



State of Ohio Environmental Protection Agency

Street Address:

Mailing Address:

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

03/31/99

CERTIFIED MAIL

RE: Draft Title V Chapter 3745-77 permit

14-31-23-3202
Hamilton Foundry Division
Jason W. Powell
200 Industrial Dr.
Harrison, OH 45030-1487

Dear Jason W. Powell:

You are hereby notified that the Ohio Environmental Protection Agency has prepared the enclosed draft of the Title V permit for the facility referenced above. The purpose of this draft is to solicit public comments. A public notice concerning the draft will appear in the Ohio EPA Weekly Review and the major newspaper in the county where the facility is located. Comments and/or a request for a public hearing from the public and any affected parties will be accepted by Hamilton County Dept. of Environmental Services within 30 days of the date of publication in the newspaper. You will be notified in writing if a public hearing is scheduled.

A decision on processing the Title V permit will be made after consideration of written public comments and oral testimony (if a public hearing is conducted). After the comment period, you will be provided with a Preliminary Proposed Title V permit and an opportunity to comment prior to the Proposed Title V permit submittal to USEPA.

If you have any questions or comments concerning this draft Title V permit, please contact Hamilton County Dept. of Environmental Services.

Very truly yours,

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

cc: USEPA
Jim Orlemann, DAPC Engineering
Michael Ahern, DAPC PMU
Hamilton County Dept. of Environmental Services
Indiana
Kentucky



Ohio EPA

State of Ohio Environmental Protection Agency

TITLE V PERMIT

Issue Date: 03/31/99

DRAFT

Effective Date:

Expiration Date:

This document constitutes issuance to:

Hamilton Foundry Division
200 Industrial Dr.
Harrison, OH 45030-1487

of a Title V permit for Facility ID: 14-31-23-3202

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, 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

P005 (Stand Grinders)

(4) 30" grinders and (3) 14" grinders with cartridge filter

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

P011 (Pangborn Tumblast, 18 CF)

18 cubic foot Pangborn Tumblast shot blast 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 #

P908 (CB-16 Core Mach 2)

CB-16 Core Machine #2

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 3745-77-04(A) 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) 651-9437

OHIO ENVIRONMENTAL PROTECTION AGENCY

Christopher Jones
Director

PART I - GENERAL TERMS AND CONDITIONS

A. State and Federally Enforceable Section

1. Monitoring and Related Recordkeeping 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.
- 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.
- c.** Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:

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

- ii.** Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (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. These quarterly written reports shall satisfy the requirements of OAC rule 3745-77-07(A)(3)(c)(i) and (ii) pertaining to the submission of monitoring reports every six months and OAC rule 3745-77-07(A)(3)(c)(iii) pertaining to the prompt reporting of all deviations except malfunctions, which shall be reported in accordance with OAC rule 3745-15-06. 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. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.) See B.8 below if no deviations occurred during the quarter.
- iii.** Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, 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. 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, recordkeeping, 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.

- 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 are true, accurate, and complete.

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, i.e., upset, 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. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports submitted pursuant to OAC rule 3745-15-06 shall satisfy the requirements of OAC rule 3745-77-07(A)(3)(c)(iii) pertaining to the prompt reporting of deviations caused by malfunctions or upsets.

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 emission unit(s) that is (are) served by such control system(s).

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.

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.

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.

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. 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.

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.

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.

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.

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 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.

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.

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:
 - 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:
 - 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 appropriate Ohio EPA District Office or local air agency in the following manner and with the following content:

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.

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.

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).

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.

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, 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; and
- 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 further clarification, the permittee can refer to Engineering Guide #63 that is available in their STARSHIP software package.)

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.

B. State Only Enforceable Section

1. 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.

2. Reporting Requirements Related to Monitoring and Recordkeeping Requirements

The permittee shall submit required reports in the following manner:

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

3. Records Retention Requirements

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

4. Inspections and Information Requests

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

5. Scheduled Maintenance/Malfunction Reporting

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

6. Permit Transfers

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

7. Air Pollution Nuisance

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

8. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable 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:

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Coreless Induction Melting Furnace No. 1	OAC rule 3745-17-07(B)(1)	Visible particulate emissions of fugitive dust shall not exceed twenty percent opacity, as a three-minute average, except as specified by rule.
	OAC rule 3745-17-08(B)*	Reasonably available control measures to minimize or eliminate visible particulate 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 fugitive particulate emissions 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 abnormal visible emission incident; and
 - e. any corrective actions taken to eliminate the abnormal visible emissions.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports which (a) identify all days during which any visible fugitive particulate emissions were observed escaping from the building containing this emissions unit and (b) describe any corrective actions taken to eliminate the abnormal 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 limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):

Emission Limitation:

20% opacity

Applicable Compliance Method:

Compliance with OAC rule 3745-17-07(B)(1) shall be determined by the method outlined in OAC rule 3745-17-03(B)(3).

2. Compliance with OAC rule 3745-17-08(B) shall be determined by the method outlined in OAC rule 3745-17-08(C).

VI. Miscellaneous Requirements

None

B. State Enforceable Section

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Coreless Induction Melting Furnace No. 1		

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

Applicable Emissions Limitations and/or Control Requirements

- 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Coreless Induction Melting Furnace No. 2	OAC rule 3745-17-07(B)(1)	Visible particulate emissions of fugitive dust shall not exceed twenty percent opacity, as a three-minute average, except as specified by rule.
	OAC rule 3745-17-08(B)*	Reasonably available control measures to minimize or eliminate visible particulate 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

- The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions 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:
 - the color of the emissions;
 - whether the emissions are representative of normal operations;
 - if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - the total duration of any abnormal visible emission incident; and
 - any corrective actions taken to eliminate the abnormal visible emissions.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports which (a) identify all days during which any visible fugitive particulate emissions were observed escaping from the building containing this emissions unit and (b) describe any corrective actions taken to eliminate the abnormal 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 limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):

Emission Limitation:

20% opacity

Applicable Compliance Method:

Compliance with OAC rule 3745-17-07(B)(1) shall be determined by the method outlined in OAC rule 3745-17-03(B)(3).

2. Compliance with OAC rule 3745-17-08(B) shall be determined by the method outlined in OAC rule 3745-17-08(C).

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**

Coreless Induction Melting Furnace
No. 2

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Coreless Induction Melting Furnace No. 3	OAC rule 3745-17-07(B)(1)	Visible particulate emissions of fugitive dust shall not exceed twenty percent opacity, as a three-minute average, except as specified by rule.
	OAC rule 3745-17-08(B)*	Reasonably available control measures to minimize or eliminate visible particulate 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 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 fugitive particulate emissions 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 abnormal visible emission incident; and
 - e. any corrective actions taken to eliminate the abnormal visible emissions.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports which (a) identify all days during which any visible fugitive particulate emissions were observed escaping from the building containing this emissions unit and (b) describe any corrective actions taken to eliminate the abnormal 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 limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):

Emission Limitation:

20% opacity

Applicable Compliance Method:

Compliance with OAC rule 3745-17-07(B)(1) shall be determined by the method outlined in OAC rule 3745-17-03(B)(3).

2. Compliance with OAC rule 3745-17-08(B) shall be determined by the method outlined in OAC rule 3745-17-08(C).

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	Applicable Emissions Limitations/Control Measures
Coreless Induction Melting Furnace No. 3		

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Ductile iron inoculation	OAC rule 3745-17-07(B)(1)	Visible particulate emissions of fugitive dust shall not exceed twenty percent opacity, as a three-minute average, except as specified by rule.
	OAC rule 3745-17-08(B)*	Reasonably available control measures to minimize or eliminate visible particulate 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 fugitive particulate emissions 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 abnormal visible emission incident; and
 - e. any corrective actions taken to eliminate the abnormal visible emissions.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports which (a) identify all days during which any visible fugitive particulate emissions were observed escaping from the building containing this emissions unit and (b) describe any corrective actions taken to eliminate the abnormal 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 limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):

Emission Limitation:

20% opacity

Applicable Compliance Method:

Compliance with OAC rule 3745-17-07(B)(1) shall be determined by the method outlined in OAC rule 3745-17-03(B)(3).

2. Compliance with OAC rule 3745-17-08(B) shall be determined by the method outlined in OAC rule 3745-17-08(C).

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
Ductile iron inoculation		

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

Applicable Emissions Limitations and/or Control Requirements

- 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Core Making Machines	OAC rule 3745-17-07(B)(1)	Visible particulate emissions of fugitive dust shall not exceed twenty percent opacity, as a three-minute average, except as specified by rule.
	OAC rule 3745-17-08(B)*	Reasonably available control measures to minimize or eliminate visible particulate emissions of fugitive dust. (No control measures have been identified as being reasonably available for this emissions unit.)
	OAC rule 3745-21-07(G)	Emissions of organic compounds shall not exceed 8 lbs/hr and 40 lbs/day, unless reduced by at least 85 percent, on any day when photochemically reactive materials, as defined in OAC rule 3745-21-01(C)(5), are employed.

* This emissions unit is located in a non-Appendix A area, but is subject to this 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 keep the following records each day this emissions unit operates while using any photochemically reactive material:
 - a. the company identification of each liquid organic material used;
 - b. the amounts (pounds) of each liquid organic material and sand mixed;
 - c. the number of hours of operation;
 - d. an estimate of the daily organic compound emission rate (pounds), using an emission factor of 1.17 pounds OC per ton of sand employed (1.17 x total tons sand mixed); and
 - e. the average hourly organic compound emission rate (pounds) (d/c).
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions 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 abnormal visible emission incident; and
 - e. any corrective actions taken to eliminate the abnormal visible emissions.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which include the following information:
 - a. an identification of each day during which the average hourly organic compound emission rate exceeded 8 pounds per hour, and the actual average hourly organic compound emission rate for each such day; and
 - b. an identification of each day during which the organic compound emission rate exceeded 40 pounds per day, and the actual organic compound emission rate for each such day.
2. The permittee shall submit semiannual written reports which (a) identify all days during which any visible fugitive particulate emissions were observed escaping from the building containing this emissions unit and (b) describe any corrective actions taken to eliminate the abnormal 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 limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):
 - 1.a Emission Limitation:
20% opacity
Applicable Compliance Method:
Compliance with OAC rule 3745-17-07(B)(1) shall be determined by the method outlined in OAC rule 3745-17-03(B)(1).

V. Testing Requirements (continued)

1.b Emission Limitation:

40 lbs organic compounds per day

Applicable Compliance Method:

To determine the actual emission rate in lbs/day for organic compounds, the following equation shall be used:

$$E_d = \text{sand usage rate (in tons per day)} \times 1.17 \text{ lbs/ton sand}$$

where

E_d = organic compound emission rate (lbs/day)

1.17 = emission factor (lbs OC per ton of sand) for phenolic urethane no-bake binder system, from Ohio Cast Metal Association study, and tons of sand per day, from the records required by section A.III.1.b.

1.c Emission Limitation:

8 lbs organic compounds per hour

Applicable Compliance Method:

To determine the actual average emission rate in lbs/hr for organic compounds, the following equation shall be used:

$$E_h = E_d / H$$

where

E_h = average organic compound emission rate (lbs/hr)

E_d = daily organic compound emission rate, as determined in A.V.2., in lbs/day

H = hours of operation each day from records provided by A.III.c.

2. Compliance with OAC rule 3745-17-08(B) shall be determined by the method outlined in OAC rule 3745-17-08(C).

VI. Miscellaneous Requirements

None

B. State Enforceable Section

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

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

- 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Core making machines with wet scrubber	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed twenty percent opacity, as a six-minute average, except as specified by rule.
Core making fugitive emissions	OAC rule 3745-17-07(B)(1)	Visible particulate emissions of fugitive dust shall not exceed twenty percent opacity, as a three-minute average, except as specified by rule.
Core making fugitive emissions	OAC rule 3745-17-08(B)*	Reasonably available control measures to minimize or eliminate visible particulate 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).
Core making stack emissions from the wet scrubber	OAC rule 3745-17-11 OAC rule 3745-21-07(G)	6.52 lbs particulate emissions/hr from stack (based on Table I of OAC rule 3745-17-11) Emissions of organic compounds shall not exceed 8 lbs/hr and 40 lbs/day, unless reduced by at least 85 percent, on any day when photochemically reactive materials, as defined in OAC rule 3745-21-01(C)(5), are 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 install, 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/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 install, 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/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 core making machines each day this emissions unit operates while using any photochemically reactive material:
 - a. the company identification of each liquid organic material used;
 - b. the amounts (pounds) of each liquid organic material and sand mixed;
 - c. the maximum number of hours that any one machine operated during the day;
 - d. an estimate of the daily organic compound emission rate (pounds), using an emission factor of 1.17 pounds OC per ton of sand employed ($1.17 \times$ total tons sand mixed); and
 - e. the average hourly organic compound emission rate (pounds) (d/c).
 4. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit and for any visible fugitive particulate emissions 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 abnormal visible emission incident; and
 - e. any corrective actions taken to eliminate the abnormal visible emissions.

IV. Reporting Requirements

1. The permittee shall submit pH deviation (excursion) reports that identify all periods of time during which the scrubber liquor pH did not comply with the pH restriction specified above.
2. The permittee shall submit deviation (excursion) reports that identify all periods of time during which the pressure drop across the scrubber was not maintained within the required range.
3. The permittee shall submit deviation (excursion) reports which include the following information:
 - a. an identification of each day during which any photochemically reactive materials were used and the average hourly organic compound emission rate exceeded 8 pounds per hour, and the actual average hourly organic compound emission rate for each such day; and
 - b. an identification of each day during which any photochemically reactive materials were used and the organic compound emission rate exceeded 40 pounds per day, and the actual organic compound emission rate for each such day.
4. The permittee shall submit semiannual written reports which (a) identify all days during which any visible particulate emissions from the stack serving this emission unit or any visible fugitive particulate emissions escaping from the building containing this emissions unit were observed and (b) describe any corrective actions taken to eliminate the abnormal 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(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):
 - 1.a Emission Limitation:
20% opacity, as a six-minute average

Applicable Compliance Method:

Compliance with OAC rule 3745-17-07(A)(1) shall be determined by the method outlined in OAC rule 3745-17-03(B)(1).
 - 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 by the method outlined in OAC rule 3745-17-03(B)(3).

V. Testing Requirements (continued)

1.c Emission Limitation:

6.52 lbs particulate emissions (PE)/hr

Applicable Compliance Method:

The particulate emission rate shall be determined by using the following equation except as otherwise provided below:

$$\text{Lbs PE/hr} = (A) \times (B) \times (100 - C) / 100$$

where:

A = particulate emission factor of 0.35 lb/ton of cores produced, from Ohio EPA reference document entitled RACM, Section 2.7;

B = hourly production rate, tons of cores produced; and

C = percent control efficiency of wet scrubber (the design efficiency of the scrubber, except if actual efficiency is available from stack test data).

If testing is required to demonstrate compliance with the allowable emission limitation of 6.52 lbs PE/hr, then testing shall be conducted using the following method:

40 CFR, Part 60, Appendix A, Method 5.

1.d Emission Limitation:

40 lbs organic compounds per day

Applicable Compliance Method:

The following equation shall be used to determine the actual emission rate in lbs/day for organic compounds except as provided below:

$$\text{Lbs/hr organic compounds} = (A) \times (B)$$

where:

A = sand usage rate, tons per day; and

B = emission factor (1.17 lbs OC per ton of sand) for phenolic urethane no-bake binder system, from Ohio Cast Metal Association study.

If testing is required to demonstrate compliance with the allowable emission limitation of 40 lbs OC/day, then testing shall be conducted using the following method and multiplying the tested hourly OC emission rate by the hours of operation during the day:

40 CFR, Part 60, Appendix A, Method 25.

V. Testing Requirements (continued)

1.e Emission Limitation:

8 lbs organic compounds per hour

Applicable Compliance Method:

The following equation shall be used to determine the actual emission rate in lbs/hr for organic compounds except as otherwise provided below:

$$\text{Lbs/hr organic compounds} = (A) \times (H)$$

where:

A = daily organic compound emission rate, as determined in A.V.5.

H = hours of operation each day from records provided by A.III.

If testing is required to demonstrate compliance with the allowable emission limitation of 8 lbs OC/hr, then testing shall be conducted using the following method:

40 CFR, Part 60, Appendix A, Method 25.

2. Compliance with OAC rule 3745-17-08(B) shall be determined by the method outlined in OAC rule 3745-17-08(C).

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Core Making Machines with Wet Scrubber		

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

- 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Coreless Induction Melting Furnace No. 4	OAC rule 3745-17-07(B)(1)	Visible particulate emissions from any fugitive dust source shall not exceed twenty percent opacity, as a three-minute average, except as specified by rule.
	OAC rule 3745-17-08(B)*	Reasonably available control measures to minimize or eliminate visible particulate 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 weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions 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 abnormal visible emission incident; and
 - e. any corrective actions taken to eliminate the abnormal visible emissions.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports which (a) identify all days during which any visible fugitive particulate emissions were observed escaping from the building containing this emissions unit and (b) describe any corrective actions taken to eliminate the abnormal 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 limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):

Emission Limitation:

20% opacity

Applicable Compliance Method:

Compliance with OAC rule 3745-17-07(B)(1) shall be determined by the method outlined in OAC rule 3745-17-03(B)(3).

2. Compliance with OAC rule 3745-17-08(B) shall be determined by the method outlined in OAC rule 3745-17-08(C).

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

- 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Coreless Induction Melting Furnace No. 4	OAC rule 3745-31-05 (PTI 14-1995)	3.8 lbs particulate emissions/hr*, 9.0 tons particulate emissions/yr * The lb/hr emission limit is equal to or less than the emissions unit's potential to emit. Therefore, no daily recordkeeping, deviation reporting, or compliance method calculations are required to demonstrate compliance with this limit.

2. Additional Terms and Conditions

None

II. Operational Restrictions

- The maximum throughput of iron at emissions unit F016 shall not exceed 20,000 tons per year.

III. Monitoring and/or Record Keeping Requirements

- The permittee shall maintain monthly records of the tons of iron processed per month

IV. Reporting Requirements

- The permittee shall submit annual reports that identify any exceedances of the annual production rate limitation, as well as the corrective actions that were taken to achieve compliance. These reports shall be submitted by January 31 of each year.

V. Testing Requirements

- Compliance with the iron throughput limitation specified in B.II.1. ensures compliance with the 9.0 TPY particulate emission limit (i.e., the throughput limitation established in PTI 14-1995 is the basis for the emission limitation).
- Compliance with the operational limitation in Section B.II. of these terms and conditions shall be demonstrated by the recordkeeping requirements of Section B.III. above.

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Gray Iron Pouring and Cooling Line with Fabric Filter	OAC rule 3745-31-05 (PTI 14-4107)	See Section A.2.
Gray Iron Pouring and Cooling Line fabric filter discharge	OAC rule 3745-17-07(A)(1)	The opacity restrictions established by this rule are less stringent than that established by Ohio Administrative Code rule 3745-31-05 (BAT).
Gray Iron Pouring and Cooling Line fugitive emissions	OAC rule 3745-17-07(B)(1)	The opacity restriction established by this rule is less stringent than that established by Ohio Administrative Code rule 3745-31-05 (BAT).
Gray Iron Pouring and Cooling fugitive emissions	OAC rule 3745-17-08(B)*	The control measures established by this rule are less stringent than that established by Ohio Administrative Code rule 3745-31-05 (BAT). * 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).
Gray Iron Pouring and Cooling Line fabric filter discharge	OAC rule 3745-17-11	The particulate emission restriction established by this rule is less stringent than that established by Ohio Administrative Code rule 3745-31-05 (BAT).

2. Additional Terms and Conditions

- 2.a Particulate emissions (PE) and particulate matter emissions less than or equal to 10 microns (PM-10) from the fabric filter serving emissions unit F018 shall not exceed the following:

6.43 lbs PE/hr, 14.28 tons PE/yr,
 3.15 lbs PM-10/hr, 7.00 tons PM-10/yr.

2. Additional Terms and Conditions (continued)

- 2.b Emissions from emissions unit F018 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 particulate emissions and for PM-10.
- 2.c Opacity from the discharge stack of the control device for emissions unit F018 shall not exceed zero percent as a three-minute average.
- 2.d There shall be no visible emissions from the roof vents exhausting emissions unit F018.

II. Operational Restrictions

- 1 The pressure drop across the baghouse 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 emissions unit F018 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 install, operate, and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse on a daily basis.
- 2. This facility shall maintain monthly records of the amount of iron poured in emissions unit F018 and the updated rolling, 12-month summation of iron poured.
- 3. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit and for any visible fugitive particulate emissions 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 abnormal visible emission incident; and
 - e. any corrective actions taken to eliminate the abnormal visible emissions.

IV. Reporting Requirements

- 1. The permittee shall submit semi-annual pressure drop deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above. These reports shall be submitted to the Hamilton County Department of Environmental Services by February 15 and August 15 of each year and cover the previous six calendar months.
- 2. This facility shall submit semi-annual reports to the Hamilton County Department of Environmental Services which contain monthly summaries of the updated rolling, 12-month summation of iron poured and the PM emissions from emissions unit F018. These reports shall be submitted by February 15 and August 15 of each year and cover the previous six calendar months.
- 3. The permittee shall submit semiannual written reports which (a) identify all days during which any visible particulate emissions from the stack serving this emission unit or any visible fugitive particulate emissions escaping from the building containing this emissions unit were observed and (b) describe any corrective actions taken to eliminate the abnormal 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(s) in Section A. of these terms and conditions shall be determined in accordance with the following method(s):

V. Testing Requirements (continued)

1.a Emission Limitation:

0% opacity

Applicable Compliance Method:

Compliance shall be demonstrated by the method outlined in Method 9 of 40 CFR, Part 60, Appendix A, 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 emissions unit F018

Applicable Compliance Method:

Compliance with the no visible emissions from roof vents limitation shall be demonstrated by the method outlined in Method 22 of 40 CFR, Part 60, Appendix A.

1.c Fabric Filter Emission Limitation:

6.43 lbs particulate emissions/hr, 14.28 tons particulate emissions/yr,
3.15 lbs PM-10/hr, 7.00 tons PM-10/yr.

Applicable Compliance Method:

The following equations shall be used to determine the particulate emission and PM-10 emission rates from the fabric filter, except as otherwise provided below:

$$\begin{aligned} \text{Lbs particulate emissions/hr} &= (A) \times (C) \\ \text{Tons particulate emissions/yr} &= (A) \times (D) \times 0.0005 \end{aligned}$$

$$\begin{aligned} \text{Lbs PM-10/hr} &= (B) \times (C) \\ \text{Tons PM-10/yr} &= (B) \times (D) \times 0.0005 \end{aligned}$$

where:

A = particulate emission factor, from most recent stack test which demonstrated compliance, lbs/ton iron poured;

B = PM-10 emission factor, from most recent stack test which demonstrated compliance, lbs/ton of iron poured

C = hourly production rate, tons of iron poured; and

D = annual production rate, tons of iron poured.

If testing is required to demonstrate compliance with the allowable emission limitation of 6.43 lbs PE/hr, then testing shall be conducted using the following method:

40 CFR, Part 60, Appendix A, Method 5.

If testing is required to demonstrate compliance with the allowable emission limitation of 3.15 lbs PM-10/hr, then testing shall be conducted using the following method:

40 CFR, Part 60, Appendix A, Method 201

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 approximately within 3 months 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 PM-10, and the overall control efficiency of 83 percent (assuming 85% capture efficiency for PE and for PM-10).
 - 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 methods shall be employed to demonstrate compliance with the allowable mass emission rate(s): for particulate emissions, Method 5 of 40 CFR, Part 60, Appendix A; for PM-10, Method 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.

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

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.

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.

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Gray Iron Pouring and Cooling Line with Fabric Filter	OAC rule 3745-31-05 (PTI 14-4107)	See term B.I.2.a.

2. Additional Terms and Conditions

- 2.a Mass emissions from the fabric filter serving emissions unit F018 shall not exceed the following:

0.18 lb SO₂/hr, 0.40 ton SO₂/yr,
 0.09 lb NO_x/hr, 0.20 ton NO_x/yr,
 3.77 lbs OC/hr, 8.39 ton OC/yr,
 0.03 lb ammonia/hr, 0.07 ton ammonia/yr,
 0.22 lb hydrogen sulfide/hr, 0.49 ton hydrogen sulfide/yr,
 0.01 lb chromium/hr, 0.03 ton chromium/yr,
 0.02 lb manganese/hr, 0.03 ton manganese/yr,
 0.02 lb nickel/hr, 0.05 ton nickel/yr.

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

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

Emission Limitation:

Mass emission limitations in Section B above

Applicable Compliance Method:

The following equations shall be used to determine the mass emission rates:

Lbs emissions/hr = (A) x (B)

Tons emissions/yr = (A) x (C) x 0.0005

where:

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

SO₂ - 0.02

NO_x - 0.01

OC - 0.4193

ammonia - 0.0037

hydrogen sulfide - 0.0243

chromium - 0.0081

manganese - 0.0099

nickel - 0.0135

B = hourly production rate, tons of iron poured

C = annual production rate, tons of iron poured

If testing is required to demonstrate compliance with the allowable emission limitations, then testing shall be conducted using the following methods:

SO₂ - 40 CFR, Part 60, Appendix A, Method 6

NO_x - 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

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Natural Gas Fired Scrap Pre-Heater	OAC rule 3745-17-07(B)(1)	Visible particulate emissions of fugitive dust shall not exceed twenty percent opacity, as a three-minute average, except as specified by rule.
	OAC rule 3745-17-08(B)*	Reasonably available control measures to minimize or eliminate visible particulate 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 fugitive particulate emissions 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 abnormal visible emission incident; and
 - e. any corrective actions taken to eliminate the abnormal visible emissions.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports which (a) identify all days during which any abnormal visible fugitive particulate emissions were observed escaping from the building containing this emissions unit and (b) describe any corrective actions taken to 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 limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):

Emission Limitation:

20% opacity

Applicable Compliance Method:

Compliance with OAC rule 3745-17-07(B)(1) shall be determined by the method outlined in OAC rule 3745-17-03(B)(3).

2. Compliance with OAC rule 3745-17-08(B) shall be determined by the method outlined in OAC rule 3745-17-08(C).

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
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Scrap Pre-Heater

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

Applicable Emissions Limitations and/or Control Requirements

- 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Casting Shakeout with Fabric Filter	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed twenty percent opacity, as a six-minute average, except as specified by rule.
	OAC rule 3745-17-11	Particulate emissions 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

- The pressure drop across the baghouse shall be maintained within the range of 4.0 to 6.0 inches of water while the emissions unit is in operation.
- All particulate emissions from this emissions unit shall be captured and vented to the fabric filter.

III. Monitoring and/or Record Keeping Requirements

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

IV. Reporting Requirements

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

V. Testing Requirements

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

V. Testing Requirements (continued)

1.a Emission Limitation:

20% opacity

Applicable Compliance Method:

Compliance with OAC rule 3745-17-07(A)(1) shall be determined by the method outlined in OAC rule 3745-17-03(B)(1).

1.b Emission Limitation

6.96 lbs particulate emissions/hr

Applicable Compliance Method:

The particulate emission rate (PE) shall be determined by using the following equation except as otherwise provided below:

$$\text{Lbs PE/hr} = (A) \times (B) \times (100 - C)/100$$

where:

A = particulate emission factor of 3.2 pounds per ton of iron castings throughput, from USEPA reference document AP-42, Fifth Edition, Section 12.10;

B = hourly production rate, tons of iron; and

C = percent control efficiency of fabric filter (use 99%, except if actual efficiency is available from stack test data)

If testing is required to demonstrate compliance with the allowable emission limitation from OAC rule 3745-17-11, then inlet/outlet testing of the fabric filter shall be conducted using the following method:

40 CFR, Part 60, Appendix A, Method 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	Applicable Emissions Limitations/Control Measures
Casting Shakeout with Fabric Filter		

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: Stand Grinders (P005)

Activity Description: (4) 30" grinders and (3) 14" grinders 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Stand Grinders with Cartridge Filter	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed twenty percent opacity, as a six-minute average, except as specified by rule.
	OAC rule 3745-17-11	3.38 lbs particulate emissions/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 baghouse shall be maintained within the range of 1.0 to 3.0 inches of water while the emissions unit is in operation.
2. All particulate emissions 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 install, operate, and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse on a daily basis.

IV. Reporting Requirements

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

V. Testing Requirements

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

V. Testing Requirements (continued)

1.a Emission Limitation:

20% opacity

Applicable Compliance Method:

Compliance with OAC rule 3745-17-07(A)(1) shall be determined by the method outlined in OAC rule 3745-17-03(B)(1).

1.b Emission Limitation:

3.38 lbs particulate emissions/hr

Applicable Compliance Method:

The particulate emission rate (PE) shall be determined by using the following equation except as otherwise provided below:

$$\text{Lbs PE/hr} = (A) \times (B) \times (100 - C)/100$$

where:

A = particulate emission factor of 17 lbs/ton of iron castings throughput, from USEPA reference document AP-42, Fifth Edition, Section 12.10;

B = hourly production rate, tons of iron produced; and

C = percent control efficiency of fabric filter (use 99%, except if actual efficiency is available from stack test data)

If testing is required to demonstrate compliance with the allowable emission limitation from OAC rule 3745-17-11, then inlet/outlet testing of the fabric filter shall be conducted using the following method:

Method 5 of 40 CFR, Part 60, Appendix A

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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Stand Grinders with Cartridge Filter

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

Applicable Emissions Limitations and/or Control Requirements

- 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Shotblaster with Fabric Filter	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed twenty percent opacity, as a six-minute average, except as specified by rule.
	OAC rule 3745-17-11	14.4 lbs particulate emissions/hr (based on Table I of OAC rule 3745-17-11)

2. Additional Terms and Conditions

None

II. Operational Restrictions

- The pressure drop across the baghouse shall be maintained within the range of 4.0 to 6.0 inches of water while the emissions unit is in operation.
- All particulate emissions from this emissions unit shall be captured and vented to the fabric filter.

III. Monitoring and/or Record Keeping Requirements

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

IV. Reporting Requirements

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

V. Testing Requirements

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

V. Testing Requirements (continued)

1.a Emission Limitation:

20% opacity

Applicable Compliance Method:

Compliance with OAC rule 3745-17-07(A)(1) shall be determined by the method outlined in OAC rule 3745-17-03(B)(1).

1.b Emission Limitation:

14.4 lbs particulate emissions/hr

Applicable Compliance Method:

The particulate emission rate (PE) shall be determined by using the following equation except as otherwise provided below:

$$\text{Lbs PE/hr} = (A) \times (B) \times (100 - C)/100$$

where:

A = particulate emission factor, 17 lbs/ton of iron castings throughput, from USEPA reference document AP-42, Fifth Edition, Section 12.10;

B = hourly production rate, tons of iron produced; and

C = 99.9 percent control efficiency of fabric filter (based on stack test performed on September 18, 1991).

If testing is required to demonstrate compliance with the allowable emission limitation from OAC rule 3745-17-11, then inlet/outlet testing of the fabric filter shall be conducted using the following method:

40 CFR, Part 60, Appendix A, Method 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Shotblaster with Fabric Filter	OAC rule 3745-31-05 (PTI 14-1995)	0.60 lb particulate emission/hr, 10% opacity, as a six-minute average, at fabric filter outlet

2. Additional Terms and Conditions

None

II. Operational Restrictions

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

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

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

1.a Emission Limitation:

10% opacity

Applicable Compliance Method:

Compliance shall be determined by the method outlined in Method 5 of 40 CFR, Part 60, Appendix A.

V. Testing Requirements (continued)

1.b Emission Limitation:

0.60 lb particulate emissions/hr

Applicable Compliance Method:

The particulate emission rate (PE) shall be determined by using the following equation except as otherwise provided below:

$$\text{Lbs PE/hr} = (A) \times (B) \times (100 - C)/100$$

where:

A = particulate emission factor, 17 lbs/ton of iron produced, from USEPA reference document AP-42, Fifth Edition, Section 12.10;

B = hourly production rate, tons of iron produced; and

C = 99.9 percent control efficiency of fabric filter (based on stack test performed on September 18, 1991).

If testing is required to demonstrate compliance with the allowable emission limitation from OAC rule 3745-17-11, then inlet/outlet testing of the fabric filter shall be conducted using the following method:

40 CFR, Part 60, Appendix A, Method 5.

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 Tumbleblast shot blast with cartridge filter

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

- 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Pangborn Shotblaster with Cartridge Filter	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed twenty percent opacity, as a six-minute average, except as specified by rule.
	OAC rule 3745-17-11	14.0 lbs particulate emissions/hr (based on Table I of OAC rule 3745-17-11)

2. Additional Terms and Conditions

None

II. Operational Restrictions

- The pressure drop across the baghouse shall be maintained within the range of 4.0 to 6.0 inches of water while the emissions unit is in operation.
- All particulate emissions from this emissions unit shall be captured and vented to the fabric filter.

III. Monitoring and/or Record Keeping Requirements

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

IV. Reporting Requirements

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

V. Testing Requirements

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

V. Testing Requirements (continued)

1.a Emission Limitation:

20% opacity

Applicable Compliance Method

Compliance with OAC rule 3745-17-07(A)(1) shall be determined by the method outlined in OAC rule 3745-17-03(B)(1).

1.b Emission Limitation:

14.0 lbs particulate emissions/hr

Applicable Compliance Method:

The particulate emission rate (PE) shall be determined by using the following equation except as otherwise provided below:

$$\text{Lbs PE/hr} = (A) \times (B) \times (100 - C)/100$$

where:

A = particulate emission factor of 17 lbs/ton of iron castings throughput, from USEPA reference document AP-42, Fifth Edition, Section 12.10;

B = hourly production rate, tons of iron; and

C = percent control efficiency of fabric filter (use 99%, except if actual efficiency is available from stack test data).

If testing is required to demonstrate compliance with the allowable emission limitation from OAC rule 3745-17-11, then inlet/outlet testing of the fabric filter shall be conducted using the following method:

40 CFR, Part 60, Appendix A, Method 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Pangborn Shotblaster with Cartridge Filter	OAC rule 3745-31-05 (PTI 14-2754)	0.21 lb particulate emission (PE)/hr 0.11 lb particulate matter less than or equal to 10 microns (PM-10)/hr 20% opacity at control device outlet

2. Additional Terms and Conditions

- 2.a Emissions unit P008 shall be vented to a control device having a 99.8% control efficiency for particulate emissions at all times during operation.

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

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

1.a Emission Limitation:

20% opacity

Applicable Compliance Method:

Method 9 of 40 CFR, Part 60, Appendix A

V. Testing Requirements (continued)

1.b Emission Limitation:

0.21 lb particulate emissions/hr, 0.11 lb particulate matter less than or equal to 10 microns/hr

Applicable Compliance Method:

The particulate emission rate (PE) and the particulate matter less than or equal to 10 microns (PM-10) shall be determined by using the following equations except as provided below:

$$\begin{aligned} \text{Lbs PE/hr} &= (A) \times (B) \times (100 - C)/100 \\ \text{Lbs PM-10/hr} &= (A) \times (B) \times (100 - C)/100 \end{aligned}$$

where:

A = particulate emission factor of 17 lbs/ton of iron castings throughput, from USEPA reference document AP-42, Fifth Edition, Section 12.10;

B = hourly production rate, tons of iron; and

C = percent control efficiency of fabric filter (use 99.8%, except if actual efficiency is available from stack test data)

If testing is required to demonstrate compliance with the allowable emission limitation of 0.21 lb PE/hr and/or 0.11 lb PM-10/hr, then inlet/outlet testing of the fabric filter shall be conducted using the following methods:

for PE : 40 CFR, Part 60, Appendix A, Method 5;

for PM-10 : 40 CFR, Part 60, Appendix A, Method 201.

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

- 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Pangborn Spinner Shotblast with Fabric Filter	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed twenty percent opacity, as a six-minute average, except as specified by rule.
	OAC rule 3745-17-11	11.4 lbs particulate emissions/hr (based on Table I of OAC rule 3745-17-11)

2. Additional Terms and Conditions

None

II. Operational Restrictions

- The pressure drop across the baghouse shall be maintained within the range of 4.0 to 6.0 inches of water while the emissions unit is in operation.
- All particulate emissions from this emissions unit shall be captured and vented to the fabric filter.

III. Monitoring and/or Record Keeping Requirements

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

IV. Reporting Requirements

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

V. Testing Requirements

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

V. Testing Requirements (continued)

1.a Emission Limitation:

20% opacity

Applicable Compliance Method:

Compliance with OAC rule 3745-17-07(A)(1) shall be determined by the method outlined in OAC rule 3745-17-03(B)(1).

1.b Emission Limitation:

11.4 lbs particulate emissions/hr

Applicable Compliance Method:

The particulate emission rate (PE) shall be determined by using the following equation except as otherwise provided below:

$$\text{Lbs PE/hr} = (A) \times (B) \times (100 - C)/100$$

where:

A = particulate emission factor of 17 lbs/ton of iron castings throughput, from USEPA reference document AP-42, Fifth Edition, Section 12.10;

B = hourly production rate, tons of iron; and

C = percent control efficiency of fabric filter (use 99.8% except if actual efficiency is available from stack test data)

If testing is required to demonstrate compliance with the allowable emission limitation from OAC rule 3745-17-11, then inlet/outlet testing of the fabric filter shall be conducted using the following method:

40 CFR, Part 60, Appendix A, Method 5.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

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 Spinner Shotblast with Fabric Filter		

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 Tumbblast, 18 CF (P011)
Activity Description: 18 cubic foot Pangborn Tumbblast shot blast with cartridge filter

A. State and Federally Enforceable Section

Applicable Emissions Limitations and/or Control Requirements

- 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Shotblaster with Cartridge Dust Collector	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed twenty percent opacity, as a six-minute average, except as specified by rule.
	OAC rule 3745-17-11	10.9 lbs particulate emissions/hr (based on Table I of OAC rule 3745-17-11)

2. Additional Terms and Conditions

None

II. Operational Restrictions

- The pressure drop across the baghouse shall be maintained within the range of 4.0 to 6.0 inches of water while the emissions unit is in operation.
- All particulate emissions from this emissions unit shall be captured and vented to the fabric filter.

III. Monitoring and/or Record Keeping Requirements

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

IV. Reporting Requirements

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

V. Testing Requirements

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

V. Testing Requirements (continued)

1.a Emission Limitation:

20% opacity

Applicable Compliance Method:

Compliance with OAC rule 3745-17-07(A)(1) shall be determined by the method outlined in OAC rule 3745-17-03(B)(1).

1.b Emission Limitation:

10.9 lbs particulate emissions/hr

Applicable Compliance Method:

The particulate emission rate (PE) shall be determined by using the following equation except as otherwise provided below:

$$\text{Lbs PE/hr} = (A) \times (B) \times (100 - C)/100$$

where:

A = particulate emission factor of 17 lbs/ton of iron castings throughput, from USEPA reference document AP-42, Fifth Edition, Section 12.10;

B = hourly production rate, tons of iron; and

C = percent control efficiency of fabric filter (use 99.8%, except if actual efficiency is available from stack test data)

If testing is required to demonstrate compliance with the allowable emission limitation from OAC rule 3745-17-11, then inlet/outlet testing of the fabric filter shall be conducted using the following method:

40 CFR, Part 60, Appendix A, Method 5.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Shotblaster with Cartridge Dust Collector	OAC rule 3745-31-05 (PTI 14-3822)	0.15 lb particulate emission/hr, 0.64 ton particulate emission/yr

2. Additional Terms and Conditions

- 2.a Emissions shall be vented to a cartridge dust collector with a control efficiency of at least 99.8% for particulate emissions.

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

1. Emission Limitation:
 0.15 lb particulate emission/hr, 0.64 ton particulate emission/yr.

Applicable Compliance Method:

The particulate emission rate (PE) shall be determined by using the following equations except as otherwise provided below:

$$\text{Lbs PE/hr} = (A) \times (B) \times (C)$$

$$\text{Tons PE/yr} = (A) \times ((100-C)/100) \times (D) \times 0.0005$$

where:

- A = particulate emission factor of 17 lbs/ton of iron castings throughput, from USEPA reference document AP-42, Fifth Edition, Section 12.10;
- B = hourly production rate, tons of iron;
- C = percent control efficiency of fabric filter (use 99.8%, except if actual efficiency is available from stack test data); and
- D = annual production rate, tons of iron.

If testing is required to demonstrate compliance with the allowable emissions limitations of 0.15 lb PE/hr and 0.64 ton PE/yr, then testing shall be conducted using the following method, and the resulting emissions rate shall be multiplied by the hours of operation per year to obtain the annual emissions rate:

40 CFR, Part 60, Appendix A, Method 5.

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

Applicable Emissions Limitations and/or Control Requirements

- 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Pneumatic sand unloading, handling, and muller with fabric filter	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed twenty percent opacity, as a six-minute average, except as specified by rule.
	OAC rule 3745-17-11	Particulate emissions from stacks shall not exceed 14.3 pounds per hour. (Based on Table I of OAC rule 3745-17-11.)

2. Additional Terms and Conditions

None

II. Operational Restrictions

- The pressure drop across the baghouse shall be maintained within the range of 4.0 to 6.0 inches of water while the emissions unit is in operation.
- All particulate emissions from this emissions unit shall be captured and vented to the fabric filter.

III. Monitoring and/or Record Keeping Requirements

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

IV. Reporting Requirements

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

V. Testing Requirements

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

V. Testing Requirements (continued)

1.a Emission Limitation:

20% opacity

Applicable Compliance Method:

Compliance with OAC rule 3745-17-07(A)(1) shall be determined by the methods outlined in OAC rule 3745-17-03(B)(1).

1.b Emission Limitation:

14.3 lbs particulate emissions/hr

Applicable Compliance Method:

The particulate emission rate (PE) shall be determined by using the following equation except as provided below:

$$\text{Lbs PM/hr} = (A) \times (B) \times (100 - C)/100$$

where:

A = particulate emission factor of 3.6 lbs/ton of sand transferred, from USEPA reference document AP-42, Fifth Edition, Section 12.10;

B = hourly sand transfer rate, tons; and

C = percent control efficiency of fabric filter (use 99%, except if actual efficiency is available from stack test data)

If testing is required to demonstrate compliance with the allowable emission limitation from OAC rule 3745-17-11, then inlet/outlet testing of the fabric filter shall be conducted using the following method:

40 CFR, Part 60, Appendix A, Method 5.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Sand Unloading and Handling with Fabric Filter		

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Disa-Forma Mold Making Machine	OAC rule 3745-17-07(B)(1)	Visible particulate emissions of fugitive dust shall not exceed twenty percent opacity, as a three-minute average, except as specified by rule.
	OAC rule 3745-17-08(B)*	Reasonably available control measures to minimize or eliminate visible particulate 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

- 2.a The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions escaping the building containing this emissions unit. The presence or absence of any abnormal 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 abnormal visible emission incident; and
 - e. any corrective actions taken to eliminate the abnormal visible emissions.

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports which (a) identify all days during which any visible fugitive particulate emissions were observed escaping from the building containing this emissions unit and (b) describe any corrective actions taken to eliminate the abnormal 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 limitation(s) in Section A. of these terms and conditions shall be determined in accordance with the following method(s):

Emission Limitation:

20% opacity

Applicable Compliance Method:

Compliance with OAC rule 3745-17-07(B)(1) shall be determined by the methods outlined in OAC rule 3745-17-03(B)(3).

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

- 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Disa-Forma Mold Making Machine	OAC rule 3745-31-05 (PTI 14-1320)	0.03 lb particulate emissions/hr, 0.13 ton particulate emissions/yr* *The lb/hour and TPY emission limitations for particulate matter are based on the emissions units potential to emit. Therefore, no record keeping, reporting, and/or compliance measures are necessary.

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Gray iron pouring and cooling line with fabric filter	OAC rule 3745-31-05 (PTI 14-4434)	4.70 lbs PM/hr 2.31 lbs particulate matter less than or equal to 10 microns (PM-10)/hr Also, see A.I.2.
Gray iron pouring and cooling line stack emissions	OAC rule 3745-17-07(A)(1)	The opacity limitations established by this rule are less stringent than that established by Ohio Administrative Code rule 3745-31-05 (BAT).
Gray iron pouring and cooling line fugitive emissions	OAC rule 3745-17-07(B)(1)	The opacity limitation established by this rule is less stringent than that established by Ohio Administrative Code rule 3745-31-05 (BAT).
Gray iron pouring and cooling line fugitive emissions	OAC rule 3745-17-08(B)*	The emission limitations/control requirements established by this rule are less stringent than those established by Ohio Administrative Code rule 3745-31-05 (BAT). * 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).
Gray iron pouring and cooling line stack emissions	OAC rule 3745-17-11	The emission limitation established by this rule is less stringent than that established by Ohio Administrative Code rule 3745-31-05 (BAT).

2. Additional Terms and Conditions

- 2.a There shall be no visible particulate emissions from the exhaust gases exiting the stack associated with the control device for this emission unit.
- 2.b There shall be no visible particulate emissions from the roof vents exhausting fugitive particulate emissions from this emissions unit.

2. Additional Terms and Conditions (continued)

- 2.c The following emissions limitations shall not be exceeded:
- i. 16.26 TPY of PM, based on a rolling, twelve-month summation; and
 - ii. 7.97 TPY of PM-10, based on a rolling, twelve-month summation.

II. Operational Restrictions

1. Particulate emissions 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 baghouse shall be maintained within the range of 2 to 6 inches of water while emissions unit P906 is in operation.
3. The production of iron shall not exceed 36,864 tons per year, based on a rolling, twelve-month summation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse on a daily basis.
2. The permittee shall 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 summation of the current month's production and the previous 11-months production).
3. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit and for any visible fugitive particulate emissions 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 abnormal visible emission incident; and
 - e. any corrective actions taken to eliminate the abnormal visible emissions.

IV. Reporting Requirements

1. The permittee shall submit semi-annual pressure drop deviation (excursion) reports to the Hamilton County Department of Environmental Services that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above. These reports shall be submitted by February 15 and August 15 of each year and shall cover the previous six calendar months.
2. The permittee shall submit an annual report which summarizes the information in A.III.2. This report shall be submitted by January 31 of each year and cover the previous years operation.
3. The permittee shall submit semiannual written reports which (a) identify all days during which any visible particulate emissions from the stack serving this emission unit or any visible fugitive particulate emissions escaping from the building containing this emissions unit were observed and (b) describe any corrective actions taken to eliminate the abnormal 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(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):

V. Testing Requirements (continued)

1.a Emission Limitations:

4.70 lbs particulate emissions (PE)/hr, 16.26 tons PE/yr,
2.31 lbs particulate matter less than or equal to 10 microns (PM-10)/hr, 7.97 tons PM-10/yr

Applicable Compliance Method:

The particulate emission rate (PE) and particulate matter emissions less than or equal to 10 microns (PM-10) shall be determined by using the following equations except as otherwise provided below:

$$\begin{aligned} \text{lbs PE/hr} &= (A) \times (B) \times (100 - D)/100 \\ \text{lbs PM-10/hr} &= (A) \times (B) \times (49\%)* \times (100 - D)/100 \\ \text{tons PE/yr} &= (A) \times (C) \times (100 - D)/100 \times 0.0005 \\ \text{tons PM-10/yr} &= (A) \times (C) \times (49\%)* \times (100 - D)/100 \times 0.0005 \end{aligned}$$

*The percentage of PM-10 emissions.

where:

A = particulate emission factor of 4.2 lbs/ton iron poured and cooled, from USEPA reference document AP-42, Fifth Edition, Section 12.10;
B = hourly production rate, tons iron;
C = annual production rate, tons iron; and
D = percent fabric filter control efficiency (use 99%, except if the actual control efficiency is available from stack test data).

If testing is required to demonstrate compliance with the above allowable emission limitations, then outlet testing of the fabric filter shall be conducted using the following methods, and the tested hourly emission rates shall be multiplied by the hours of operation to obtain the annual emission rates:

for PE: 40 CFR, Part 60, Appendix A, Method 5;
for PM-10: 40 CFR, Part 60, Appendix A, Method 201.

1.b Emission Limitation:

zero percent opacity from stack outlet

Applicable Compliance Method:

40 CFR, Part 60, Appendix A, Method 9

1.c Emission Limitation:

no visible particulate emissions from roof vents

Applicable Compliance Method:

40 CFR, Part 60, Appendix A, Method 22

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 issuance of the permit and within 6 months prior to permit expiration.
- b. The emission testing shall be conducted to demonstrate compliance with the allowable particulate emission rate for the fabric filter outlet.
- c. The following test method shall be employed to demonstrate compliance with the allowable mass emission rate(s): for particulates, Method 5 of 40 CFR, Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

V. Testing Requirements (continued)

c. 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.

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

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 with Fabric Filter	OAC rule 3745-31-05 (PTI 14-4434)	See term B.1.2.

2. Additional Terms and Conditions

2.a Mass emissions from the fabric filter discharge from emissions unit P906 shall not exceed the amounts listed below*:

- a. 0.90 lb/hr, 3.10 tons/yr fugitive PM,
- b. 0.44 lb/hr, 1.52 tons/yr fugitive PM-10,
- c. 0.11 lb/hr, 0.37 ton/yr SO₂,
- d. 0.05 lb/hr, 0.18 ton/yr NO_x,
- e. 0.75 lb/hr, 2.58 tons/yr VOC,
- f. 0.000025 lb/hr, 0.000085 ton/yr lead,
- g. 0.13 lb/hr, 0.01 ton/yr hydrogen sulfide,
- h. 0.00015 lb/hr, 0.00050 ton/yr chromium,
- i. 0.000025 lb/hr, 0.000085 ton/yr mercury,
- j. 0.00015 lb/hr, 0.00050 ton/yr manganese, and
- k. 0.000056 lb/hr, 0.00019 ton/yr nickel.

* The lb/hr and TPY emission limits are equal to the potential to emit. Therefore, no daily recordkeeping, deviation reporting, or compliance method calculations are required to demonstrate compliance with these limits.

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

(P907)

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: CB-16 Core Mach 1

(P907) Description: CB-16 Core Machine # 1

A. State and Federally Enforceable Section

Applicable Emissions Limitations and/or Control Requirements

- 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Core Making Machine with Wet Scrubber	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed twenty percent opacity, as a six-minute average, except as specified by rule.
	OAC rule 3745-17-07(B)(1)	Visible particulate emissions of fugitive dust shall not exceed twenty percent opacity, as a three-minute average, except as specified by rule.
	OAC rule 3745-17-08(B)*	Minimize or eliminate visible fugitive particulate emissions 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).
	OAC rule 3745-17-11	Particulate emissions shall not exceed 8.56 lbs/hr (based on Table I of OAC rule 3745-17-11).
	OAC rule 3745-21-07(G)(2)	8 lbs OC/hr, 40 lbs OC/day, unless reduced by at least 85 percent, on any day when photochemically reactive materials, as defined in OAC rule 3745-21-01(C)(5), are employed.* * The emission unit's potential to emit is less than the lb/hr and lb/day emission limits. Therefore, no daily recordkeeping, deviation reporting, or compliance method calculations are required to demonstrate compliance with these limits.

(P907)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 emissions unit P907 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 install, 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 this emissions unit operates while using any photochemically reactive material:
 - a. the company identification of each liquid organic materials used;
 - b. the amounts (pounds) of each liquid organic material and sand mixed;
 - c. the number of hours of operation;
 - d. an estimate of the daily organic compound emission rate (pounds), using an emission factor of .65 pound OC per ton of sand employed and the OC control efficiency of the scrubber of 96% (.65 x total tons sand mixed x (1-.96)); and
 - e. the average hourly organic compound emission rate (pounds) (d/c).
3. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit and for any visible fugitive particulate emissions 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 abnormal visible emission incident; and
 - e. any corrective actions taken to eliminate the abnormal visible emissions.

IV. Reporting Requirements

1. The permittee shall submit 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.

(PA07) Reporting Requirements (continued)

2. The permittee shall submit semiannual written reports which (a) identify all days during which any visible particulate emissions from the stack serving this emission unit or any visible fugitive particulate emissions escaping from the building containing this emissions unit were observed and (b) describe any corrective actions taken to eliminate the abnormal 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(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):

1.a Emission Limitation:

20% opacity for stack emissions

Applicable Compliance Method:

Compliance with OAC rule 3745-17-07(A)(1) shall be determined by the method outlined in OAC rule 3745-17-03(B)(1).

Emission Limitation:

20% opacity for fugitive emissions

Applicable Compliance Method:

Compliance with OAC rule 3745-17-07(A)(1) shall be determined by the method outlined in OAC rule 3745-17-03(B)(3).

Emission Limitation:

8.56 lbs particulate emissions/hr

Applicable Compliance Method:

The following equation shall be used to determine the particulate emissions (PE) rate except as otherwise provided below:

$$\text{Lbs PE/hr} = (A) \times (B) \times (100 - C)/100$$

where:

A = emission factor of 0.35 lbs/ton of cores produced, from Ohio EPA reference document RACM, Section 2.7;

B = hourly production rate, tons of cores produced; and

C = overall percent control efficiency of scrubber (use 97%, except if actual efficiency is available from stack test data).

If testing is required to demonstrate compliance with the allowable emission limitation from OAC rule 3745-17-11, then inlet/outlet testing of the fabric filter shall be conducted using the following method:

40 CFR, Part 60, Appendix A, Method 5.

(P907) Testing Requirements (continued)

1.d Emission Limitation:

8 lbs OC/hr and/or 40 lbs OC/day

Applicable Compliance Method:

Compliance with the OC emissions limitations shall be determined by method specified in A.III.2.

If testing is required to demonstrate compliance with the allowable emission limitations from OAC rule 3745-21-07(G)(2), then outlet testing of the scrubber shall be conducted using the following method, and the tested hourly emission rate shall be multiplied by the hours of operation per year to obtain the annual emission rate.

40 CFR, Part 60, Appendix A, Method 25.

VI. Miscellaneous Requirements

None

P907 State Enforceable Section

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Core Making Machine with Wet Scrubber	OAC rule 3745-31-05 (PTI 14-4529)	See Term A.2.

2. Additional Terms and Conditions

- 2.a Particulate emissions (PE), particulate matter emissions less than or equal to 10 microns (PM-10), and organic compound (OC) emissions from emissions unit P907 shall not exceed the amounts listed below:

 0.03 lb PE/hr, 0.14 ton PE/yr,
 0.03 lb PM-10/hr, 0.14 ton PM-10/yr,
 0.12 lb OC/hr, 0.51 ton OC/yr.

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

1. Compliance with the particulate and OC emissions limitations specified in B.I.2. shall be determined by the information collected and recorded in A.III.2 and the compliance methods specified in A.V.1.c (for particulate) and A.V.1.d (for OC).

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: CB-16 Core Mach 2 (P908)

Activity Description: CB-16 Core Machine #2

A. State and Federally Enforceable Section

Applicable Emissions Limitations and/or Control Requirements

- 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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Core Making Machine with Wet Scrubber	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed twenty percent opacity, as a six-minute average, except as specified by rule.
	OAC rule 3745-17-07(B)(1)	Visible particulate emissions of fugitive dust shall not exceed twenty percent opacity, as a three-minute average, except as specified by rule.
	OAC rule 3745-17-08(B)*	Minimize or eliminate visible fugitive particulate emissions escaping the capture hooding by maintaining sufficient collection efficiency for the control equipment.
	OAC rule 3745-17-11	Particulate emissions shall not exceed 8.56 lbs/hr (based on Table of OAC rule 3745-17-11).
	OAC rule 3745-21-07(G)	8 lbs OC/hr, 40 lbs OC/day, unless reduced by at least 85 percent, on any day when photochemically reactive materials, as defined in OAC rule 3745-21-01(C)(5), are employed.*

* 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).

* The emission unit's potential to emit is less than the lb/hr and lb/day emission limits. Therefore, no daily recordkeeping, deviation reporting, or compliance method calculations are required to demonstrate compliance with these limits.

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 emissions unit P907 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 install, 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 this emissions unit operates while using any photochemically reactive material:
 - a. the company identification of each liquid organic materials used;
 - b. the amounts (pounds) of each liquid organic material and sand mixed;
 - c. the number of hours of operation;
 - d. an estimate of the daily organic compound emission rate (pounds), using an emission factor of .65 pound OC per ton of sand employed and the OC control efficiency of the scrubber of 96% (.65 x total tons sand mixed x (1-.96)); and
 - e. the average hourly organic compound emission rate (pounds) (d/c).
 3. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit and for any visible fugitive particulate emissions 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 abnormal visible emission incident; and
 - e. any corrective actions taken to eliminate the abnormal visible emissions.

IV. Reporting Requirements

1. The permittee shall submit 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.

IV. Reporting Requirements (continued)

2. The permittee shall submit semiannual written reports which (a) identify all days during which any visible particulate emissions from the stack serving this emission unit or any visible fugitive particulate emissions escaping from the building containing this emissions unit were observed and (b) describe any corrective actions taken to eliminate the abnormal 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(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):

- 1.a Emission Limitation:

20% opacity for stack emissions

Applicable Compliance Method:

Compliance with OAC rule 3745-17-07(A)(1) shall be determined by the method outlined in OAC rule 3745-17-03(B)(1).

- 1.b Emission Limitation:

20% opacity for fugitive emissions

Applicable Compliance Method:

Compliance with OAC rule 3745-17-07(A)(1) shall be determined by the method outlined in OAC rule 3745-17-03(B)(3).

- 1.c Emission Limitation:

8.56 lbs particulate emissions/hr

Applicable Compliance Method:

The following equation shall be used to determine the particulate emissions (PE) rate except as otherwise provided below:

$$\text{Lbs PE/hr} = (A) \times (B) \times (100 - C)/100$$

where:

A = emission factor of 0.35 lbs/ton of cores produced, from Ohio EPA reference document RACM, Section 2.7;

B = hourly production rate, tons of cores produced; and

C = overall percent control efficiency of scrubber (use 97%, except if actual efficiency is available from stack test data).

If testing is required to demonstrate compliance with the allowable emission limitation from OAC rule 3745-17-11, then inlet/outlet testing of the fabric filter shall be conducted using the following method:

40 CFR, Part 60, Appendix A, Method 5.

V. Testing Requirements (continued)

1.d Emission Limitations:

8 lbs OC/hr and/or 40 lbs OC/day

Applicable Compliance Method:

Compliance with the OC emissions limitations shall be determined by method specified in A.III.2.

If testing is required to demonstrate compliance with the allowable emission limitations from OAC rule 3745-21-07(G)(2), then outlet testing of the scrubber shall be conducted using the following method, and the tested hourly emission rate shall be multiplied by the hours of operation per year to obtain the annual emission rate

40 CFR, Part 60, Appendix A, Method 25.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Core Making Machine with Wet Scrubber	OAC rule 3745-31-05 (PTI 14-4529)	See Term A.2.

2. Additional Terms and Conditions

- 2.a Particulate emissions (PE), particulate matter emissions less than or equal to 10 microns (PM-10), and organic compound (OC) emissions from emissions unit P907 shall not exceed the amounts listed below:

 0.03 lb PE/hr, 0.14 ton PE/yr,
 0.03 lb PM-10/hr, 0.14 ton PM-10/yr,
 0.12 lb OC/hr, 0.51 ton OC/yr.

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

1. Compliance with the particulate and OC emissions limitations specified in B.I.2. shall be determined by the information collected and recorded in A.III.2 and the compliance methods specified in A.V.1.c (for particulate) and A.V.1.d (for OC).

VI. Miscellaneous Requirements

None

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