.

2. The quarterly deviation reports shall be submitted in accordance with paragraph A.1.c.ii of the General Terms and Conditions of this permit.

3. The permittee shall submit semiannual written reports that (a) identify all days during which any visible PE were observed from the fabric filter serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible PE. These reports shall be submitted to the Hamilton County Department of Environmental Services by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitations specified in Section A.I shall be determined in accordance with the following methods:

1.a Emission Limitation: Visible PE shall not exceed 10% opacity, as a six-minute average, at fabric filter outlet.

Applicable Compliance Method: Compliance shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996.

1.b Emission Limitation: 0.60 lb of PE/hr

Applicable Compliance Method: Compliance with the hourly PE limitation may be determined by using the following methodology:

lbs of PE/hr = (A) x (B) x (100 - C)/100

where:

A = PE factor (17 lbs/ton of iron castings throughput*);
B = maximum hourly production rate (6.6 tons/hr); and
C = 99.9 percent control efficiency of fabric filter (based on stack test performed on September 18, 1991).

* The PE factor was obtained from U.S. EPA reference document AP-42, Chapter 12.10, Table 12.10-7, dated January 1995.

If required, the permittee shall demonstrate compliance with the hourly PE emission limitation through emission tests performed in accordance with 40 CFR, Appendix A, Methods 1-5.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Pangborn Tumbleblast, 26 CF (P008)

Activity Description: 26 cubic foot Pangborn Tumblast shot blast with cartridge filter

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
Pangborn shotblaster, equipped with a cartridge filter	OAC rule 3745-31-05(A)(3) (PTI 14-2754)	0.21 lb of of particulate emissions (PE)/hr 0.11 lb of particulate matter with a diameter of 10 microns or less (PM10 emissions)/hr The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1). See Section A.1.2 below.
	OAC rule 3745-17-07(A)(1)	Visible PE shall not exceed 20% opacity, as a six-minute average, at control device outlet, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	The PE limitation specified by this rule is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

2.a All emissions from this emissions unit shall be vented to a fabric filter having at least a 99.8% control efficiency for PE at all times during operation.

II. Operational Restrictions

1. The pressure drop across the fabric filter shall be maintained within the range of 4 to 6 inches of water while this emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the fabric filter while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the fabric filter on daily basis.

2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible PE from the control device serving this emissions unit. 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 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.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the pressure drop across the fabric filter did not comply with the allowable range specified above.

2. The quarterly deviation reports shall be submitted in accordance with paragraph A.1.c.ii of the General Terms and Conditions of this permit.

3. The permittee shall submit semiannual written reports that (a) identify all days during which any visible PE were observed from the control device serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible PE. These reports shall be submitted to the Hamilton County Department of Environmental Services by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitations specified in Section A.I shall be determined in accordance with the following methods:

1.a Emission Limitation: Visible PE shall not exceed 20% opacity, as a six-minute average, at control device outlet.

Applicable Compliance Method: Compliance shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996.

V. Testing Requirements (continued)

1.b Emission Limitations: 0.21 lb of PE/hr; 0.11 lb of PM10 emissions/hr

Applicable Compliance Method: The PE and PM10 emission limitations were established by using the following methodology:

lbs of PE/hr = (A) x (B) x (100 - D)/100
lbs of PM10/hr = (A) x (B) x (100 - C)/100 x (100 - D)/100

where:

A = PE factor (17 lbs/ton of iron castings throughput*);
B = maximum hourly iron production rate (6.25 tons/hr);
C = percent emissions emitted as PM10 emissions (49%)**; and
D = the assumed control efficiency of fabric filter (99.8%).

* The PE and PM10 emissions factors were obtained from U.S. EPA reference document AP-42, Chapter 12.10, Table 12.10-7, dated January 1995.

** This percentage of PM10 emissions is specified in U.S. EPA reference document AP-42, Chapter 12.10, Table 12.10-8, dated January 1995.

If required, the permittee shall demonstrate compliance with the hourly PE limitation through emission tests performed in accordance with 40 CFR, Appendix A, Methods 1-5.

If required, the permittee shall demonstrate compliance with the hourly PM10 emission limitation through emission tests performed in accordance with 40 CFR, Appendix A, Method 201.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Pangborn Spin Blast (Rotoblast cabinet) (P009)

Activity Description: Pangborn spinner shotblast (rotoblast cabinet) with cartridge filter

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
Pangborn 34 CF tumblast, equipped with a fabric filter	OAC rule 3745-17-07(A)(1)	Visible particulate emissions (PE) from any stack shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
	OAC rule 3745-17-11(B)(1)	11.4 lbs of PE/hr (based on Table I of OAC rule 3745-17-11)

2. Additional Terms and Conditions

None

II. Operational Restrictions

1. The pressure drop across the fabric filter shall be maintained within the range of 4 to 6 inches of water while the emissions unit is in operation.

2. All PE from this emissions unit shall be captured and vented to the fabric filter.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the fabric filter while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse on daily basis.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the pressure drop across the fabric filter did not comply with the allowable range specified above.

2. The quarterly deviation reports shall be submitted in accordance with paragraph A.1.c.ii of the General Terms and Conditions of this permit.

V. Testing Requirements

1. Compliance with the emission limitations specified in Section A.I shall be determined in accordance with the following methods:

V. Testing Requirements (continued)

1.a Emission Limitation: Visible PE from any stack shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

Applicable Compliance Method: Compliance shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996.

1.b Emission Limitation: 11.4 lbs of PE/hr (based on Table I of OAC rule 3745-17-11)

Applicable Compliance Method: Compliance with the hourly PE limitation may be determined by using the following methodology:

lbs of PE/hr = (A) x (B) x (100 - C)/100

where:

A = PE factor (17 lbs/ton of iron castings throughput*);
B = maximum hourly iron production rate (6 tons/hr); and
C = the assumed control efficiency of the fabric filter (99.8%)

* The PE emission factor was obtained from U.S. EPA reference document AP-42, Chapter 12.10, Table 12.10-7, dated January 1995.

If required, the permittee shall demonstrate compliance with the hourly PE emission limitation through emission tests performed in accordance with 40 CFR, Appendix A, Methods 1-5.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Sand Unloading and Handling (P901)

Activity Description: Sand storage silos and muller, associated pneumatic transfer and conveying equipment, baghouse

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
pneumatic sand unloading, handling, and muller, equipped with a fabric filter	OAC rule 3745-17-07(A)(1)	Visible particulate emissions (PE) from any stack shall not exceed 20% opacity, as a six-minute average, except as specified by rule.
	OAC rule 3745-17-11(B)(1)	14.3 lbs of PE/hour (based on Table I of OAC rule 3745-17-11)

2. Additional Terms and Conditions

None

II. Operational Restrictions

1. The pressure drop across the fabric filter shall be maintained within the range of 4 to 6 inches of water while this emissions unit is in operation.

2. All PE from this emissions unit shall be captured and vented to the fabric filter.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the fabric filter while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the fabric filter on a daily basis.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the pressure drop across the fabric filter did not comply with the allowable range specified above.

2. The quarterly deviation reports shall be submitted in accordance with paragraph A.1.c.ii of the General Terms and Conditions of this permit.

V. Testing Requirements

1. Compliance with the emission limitations specified in Section A.I shall be determined in accordance with the following methods:

V. Testing Requirements (continued)

1.a Emission Limitation: Visible PE from any stack shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

Applicable Compliance Method: Compliance shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996.

1.b Emission Limitation: 14.3 lbs of PE/hr (based on Table I of OAC rule 3745-17-11)

Applicable Compliance Method: Compliance with the hourly PE limitation may be based upon the following methodology:

lbs of PE/hr = (A) x (B) x (100 - C)/100

where:

A = PE factor of 3.6 lbs/ton of sand transferred*;
B = maximum hourly sand transfer rate (40 tons/hr); and
C = the assumed control efficiency of the fabric filter (99%).

* The PE emissions factor was obtained from U.S. EPA reference document AP-42, Chapter 12.10, Table 12.10-7, dated January 1995.

If required, the permittee shall demonstrate compliance with the hourly PE emission limitation through emission tests performed in accordance with 40 CFR, Appendix A, Methods 1-5.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Disa-Forma Mold Making (P904)

Activity Description: Disa-Forma 3030 molding machine

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
disa-forma mold making machine, equipped with a fabric filter	OAC rule 3745-31-05(A)(3) (PTI 14-1320)	0.06 lb of particulate emissions (PE)/hr* 0.27 ton per year (TPY) of PE* See Section A.1.2 below. The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A) and 3745-17-07(B). *The lb/hour and TPY emission limitations are based on the emissions unit's potential to emit. Therefore, no additional monitoring, record keeping or reporting is required.
	OAC rule 3745-17-07(A)(1)	Visible PE from any stack shall not exceed a 20% opacity, as a six-minute average, except as provided by rule.
	OAC rule 3745-17-07(B)(1)	Visible emissions of fugitive dust shall not exceed 20% opacity, as a three-minute average.
	OAC rule 3745-17-08(B)*	Reasonably available control measures to minimize or eliminate visible emissions of fugitive dust. * This emissions unit is located in a non-Appendix A area, but is subject to this rule per OAC rule 3745-17-08(A)(2).

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
	OAC rule 3745-17-11(B)	The PE limitation specified by this rule is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

2.a PE from this emissions unit shall be captured to the extent possible with good engineering design and vented to a fabric filter. The capture and control system shall have an overall efficiency of at least 83% for the PE.

II. Operational Restrictions

1. The pressure drop across the fabric filter shall be maintained within the range of 2 to 6 inches of water while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the fabric filter while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the fabric filter on a daily basis.

2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust escaping the building containing this emissions unit. 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 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) above or continue the daily 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.

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 fabric filter serving this emissions unit. 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 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.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the pressure drop across the fabric filter did not comply with the allowable range specified above.

2. The quarterly deviation reports shall be submitted in accordance with paragraph A.1.c.ii of the General Terms and Conditions of this permit.

3. The permittee shall submit semiannual written reports that (a) identify all days during which any visible emissions of fugitive dust were observed escaping from the building containing this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible emissions. These reports shall be submitted to the Hamilton County Department of Environmental Services by January 31 and July 31 of each year and shall cover the previous 6-month period.

4. The permittee shall submit semiannual written reports that (a) identify all days during which any visible PE were observed from the fabric filter serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible PE. These reports shall be submitted to the Hamilton County Department of Environmental Services by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitations specified in Section A.I shall be determined in accordance with the following methods:

1.a Emission Limitation: Visible emissions of fugitive dust shall not exceed 20% opacity, as a three-minute average

Applicable Compliance Method: Compliance with the visible emission limitation shall be determined using the methods specified in OAC rule 3745-17-03(B)(3).

1.b Emission Limitation: Visible PE from any stack shall not exceed a 20% opacity, as a six-minute average, except as provided by rule.

Applicable Compliance Method: Compliance shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996.

1.c Emission Limitation: 0.06 lb of PE/hr; 0.27 TPY of PE

Applicable Compliance Method: The hourly and annual PE limitations are based upon the emissions unit's potential to emit. The PE limitation was established by the following methodology:

lbs of PE/hr = (A) x (B) x (100 - C)/100

where:

A = particulate emission factor (0.04 lbs/ton*)
B = maximum hourly production rate (9.0 tons/hr)
C = the overall control efficiency of the control system (83%)

* The PE factor was obtained from U.S. EPA reference document AP-42, Chapter 12.10, Table 12.10-7, dated January 1995.

If required, the permittee shall demonstrate compliance with the hourly PE limitation through emission tests performed in accordance with 40 CFR, Appendix A, Methods 1-5.

The annual PE limitation may determined by multiplying the hourly PE limitation (0.06 lb/hr) by 8,760 hours/year, and dividing by 2,000 lbs/ton.

V. Testing Requirements (continued)

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

a. The emission testing shall be conducted within 1 year after permit issuance and within 6 months prior to permit expiration.

b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for PE, and the overall control efficiency of 83 percent (assuming 85% capture efficiency for PE).

c. The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined by simultaneous testing at the inlet and outlet of the control system (assuming 85% capture efficiency).

d. The following test method shall be employed to demonstrate compliance with the allowable mass emission rate:

PE: Methods 1-5 of 40 CFR Part 60, Appendix A.

Alternative U.S. EPA-approved test methods may be used with prior approval from the Hamilton County Department of Environmental Services.

e. The testing shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Hamilton County Department of Environmental Services.

3. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services. 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 Hamilton County Department of Environmental Services' refusal to accept the results of the emission test(s).

Personnel from the Hamilton County Department of Environmental Services 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 Hamilton County Department of Environmental Services 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 Hamilton County Department of Environmental Services

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Sinto Pour & Cool (P906)

Activity Description: Roberts - Sinto Pour and Cool Line With Fabric Filter Control

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
gray iron pouring and cooling line, equipped with a fabric filter	OAC rule 3745-31-05(A)(3) (PTI 14-4434)	See Section A.I.2 below.
	OAC rule 3745-17-07(A)(1)	The visible particulate emission (PE) limitation specified by this rule is less stringent than the visible PE limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-07(B)(1)	The visible emission limitation for fugitive dust specified by this rule is less stringent than the visible emission limitation for fugitive dust established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-08(B)*	The emission control requirements specified by this rule are less stringent than those established pursuant to OAC rule 3745-31-05(A)(3). * This emissions unit is located in a non-Appendix A area, but is subject to this rule per OAC rule 3745-17-08(A)(2).
	OAC rule 3745-17-11(B)	The PE limitation specified by this rule is less stringent than the PE limitation established by OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

2.a The following emissions limitations shall not be exceeded:

i. 4.70 lbs of PE/hr; 16.26 tons per year (TPY) of PE, based on a rolling, twelve-month summation; and

ii. 2.31 lbs of particulate matter with a diameter of 10 microns or less (PM10 emissions)/hr; 7.97 TPY of PM10 emissions, based on a rolling, twelve-month summation.

2.b Emissions from this emissions unit shall be captured to the extent possible with good engineering design and vented to a fabric filter. The capture and control system shall have an overall efficiency of at least 79% for PE and for PM10 emissions.

Mass emissions from the fabric filter serving this emissions unit shall not exceed the following*:

0.90 lb/hr and 3.10 TPYof fugitive PE;
0.44 lb/hr, 1.52 TPY of fugitive PM10 emissions;
0.11 lb/hr and 0.37 TPY of sulfur dioxide (SO2) emissions;
0.05 lb/hr and 0.18 TPY of nitrogen oxide (NOx) emissions;
0.75 lb/hr and 2.58 TPY of volatile organic compound (VOC) emissions;
0.000025 lb/hr and 0.000085 TPY of lead emissions;
0.13 lb/hr and 0.01 TPY of hydrogen sulfide (H2S) emissions;
0.00015 lb/hr and 0.00050 TPY of chromium emissions;
0.000025 lb/hr and 0.000085 TPY of mercury emissions;
0.00015 lb/hr and 0.00050 TPY of manganese emissions; and
0.000056 lb/hr and 0.00019 TPY of nickel emissions.

* The hourly emission limitations are based upon the emissions unit's potential to emit (with controls, i.e., the fabric filter). Therefore, no additional monitoring, record keeping or reporting is required to demonstrate compliance with these emission limitations.

2.c PE from the fabric filter shall not exceed zero percent (0%) opacity, as a three-minute average.

2.d There shall be no visible emissions from the roof vents exhausting any emissions from this emissions unit.

II. Operational Restrictions

1. PE shall be collected and vented to a fabric filter. The permittee shall operate and maintain the fabric filter in accordance with the procedures specified by the manufacturer.

2. The pressure drop across the fabric filter shall be maintained within the range of 2 to 6 inches of water while this emissions unit is in operation.

3. The production of iron shall not exceed 36,864 TPY, based on a rolling, twelve-month summation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the fabric filter while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the fabric filter on a daily basis.

2. The permittee shall collect and record the following information on a monthly basis:

a. the amount of iron poured and cooled, in tons; and

b. the rolling, twelve-month summation of iron poured and cooled, in tons (the current month's production total plus the previous eleven months production total).

III. Monitoring and/or Record Keeping Requirements (continued)

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 fabric filter and for any visible emissions of fugitive dust escaping from the building containing this emissions unit. 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 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.

IV. Reporting Requirements

1. The permittee shall submit semiannual deviation (excursion) reports to the Hamilton County Department of Environmental Services that identify all periods of time during which the pressure drop across the fabric filter did not comply with the allowable range specified above. These reports shall be submitted by January 31 and July 31 of each year and shall cover the previous six calendar months.

2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible PE from the fabric filter and/or any visible emissions of fugitive dust escaping from the building containing this emissions unit were observed and (b) describe any corrective actions taken to eliminate the visible emissions. These reports shall be submitted to the Hamilton County Department of Environmental Services by January 31 and July 31 of each year and shall cover the previous 6-month period.

3. The permittee shall submit an annual reports to the Hamilton County Department of Environmental Services that summarize the total iron production, in tons, for the calendar year. Each report shall be submitted by January 31 of each year and cover the previous calendar year.

4. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 12-month summation iron production restriction.

5. The quarterly deviation reports shall be submitted in accordance with paragraph A.1.c.ii of the General Terms and Conditions of this permit.

V. Testing Requirements

1. Compliance with the emission limitations specified in Section A.I and the iron production rate restriction specified in Section A.ll shall be determined in accordance with the following methods:

1.a Emission Limitation: 0% opacity from the stack outlet

Applicable Compliance Method: Compliance shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996.

1.b Emission Limitation: no visible PE from the roof vents (fugitive PE)

Applicable Compliance Method: Compliance shall be determined in accordance with Test Method 22 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(4)(a) through (B)(4)(d) of OAC rule 3745-17-03.

V. Testing Requirements (continued)

1.c Emission Limitations: 4.70 lbs of PE/hr and 16.26 TPY of PE, based upon a rolling, twelve-month summation; 2.31 lbs of PM10 emissions/hr and 7.97 TPY of PM10 emissions, based upon a rolling, twelve-month summation

Applicable Compliance Method: The hourly PE and PM10 emission limitations are based upon the emissions unit's potential to emit (with controls, i.e., the fabric filter). Compliance with the PE and PM10 emission limitations may be determined by the following methodology:

lbs of PE/hr = (A) x (B) x (100 - E)/100
lbs of PM10/hr = (A) x (B) x (100 - D)/100 x (100 - E)/100

TPY of PE = (A) x (C) x (100 - E)/100 x (1 ton/2,000 lbs)
TPY of PM10 = (A) x (C) x (100 - D)/100 x (100 - E)/100 x (1 ton/2,000 lbs)

where:

A = PE factor (4.2 lbs/ton iron poured and cooled)*;
B = maximum hourly iron production rate (5.33 tons/hr);
C = annual production rate, in tons/yr, based upon a rolling, twelve-month summation;
D = percent emissions emitted as PM10 emissions (assumed to be 49%)**; and
E = fabric filter control efficiency (assumed to be 99%)

* The PE emission factor specified in U.S. EPA reference document AP-42, Fifth Edition, Chapter 12.10, Table 12.10-7.

** The percentage of PM10 emissions specified in U.S. EPA reference document AP-42, Fifth Edition, Chapter 12.10, Table 12.10-8.

If required, the permittee shall demonstrate compliance with the hourly PE emission limitation through emission tests performed in accordance with 40 CFR, Appendix A, Methods 1-5.

If required, the permittee shall demonstrate compliance with the hourly PM10 emission limitation through emission tests performed in accordance with 40 CFR, Appendix A, Method 201.

V. Testing Requirements (continued)

1.d Emission Limitations: Mass emissions from the fabric filter serving this emissions unit shall not exceed the following:

0.90 lb/hr and 3.10 TPY of fugitive PE;
0.44 lb/hr, 1.52 TPY of fugitive PM10 emissions;
0.11 lb/hr and 0.37 TPY of sulfur dioxide (SO2) emissions;
0.05 lb/hr and 0.18 TPY of nitrogen oxide (NOx) emissions;
0.75 lb/hr and 2.58 TPY of volatile organic compound (VOC) emissions;
0.13 lb/hr and 0.01 TPY of hydrogen sulfide (H2S) emissions;
0.000025 lb/hr and 0.000085 TPY of lead emissions;
0.00015 lb/hr and 0.00050 TPY of chromium emissions;
0.000025 lb/hr and 0.000085 TPY of mercury emissions;
0.00015 lb/hr and 0.00050 TPY of manganese emissions; and
0.000056 lb/hr and 0.00019 TPY of nickel emissions.

Applicable Compliance Method: The hourly emission limitations represent the emissions unit's potential to emit and were established using the following methodology:

for PE and PM10 emissions:

lbs of emissions/hr = (A) x (B) x (100 - D)/100 x (100 - E)/100
TPY of emissions = (A) x (C) x (100 - D)/100 x (100 - E) x (1 ton/2,000 lbs)

for SO2, NOx, VOC, and H2S emissions:

lbs of emissions/hr = (A) x (B)
TPY of emissions = (A) x (C) x (1 ton/2,000 lbs)

for chromium, lead, mercury, manganese and nickel emissions:

lbs of emissions/hr = (A) x (B) x (100 - D)/100
TPY of emissions = (A) x (C) x (100 - D)/100 x (1 ton/2,000 lbs)

where:

A = the emission factor, in lbs/ton of iron poured, and specified as follows:

PE: 4.2
PM10: 2.06
SO2: 0.02
NOx: 0.01
VOC: 0.14
H2S: 0.0243
chromium: 0.00013
mercury: 0.000022
manganese: 0.00013
nickel: 0.000050
lead: 0.000022

B = maximum hourly iron production rate (5.33 tons/hr)
C = annual iron production rate, in tons/year
D = the overall control efficiency of the fabric filter (assumed to be 79%)
E = control efficiency of the building enclosure (assumed to be 80%)

V. Testing Requirements (continued)

If required, the permittee shall demonstrate compliance with the hourly emission limitations through emission tests performed in accordance with the following methods:

PE: 40 CFR, Part 60, Appendix A, Methods 1-5
PM10: 40 CFR, Part 60, Appendix A, Method 201
SO2: 40 CFR, Part 60, Appendix A, Method 6
NOx: 40 CFR, Part 60, Appendix A, Method 7
VOC: 40 CFR, Part 60, Appendix A, Methods 1-4 and 25
hydrogen sulfide: 40 CFR Part 60, Appendix A, Method 15
chromium, lead, mercury, manganese and nickel: 40 CFR Part 60, Appendix A, Method 29

In addition, compliance with the annual chromium, lead, mercury, manganese and nickel emission limitations shall be demonstrated using the above-mentioned equations.

1.e Iron Production Rate Restriction: 36,864 TPY, based on a rolling, twelve-month summation.

Applicable Compliance Method: Compliance with the iron production rate restriction shall be determined by the the record keeping requirements specified in Section A.III.2.

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

a. The emission testing shall be conducted within 1 year after permit issuance and within 6 months prior to permit expiration.

b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for PE and PM10, and the overall control efficiency of 79 percent (assuming 80% capture efficiency for PE and for PM10).

c. The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined by simultaneous testing at the inlet and outlet of the control system (assuming 80% capture efficiency).

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

PE: Methods 1-5 of 40 CFR Part 60, Appendix A; and
PM10 emissions: Methods 1-4 and 201.

Alternative U.S. EPA-approved test methods may be used with prior approval from the Hamilton County Department of Environmental Services.

e. The testing shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Hamilton County Department of Environmental Services.

d. 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 Hamilton County Department of Environmental Services.

V. Testing Requirements (continued)

3. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services. 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 Hamilton County Department of Environmental Services refusal to accept the results of the emission test(s).

Personnel from the Hamilton County Department of Environmental Services 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 Hamilton County Department of Environmental Services within 30 days following completion of the test(s).

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: CB-16 Core Mach 1 (P907)

Activity Description: CB-16 Core Machine # 1

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
core making machine, equipped with a wet scrubber	OAC rule 3745-31-05(A)(3) (PTI 14-4529)	0.03 lb of particulate emissions (PE)/hr 0.14 ton per year (TPY) of PE 0.03 lb of particulate matter with a diameter of 10 microns or less (PM10 emissions)/hr 0.14 TPY of PM10 emissions 0.12 lb of organic compound (OC) emissions/hr 0.51 TPY of OC emissions The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1) and OAC rule 3745-17-07(B)(1).
	OAC rule 3745-17-07(A)(1)	Visible PE from any stack shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
	OAC rule 3745-17-07(B)(1)	Visible emissions of fugitive dust shall not exceed 20% opacity, as a three-minute average.
	OAC rule 3745-17-08(B)*	Minimize or eliminate visible emissions of fugitive dust escaping the capture hooding by maintaining sufficient collection efficiency for the control equipment. * This emissions unit is located in a non-Appendix A area, but is subject to this rule per OAC rule 3745-17-08(A)(2).

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
	OAC rule 3745-17-11(B)(1)	The PE limitation specified by this rule is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-21-07(G)(2)	The hourly and daily OC emission limitations specified by this rule are less stringent than the hourly OC emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

None

II. Operational Restrictions

1. Emissions shall be captured to the extent possible using good engineering design and vented to a drop out box and wet scrubber at all times when the emissions unit is in operation.

2. The pressure drop across the scrubber shall be continuously maintained between 1 and 5 inches of water at all times while the emissions unit is in operation.

3. The pH of the scrubber liquor shall be maintained at or below a value of 4.0.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to continuously monitor the static pressure drop across the scrubber and the pH of the scrubber liquor while the emissions unit is in operation. The monitoring devices and any recorders shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall collect and record the following information each day:

a. the pressure drop across the scrubber, in inches of water, on a once per shift basis;

b. the scrubber liquor pH, on a once per shift basis; and

c. the operating times for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.

2. The permittee shall keep the following records each day for this emissions unit:

a. the company identification of each liquid organic material used;

b. the total amount, in pounds, of sand mixed;

c. the number of hours of operation;

d. the daily OC emission rate, in pounds, using an emission factor of 0.65 lb of OC emissions per ton of sand employed and the OC control efficiency of the scrubber of 96% [i.e., 0.65 x (b) total pounds of sand mixed x (1 - 0.96) x 1 ton/2,000 lbs]; and

e. the average hourly organic compound emission rate, in pounds (d/c).

III. Monitoring and/or Record Keeping Requirements (continued)

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 wet scrubber serving this emissions unit. 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 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.

4. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust from capture hooding serving this emissions unit. 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) above or continue the daily 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.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the following scrubber parameters were not maintained at or above the required levels:

a. the static pressure drop across the scrubber; and

b. the pH of the scrubber liquor.

2. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the hourly OC emission limitation of 0.12 lb of OC emissions/hr.

3. The quarterly deviation reports shall be submitted in accordance with paragraph A.1.c.ii of the General Terms and Conditions of this permit.

4. The permittee shall submit semiannual written reports that (a) identify all days during which any visible PE from the wet scrubber were observed and (b) describe any corrective actions taken to eliminate the visible emissions. These reports shall be submitted to the Hamilton County Department of Environmental Services by January 31 and July 31 of each year and shall cover the previous 6-month period.

5. The permittee shall submit semiannual written reports that (a) identify all days during which any visible emissions of fugitive dust were observed from the capture hooding serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible fugitive particulate emissions. These reports shall be submitted to the Hamilton County Department of Environmental Services by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I shall be determined in accordance with the following methods:

1.a Emission Limitation: 20% opacity, as a six-minute average, except as provided by rule

Applicable Compliance Method: Compliance shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996.

1.b Emission Limitation: 20% opacity as a three-minute average.

Applicable Compliance Method: Compliance with OAC rule 3745-17-07(B)(1) shall be determined using the method specified in OAC rule 3745-17-03(B)(3).

1.c Emission Limitations: 0.03 lb of PE/hr and 0.14 TPY of PE; 0.03 lb of PM10 emissions/hr and 0.14 TPY of PM10 emissions

Applicable Compliance Method: The PE and PM10 emission limitations were established by using the following methodology:

lbs of PE and PM10 emissions/hr = (A) x (B) x (100 - C)/100
where:

A = emission factor of 0.35 lb/ton of cores produced, from Ohio EPA reference document RACM, Section 2.7
B = maximum hourly production rate, tons of cores produced (3.0 tons/hr)
C = the assumed overall percent control efficiency of scrubber (97%)

If required, the permittee shall demonstrate compliance with the hourly PE emission limitation through emission tests performed in accordance with 40 CFR, Appendix A, Methods 1-5.

If required, the permittee shall demonstrate compliance with the hourly PM10 emission limitation through emission tests performed in accordance with 40 CFR, Appendix A, Method 201.

1.d Emission Limitations: 0.12 lb of OC emissions/hr; 0.51 TPY of OC emissions

Applicable Compliance Method: Compliance with the hourly OC emissions limitation shall be determined by the record keeping requirements specified in Section A.III.2.

If required, the permittee shall demonstrate compliance with the hourly OC emission limitation through emission tests performed in accordance with 40 CFR, Appendix A, Methods 1-4, 18 and 25.

The annual OC emission limitation was developed by multiplying the hourly OC emission rate (0.12 lb of OC emissions/hr) by 8,760 hours/year, and dividing by 2,000 lbs/ton. Therefore, compliance with the annual OC emission limitation is ensured if compliance is maintained with the hourly OC emission limitation.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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