



State of Ohio Environmental Protection Agency

Street Address:

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

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

Mailing Address:

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

03/23/01

CERTIFIED MAIL

RE: Draft Title V Chapter 3745-77 permit

03-06-01-0004
St. Marys Foundry Inc.
Angela Molaskey
405 E. South Street
St.Marys, OH 45885

Dear Angela Molaskey:

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 Northwest District Office 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 Northwest District Office.

Very truly yours,

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

cc: USEPA (electronically submitted)
Michael Ahern, DAPC PMU
Northwest District Office
Indiana



Ohio EPA

State of Ohio Environmental Protection Agency

DRAFT TITLE V PERMIT

Issue Date: 03/23/01

Effective Date: To be entered upon final issuance

Expiration Date: To be entered upon final issuance

This document constitutes issuance to:

St. Marys Foundry Inc.
405 E. South St.
St. Marys, OH 45885

of a Title V permit for Facility ID: 03-06-01-0004

Emissions Unit ID (Company ID)/

Emissions Unit Activity Description:

F001 (C-Core Mixer)

Continuous operation of mixing sand and binders to produce sand finished molds/cores

F002 (Pit-bay Mixer)

Continuous operation of mixing sand and binders to produce sand finished molds/cores

F003 (New-bay Mixer)

Continuous operation of mixing sand and binders to produce sand finished molds/cores

F007 (Charge Handling)

Receiving, unloading and handling of raw material (scrap iron)

F008 (Pit-bay Pouring and Cooling)

Molten metal is tapped from the furnace into a ladle, the ladle is then transported to the Pit Bay mold line, and the molten metal is poured into prepared molds. The molds contain the molten iron within the mold form until it solidifies (cooling).

F009 (New-bay Pouring and Cooling)

Molten metal is tapped from the furnace into a ladle, the ladle is then transported to the New Bay mold line, and the molten metal is poured into prepared molds. The molds contain the molten iron within the mold form until it solidifies (cooling).

F010 (Inoculation)

Inoculation material is added to the molten iron via throw-in bags/buckets, molten iron is poured over top of the bag/bucket

F012 (Coreless Electric Induction Furnace #1)

Melting of pig iron, scrap steel, scrap iron, foundry returns, and alloys through use of a coreless electric induction furnace

F013 (Coreless Electric Induction Furnace #2)

Melting of pig iron, scrap steel, scrap iron, foundry returns, and alloys through use of a coreless electric induction furnace

F014 (Small Coreless Electric Induction Furnace)

Melting of pig iron, scrap steel, scrap iron, foundry returns, and alloys through use of a coreless electric induction furnace

P002 (Shakeout Deck)

Flasks/castings are placed on a vibrating deck to shake the mold sand and core sand loose from the casting, used sand is screened, cleaned, and reused to make new molds

P009 (Tableblast)

Rough clean of castings using steel shot

P011 (Sand Storage and Transfer)

Sand is stored in concrete silos and conveyed pneumatically throughout the facility, sand is received via trucks

P012 (Ball Mill Crusher)

Prepares sand for foundry use by crushing agglomerated sand into useable (grain) sand

P016 (Electric-Heated Thermal Sand Reclamation System)

Reclamation of spent foundry sand through use of an indirect electric radiant heat thermal sand reclamation system with a gas heated center fired temperature controlled exhaust system; hot fluidizing air oxidizes, destroying the binder and organic matter on the sand grains

P017 (New-bay Chill Blast Machine with Baghouse)

Solidification tool (similar to a shotblast machine) used to clean rough cast iron chills

P018 (Sand Silo for New Bay Mixer)

Silo receives sand from west silo (reclaimed sand) and feeds, via gravity, sand to new bay mixer (mixing of sand and binders)

P019 (Casting Blowout Room)

Excess sand is removed from castings via compressed air and disposed

P020 (Natural Gas Fired Scrap Preheater)

Raw scrap (pig iron, iron, scrap steel, foundry returns) is conveyed into preheater to remove water and residue (combustion of organics) prior to melting

P021 (Arc-Air Room (Thermal Cutting))

Removal of gates and rizers from castings using hand-held arc cutting system. Castings are transferred into arc air room (enclosed room) on a sliding cart. Employees manually cut gates and rizers from castings using a jointed gouging rod.

P022 (Tumbleblast Machine (Clean Room))

Rough clean of castings using steel shot

R001 (Core/Mold Coating Operations)

Coating is applied to cores and molds via over-pour, swabbing (brush), and portable spray guns, after application, the part is ignited and coating is burned-off

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:

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

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:
 - i. 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:
 - i. At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.

- ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with paragraph (E) of OAC rule 3745-77-03.
 - iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
 - iv. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually, or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
- i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
 - ii. An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.
- d. Compliance certifications concerning the terms and conditions contained in this permit that are federally enforceable emission limitations, standards, or work practices, shall be submitted to the appropriate Ohio EPA District Office or local air agency in the following manner and with the following content:
- i. Compliance certifications shall be submitted annually on a calendar year basis. The annual certification shall be submitted on or before April 30th of each year during the permit term.
 - ii. Compliance certifications shall include the following:
 - (a) An identification of each term or condition of this permit that is the basis of the certification.
 - (b) The permittee's current compliance status.
 - (c) Whether compliance was continuous or intermittent.
 - (d) The method(s) used for determining the compliance status of the source currently and over the required reporting period.
 - (e) Such other facts as the Director of the Ohio EPA may require in the permit to determine the compliance status of the source.
 - iii. Compliance certifications shall contain such additional requirements as may be specified pursuant to sections 114(a)(3) and 504(b) of the Act.

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.

18. Insignificant Activity

Each insignificant activity that has one or more applicable requirements shall comply with those applicable requirements.

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:

B001 - air makeup unit; B002 - air makeup unit; F004 - A/B core mixer (lake); F005 - A/B core mixer (olivine); F006 - sand storage pile; F011 - paved roadways; P005 - core oven; P006 - woodworking machine; P015 - storage silos for B-core mixers; Z019 - 40-ton c-core sand storage silo; Z020 - 20-ton c-core sand storage silo; and Z021 - slag handling operations.

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 (PTI) for the emissions unit.

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: C-Core Mixer (F001)

Activity Description: Continuous operation of mixing sand and binders to produce sand finished molds/cores

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> |
|---|--|---|
| c-core mixer | OAC rule 3745-17-07(B) | none (See A.I.2.a.) |
| | OAC rule 3745-17-08(B) | none (See A.I.2.b.) |
| | OAC rule 3745-21-07(G) | none (See A.II.1.) |
| | OAC rule 3745-31-05 (PTI #03-10079) | 2.08 lbs particulate emissions (PE)/hr, 9.13 TPY PE |
| | | 1.04 lbs particulate matter less than 10 microns (PM10)/hr, 4.56 TPY PM10 |
| | | 0.1 lb organic compounds (OC)/hr, 0.44 TPY OC |
| | | 20% opacity, as a 3-minute average, except as provided by rule |

2. Additional Terms and Conditions

- 2.a This emissions unit is exempt from the visible particulate emissions limitation specified in OAC rule 3745-17-07(B), pursuant to OAC rule 3745-17-07(B)(11)(e).
- 2.b This facility is not located within an "Appendix A" area identified in OAC rule 3745-17-08. Therefore, pursuant to OAC rule 3745-17-08(A), this emissions unit is exempt from the requirements of OAC rule 3745-17-08(B).
- 2.c The 0.1 lb/hr and 0.44 TPY OC emission limitations were established for PTI purposes to reflect the potentials to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and reporting requirements to ensure compliance with these limitations.

II. Operational Restrictions

1. The use of any photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5), in this emissions unit is prohibited.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain daily records of the following information for this emissions unit:
 - a. the company identification for each liquid organic material employed; and
 - b. documentation on whether or not each liquid organic material employed is a photochemically reactive material.
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive emissions from any opening in the building in which this emissions unit is located. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the location and color of the emissions;
 - b. the cause of the visible emissions;
 - c. the total duration of each visible emission incident; and
 - d. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

1. The permittee shall notify the Director (the appropriate Ohio EPA District Office or local air agency) in writing of any daily record showing the use of any noncomplying material (i.e., photochemically reactive material) in this emissions unit. The notification shall include a copy of such record and shall be sent to the Director (the appropriate Ohio EPA District Office or local air agency) within 45 days after the exceedance occurs.
2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible fugitive emissions were observed from any opening in the building in which this emissions unit is located and (b) describe any corrective actions taken to eliminate the visible fugitive dust emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitations in section A.I of the terms and conditions of this permit shall be determined in accordance with the following methods:

1.a Emission Limitations: 2.08 lbs PE/hr and 9.13 TPY PE

Applicable Compliance Method: Compliance with the hourly limitation may be determined by multiplying the emission factor of 0.309 pound of PE per ton of sand processed (from AIRS database) by the maximum production rate (tons/hr), and then multiplying by a building control factor of (1-0.70).*

The annual limitation was developed by multiplying the hourly limitation by 8760, and then dividing by 2000. Therefore, if compliance is shown with the hourly limitation, compliance shall be shown with the annual limitation.

* The building control efficiency is assumed to be 70%.

1.b Emission Limitations: 1.04 lbs PM10/hr and 4.56 TPY PM10

Applicable Compliance Method: Compliance may be determined by multiplying the emission factor of 0.154 pound of PM10 per ton of sand processed (this assumes that 50% of the total particulates is PM10) by the maximum production rate (tons/hr), and then multiplying by a building control factor of (1-0.70).*

The annual limitation was developed by multiplying the hourly limitation by 8760, and then dividing by 2000. Therefore, if compliance is shown with the hourly limitation, compliance shall be shown with the annual limitation.

* The building control efficiency is assumed to be 70%.

Facility Name: **St. Marys Foundry Inc.**

Facility ID: **03-06-01-0004**

Emissions Unit: **C-Core Mixer (F001)**

V. Testing Requirements (continued)

1.c Emission Limitations: 0.1 lb OC/hr and 0.44 TPY OC

Applicable Compliance Method: Compliance may be determined by multiplying the emission factor of 0.0008 pound of OC per ton of sand processed (from AIRS database) by the maximum production rate (tons/hr).

The annual limitation was developed by multiplying the hourly limitation by 8760, and then dividing by 2000. Therefore, if compliance is shown with the hourly limitation, compliance shall be shown with the annual limitation.

1.d Emission Limitation: 20% opacity, as 3-minute average, except as provided by rule

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the visible emissions limitation above pursuant to OAC rule 3745-17-03(B)(3).

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/ Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|---|---|--|
|---|---|--|

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: Pit-bay Mixer (F002)

Activity Description: Continuous operation of mixing sand and binders to produce sand finished molds/cores

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> |
|---|--|---|
| pit-bay mixer | OAC rule 3745-17-07(B) | none (See A.I.2.a.) |
| | OAC rule 3745-17-08(B) | none (See A.I.2.b.) |
| | OAC rule 3745-21-07(G) | none (See A.II.1.) |
| | OAC rule 3745-31-05 (PTI #03-10079) | 2.78 lbs particulate emissions (PE)/hr, 12.18 TPY PE |
| | | 1.38 lbs particulate matter less than 10 microns (PM10)/hr, 6.04 TPY PM10 |
| | | 0.1 lb organic compounds (OC)/hr, 0.44 TPY OC |
| | | 20% opacity, as a 3-minute average, except as provided by rule |

2. Additional Terms and Conditions

- 2.a This emissions unit is exempt from the visible particulate emissions limitation specified in OAC rule 3745-17-07(B), pursuant to OAC rule 3745-17-07(B)(11)(e).
- 2.b This facility is not located within an "Appendix A" area identified in OAC rule 3745-17-08. Therefore, pursuant to OAC rule 3745-17-08(A), this emissions unit is exempt from the requirements of OAC rule 3745-17-08(B).
- 2.c The 0.1 lb/hr and 0.44 TPY OC emission limitations were established for PTI purposes to reflect the potentials to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and reporting requirements to ensure compliance with these limitations.

II. Operational Restrictions

1. The use of any photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5), in this emissions unit is prohibited.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain daily records of the following information for this emissions unit:
 - a. the company identification for each liquid organic material employed; and
 - b. documentation on whether or not each liquid organic material employed is a photochemically reactive material.
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive emissions from any opening in the building in which this emissions unit is located. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the location and color of the emissions;
 - b. the cause of the visible emissions;
 - c. the total duration of each visible emission incident; and
 - d. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

1. The permittee shall notify the Director (the appropriate Ohio EPA District Office or local air agency) in writing of any daily record showing the use of any noncomplying material (i.e., photochemically reactive material) in this emissions unit. The notification shall include a copy of such record and shall be sent to the Director (the appropriate Ohio EPA District Office or local air agency) within 45 days after the exceedance occurs.
2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible fugitive emissions were observed from any opening in the building in which this emissions unit is located and (b) describe any corrective actions taken to eliminate the visible fugitive dust emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitations in section A.I of the terms and conditions of this permit shall be determined in accordance with the following methods:

1.a Emission Limitations: 2.78 lbs PE/hr and 12.18 TPY PE

Applicable Compliance Method: Compliance with the hourly limitation may be determined by multiplying the emission factor of 0.309 pound of PE per ton of sand processed (from AIRS database) by the maximum production rate (tons/hr), and then multiplying by a building control factor of (1-0.70).*

The annual limitation was developed by multiplying the hourly limitation by 8760, and then dividing by 2000. Therefore, if compliance is shown with the hourly limitation, compliance shall be shown with the annual limitation.

* The building control efficiency is assumed to be 70%.

1.b Emission Limitations: 1.38 lbs PM10/hr and 6.04 TPY PM10

Applicable Compliance Method: Compliance may be determined by multiplying the emission factor of 0.154 pound of PM10 per ton of sand processed (this assumes 50% of the total particulates is PM10) by the maximum production rate (tons/hr), and then multiplying by a building control factor of (1-0.70).*

The annual limitation was developed by multiplying the hourly limitation by 8760, and then dividing by 2000. Therefore, if compliance is shown with the hourly limitation, compliance shall be shown with the annual limitation.

* The building control efficiency is assumed to be 70%.

V. Testing Requirements (continued)

1.c Emission Limitations: 0.1 lb OC/hr and 0.44 TPY OC

Applicable Compliance Method: Compliance may be determined by multiplying the emission factor of 0.0008 pound of OC per ton of sand processed (from AIRS database) by the maximum production rate (tons/hr).

The annual limitation was developed by multiplying the hourly limitation by 8760, and then dividing by 2000. Therefore, if compliance is shown with the hourly limitation, compliance shall be shown with the annual limitation.

1.d Emission Limitation: 20% opacity, as 3-minute average, except as provided by rule

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the visible emissions limitation above pursuant to OAC rule 3745-17-03(B)(3).

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/ Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|---|---|--|
|---|---|--|

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: New-bay Mixer (F003)

Activity Description: Continuous operation of mixing sand and binders to produce sand finished molds/cores

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> |
|---|--|---|
| new-bay mixer | OAC rule 3745-17-07(B) | none (See A.I.2.a.) |
| | OAC rule 3745-17-08(B) | none (See A.I.2.b.) |
| | OAC rule 3745-21-07(G) | none (See A.II.1.) |
| | OAC rule 3745-31-05 (PTI #03-10079) | 2.50 lbs particulate emissions (PE)/hr, 10.95 TPY PE |
| | | 1.24 lbs particulate matter less than 10 microns (PM10)/hr, 5.43 TPY PM10 |
| | | 0.1 lb organic compounds (OC)/hr, 0.44 TPY OC |
| | | 20% opacity, as a 3-minute average, except as provided by rule |

2. Additional Terms and Conditions

- 2.a This emissions unit is exempt from the visible particulate emissions limitation specified in OAC rule 3745-17-07(B), pursuant to OAC rule 3745-17-07(B)(11)(e).
- 2.b This facility is not located within an "Appendix A" area identified in OAC rule 3745-17-08. Therefore, pursuant to OAC rule 3745-17-08(A), this emissions unit is exempt from the requirements of OAC rule 3745-17-08(B).
- 2.c The 0.1 lb/hr and 0.44 TPY OC emission limitations were established for PTI purposes to reflect the potentials to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and reporting requirements to ensure compliance with these limitations.

II. Operational Restrictions

1. The use of any photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5), in this emissions unit is prohibited.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain daily records of the following information for this emissions unit:
 - a. the company identification for each liquid organic material employed; and
 - b. documentation on whether or not each liquid organic material employed is a photochemically reactive material.
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive emissions from any opening in the building in which this emissions unit is located. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the location and color of the emissions;
 - b. the cause of the visible emissions;
 - c. the total duration of each visible emission incident; and
 - d. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

1. The permittee shall notify the Director (the appropriate Ohio EPA District Office or local air agency) in writing of any daily record showing the use of any noncomplying material (i.e., photochemically reactive material) in this emissions unit. The notification shall include a copy of such record and shall be sent to the Director (the appropriate Ohio EPA District Office or local air agency) within 45 days after the exceedance occurs.
2. The permittee shall submit semiannual written reports that (a) identify all days during that any visible fugitive emissions were observed from any opening in the building in which this emissions unit is located and (b) describe any corrective actions taken to eliminate the visible fugitive dust emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitations in section A.I of the terms and conditions of this permit shall be determined in accordance with the following methods:

1.a Emission Limitations: 2.50 lbs PE/hr and 10.95 TPY PE

Applicable Compliance Method: Compliance with the hourly limitation may be determined by multiplying the emission factor of 0.309 pound of PE per ton of sand processed (from AIRS database) by the maximum production rate (tons/hr), and then multiplying by a building control factor of (1-0.70).*

The annual limitation was developed by multiplying the hourly limitation by 8760, and then dividing by 2000. Therefore, if compliance is shown with the hourly limitation, compliance shall be shown with the annual limitation.

* The building control efficiency is assumed to be 70%.

1.b Emission Limitations: 1.24 lbs PM10/hr and 5.43 TPY PM10

Applicable Compliance Method: Compliance may be determined by multiplying the emission factor of 0.154 pound of PM10 per ton of sand processed (this assumes 50% of the total particulates is PM10) by the maximum production rate (tons/hr), and then multiplying by a building control factor of (1-0.70).*

The annual limitation was developed by multiplying the hourly limitation by 8760, and then dividing by 2000. Therefore, if compliance is shown with the hourly limitation, compliance shall be shown with the annual limitation.

* The building control efficiency is assumed to be 70%.

V. Testing Requirements (continued)

1.c Emission Limitations: 0.1 lb OC/hr and 0.44 TPY OC

Applicable Compliance Method: Compliance may be determined by multiplying the emission factor of 0.0008 pound of OC per ton of sand processed (from AIRS database) by the maximum production rate (tons/hr).

The annual limitation was developed by multiplying the hourly limitation by 8760, and then dividing by 2000. Therefore, if compliance is shown with the hourly limitation, compliance shall be shown with the annual limitation.

1.d Emission Limitation: 20% opacity, as 3-minute average, except as provided by rule

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the visible emissions limitation above pursuant to OAC rule 3745-17-03(B)(3).

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/ Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|---|---|--|
|---|---|--|

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: Charge Handling (F007)

Activity Description: Receiving, unloading and handling of raw material (scrap iron)

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> |
|---|---------------------------------------|--|
| charge handling | OAC rule 3745-17-07(B) | none (See A.1.2.a.) |
| | OAC rule 3745-17-08(B) | none (See A.1.2.b.) |

2. Additional Terms and Conditions

- 2.a This emissions unit is exempt from the visible particulate emissions limitation specified in OAC rule 3745-17-07(B), pursuant to OAC rule 3745-17-07(B)(11)(e).
- 2.b This facility is not located within an "Appendix A" area identified in OAC rule 3745-17-08. Therefore, pursuant to OAC rule 3745-17-08(A), this emissions unit is exempt from the requirements of OAC rule 3745-17-08(B).

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

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> |
|---|---|--|
|---|---|--|

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: Pit-bay Pouring and Cooling (F008)

Activity Description: Molten metal is tapped from the furnace into a ladle, the ladle is then transported to the Pit Bay mold line, and the molten metal is poured into prepared molds. The molds contain the molten iron within the mold form until it solidifies (cooling).

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> |
|---|---------------------------------------|--|
| pit-bay pouring and cooling | OAC rule 3745-17-07(B) | none (See A.1.2.a.) |
| | OAC rule 3745-17-08(B) | none (See A.1.2.b.) |
| | OAC rule 3745-21-07 | none (See A.1.2.c.) |

2. Additional Terms and Conditions

- 2.a This emissions unit is exempt from the visible particulate emissions limitation specified in OAC rule 3745-17-07(B), pursuant to OAC rule 3745-17-07(B)(11)(e).
- 2.b This facility is not located within an "Appendix A" area identified in OAC rule 3745-17-08. Therefore, pursuant to OAC rule 3745-17-08(A), this emissions unit is exempt from the requirements of OAC rule 3745-17-08(B).
- 2.c This facility is not located in a "Priority I" county (it is located in Auglaize County) as indicated in paragraph (A) of OAC rule 3745-21-06, and not a "new source". Therefore, pursuant to OAC rule 3745-21-07(A), it is exempt from the requirements of OAC rule 3745-21-07.

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

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> |
|---|---|--|
|---|---|--|

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: New-bay Pouring and Cooling (F009)

Activity Description: Molten metal is tapped from the furnace into a ladle, the ladle is then transported to the New Bay mold line, and the molten metal is poured into prepared molds. The molds contain the molten iron within the mold form until it solidifies (cooling).

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> |
|---|---------------------------------------|--|
| new-bay pouring and cooling | OAC rule 3745-17-07(B) | none (See A.1.2.a.) |
| | OAC rule 3745-17-08(B) | none (See A.1.2.b.) |
| | OAC rule 3745-21-07 | none (See A.1.2.c.) |

2. Additional Terms and Conditions

- 2.a This emissions unit is exempt from the visible particulate emissions limitation specified in OAC rule 3745-17-07(B), pursuant to OAC rule 3745-17-07(B)(11)(e).
- 2.b This facility is not located within an "Appendix A" area identified in OAC rule 3745-17-08. Therefore, pursuant to OAC rule 3745-17-08(A), this emissions unit is exempt from the requirements of OAC rule 3745-17-08(B).
- 2.c This facility is not located in a "Priority I" county (it is located in Auglaize County) as indicated in paragraph (A) of OAC rule 3745-21-06, and not a "new source". Therefore, pursuant to OAC rule 3745-21-07(A), it is exempt from the requirements of OAC rule 3745-21-07.

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

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> |
|---|---|--|
|---|---|--|

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: Inoculation (F010)

Activity Description: Inoculation material is added to the molten iron via throw-in bags/buckets, molten iron is poured over top of the bag/bucket

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> |
|---|---------------------------------------|--|
| inoculation | OAC rule 3745-17-07(B) | none (See A.1.2.a.) |
| | OAC rule 3745-17-08(B) | none (See A.1.2.b.) |

2. **Additional Terms and Conditions**

- 2.a This emissions unit is exempt from the visible particulate emission limitations specified in OAC rule 3745-17-07(B), pursuant to OAC rule 3745-17-07(B)(11)(e).
- 2.b This facility is not located within an "Appendix A" area identified in OAC rule 3745-17-08. Therefore, pursuant to OAC rule 3745-17-08(A), this emissions unit is exempt from the requirements of OAC rule 3745-17-08(B).

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

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> |
|---|---|--|
|---|---|--|

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: Coreless Electric Induction Furnace #1 (F012)

Activity Description: Melting of pig iron, scrap steel, scrap iron, foundry returns, and alloys through use of a coreless electric induction furnace

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 electric induction furnace #1 | OAC rule 3745-17-07(B) | none (See A.I.2.a.) |
| | OAC rule 3745-17-08(B) | none (See A.I.2.b.) |
| | OAC rule 3745-21-07 | none (See A.II.1.) |
| | OAC rule 3745-31-05 (PTI #03-677) | none (See A.I.2.c.) |

2. Additional Terms and Conditions

- 2.a This emissions unit is exempt from the visible particulate emissions limitation specified in OAC rule 3745-17-07(B), pursuant to OAC rule 3745-17-07(B)(11)(e).
- 2.b This facility is not located within an "Appendix A" area identified in OAC rule 3745-17-08. Therefore, pursuant to OAC rule 3745-17-08(A), this emissions unit is exempt from the requirements of OAC rule 3745-17-08(B).
- 2.c No limits, pursuant to OAC rule 3745-31-05, were established in PTI #03-677 for this emissions unit.

II. Operational Restrictions

1. The use of any photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5), in this emissions unit is prohibited.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain daily records of the following information for this emissions unit:
 - a. the company identification for each liquid organic material employed; and
 - b. documentation on whether or not each liquid organic material employed is a photochemically reactive material.

IV. Reporting Requirements

1. The permittee shall notify the Director (the appropriate Ohio EPA District Office or local air agency) in writing of any daily record showing the use of any noncomplying material (i.e., photochemically reactive material) in this emissions unit. The notification shall include a copy of such record and shall be sent to the Director (the appropriate Ohio EPA District Office or local air agency) within 45 days after the exceedance occurs.

Facility Name: **St. Marys Foundry Inc.**
Facility ID: **03-06-01-0004**
Emissions Unit: **Coreless Electric Induction Furnace #1 (F012)**

V. Testing Requirements

None

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> |
|---|---|--|
|---|---|--|

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: Coreless Electric Induction Furnace #2 (F013)

Activity Description: Melting of pig iron, scrap steel, scrap iron, foundry returns, and alloys through use of a coreless electric induction furnace

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 electric induction furnace #2 | OAC rule 3745-17-07(B) | none (See A.I.2.a.) |
| | OAC rule 3745-17-08(B) | none (See A.I.2.b.) |
| | OAC rule 3745-21-07 | none (See A.II.1.) |
| | OAC rule 3745-31-05 (PTI #03-677) | none (See A.I.2.c.) |

2. Additional Terms and Conditions

- 2.a This emissions unit is exempt from the visible particulate emissions limitation specified in OAC rule 3745-17-07(B), pursuant to OAC rule 3745-17-07(B)(11)(e).
- 2.b This facility is not located within an "Appendix A" area identified in OAC rule 3745-17-08. Therefore, pursuant to OAC rule 3745-17-08(A), this emissions unit is exempt from the requirements of OAC rule 3745-17-08(B).
- 2.c No limits, pursuant to OAC rule 3745-31-05, were established in PTI #03-677 for this emissions unit.

II. Operational Restrictions

1. The use of any photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5), in this emissions unit is prohibited.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain daily records of the following information for this emissions unit:
 - a. the company identification for each liquid organic material employed; and
 - b. documentation on whether or not each liquid organic material employed is a photochemically reactive material.

IV. Reporting Requirements

1. The permittee shall notify the Director (the appropriate Ohio EPA District Office or local air agency) in writing of any daily record showing the use of any noncomplying material (i.e., photochemically reactive material) in this emissions unit. The notification shall include a copy of such record and shall be sent to the Director (the appropriate Ohio EPA District Office or local air agency) within 45 days after the exceedance occurs.

Facility Name: **St. Marys Foundry Inc.**
Facility ID: **03-06-01-0004**
Emissions Unit: **Coreless Electric Induction Furnace #2 (F013)**

V. Testing Requirements

None

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> |
|---|---|--|
|---|---|--|

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: Small Coreless Electric Induction Furnace (F014)

Activity Description: Melting of pig iron, scrap steel, scrap iron, foundry returns, and alloys through use of a coreless electric induction furnace

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> |
|---|---------------------------------------|--|
| small coreless electric induction furnace | OAC rule 3745-17-07(B) | none (See A.I.2.a.) |
| | OAC rule 3745-17-08(B) | none (See A.I.2.b.) |
| | OAC rule 3745-21-07 | none (See A.II.1.) |
| | OAC rule 3745-31-05 (PTI #03-2606) | 5.4 lbs particulate emissions (PE)/hr (see A.I.2.c) |

2. Additional Terms and Conditions

- 2.a This emissions unit is exempt from the visible particulate emissions limitation specified in OAC rule 3745-17-07(B), pursuant to OAC rule 3745-17-07(B)(11)(e).
- 2.b This facility is not located within an "Appendix A" area identified in OAC rule 3745-17-08. Therefore, pursuant to OAC rule 3745-17-08(A), this emissions unit is exempt from the requirements of OAC rule 3745-17-08(B).
- 2.c The 5.4 lbs PE/hr emission limitation was established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and reporting requirements to ensure compliance with this limitation.

II. Operational Restrictions

1. The use of any photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5), in this emissions unit is prohibited.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain daily records of the following information for this emissions unit:
 - a. the company identification for each liquid organic material employed; and
 - b. documentation on whether or not each liquid organic material employed is a photochemically reactive material.

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

2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive emissions from any opening in the building in which this emissions unit is located. 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. the cause of the visible emissions;
 - c. the total duration of any visible emission incident; and
 - d. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

1. The permittee shall notify the Director (the appropriate Ohio EPA District Office or local air agency) in writing of any daily record showing the use of any noncomplying material (i.e., photochemically reactive material) in this emissions unit. The notification shall include a copy of such record and shall be sent to the Director (the appropriate Ohio EPA District Office or local air agency) within 45 days after the exceedance occurs.
2. The permittee shall submit semiannual written reports which (a) identify all days during which any visible fugitive emissions were observed from any opening in the building in which this emissions unit is located and (b) describe any corrective actions taken to eliminate the visible fugitive dust emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitation in section A.I of the terms and conditions of this permit shall be determined in accordance with the following method:

Emission Limitation: 5.4 lbs PE/hr

Applicable Compliance Method: Compliance may be determined by multiplying the maximum process weight rate of this emissions unit (tons/hr) by the emission factor of 0.90 lb PE/ton gray iron produced (from FIRE v. 6.22 {SCC 3-04-003-03}).

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> |
|---|---|--|
|---|---|--|

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: Shakeout Deck (P002)

Activity Description: Flasks/castings are placed on a vibrating deck to shake the mold sand and core sand loose from the casting, used sand is screened, cleaned, and reused to make new molds

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> |
|---|---------------------------------------|--|
| shakeout deck, with baghouse | OAC rule 3745-17-07(A) | 20% opacity, as a 6-minute average, except as provided by rule |
| | OAC rule 3745-17-11(B) | 2.6 lbs particulate emissions (PE)/hr |

2. Additional Terms and Conditions

- 2.a All the PE from this emissions unit shall be vented to the baghouse.

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 6 to 10 inches of water while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be 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. All quarterly reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

V. Testing Requirements

1. Compliance with the emission limitations in section A.I of the terms and conditions of this permit shall be determined in accordance with the following methods:

- 1.a Emission Limitation: 20% opacity, as a 6-minute average, except as provided by rule

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the visible emissions limitation above pursuant to OAC rule 3745-17-03(B)(1).

V. Testing Requirements (continued)

1.b Emission Limitation: 2.6 lbs PE/hr

Applicable Compliance Method: Compliance may be determined by multiplying the emission factor of 3.20 pounds of PE per ton of gray iron produced (from FIRE v. 6.22, SCC 3-04-003-31) by the maximum production rate (tons/hr), and then multiplying by a baghouse control factor of (1-0.99).*

If required, the permittee shall demonstrate compliance with the emission limitation above pursuant to OAC rule 3745-17-03(B)(10).

* The baghouse efficiency is assumed to be 99%.

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> |
|---|---|--|
|---|---|--|

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: Tableblast (P009)
Activity Description: Rough clean of castings using steel shot

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> |
|---|---------------------------------------|--|
| tableblast, with baghouse | OAC rule 3745-17-07(A) | 20% opacity, as a 6-minute average, except as provided by rule |
| | OAC rule 3745-17-11(B) | 10.2 lbs particulate emissions (PE)/hr |

2. Additional Terms and Conditions

- 2.a All the PE from this emissions unit shall be vented to the baghouse.

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 3 to 6 inches of water while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be 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 that all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above. All quarterly reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

V. Testing Requirements

1. Compliance with the emission limitations in section A.I of the terms and conditions of this permit shall be determined in accordance with the following methods:

- 1.a Emission Limitation: 20% opacity, as a 6-minute average, except as provided by rule

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the visible emissions limitation above pursuant to OAC rule 3745-17-03(B)(1).

V. Testing Requirements (continued)

1.b Emission Limitation: 10.2 lbs PE/hr

Applicable Compliance Method: Compliance may be determined by multiplying the emission factor of 17.0 pounds of PE per ton of gray iron produced (from FIRE v. 6.22, SCC 3-04-003-40) by the maximum production rate (tons/hr), and then multiplying by a baghouse control factor of (1-0.99).*

If required, the permittee shall determine compliance with the emission limit above pursuant to OAC rule 3745-17-03(B)(10).

* The baghouse control efficiency is assumed to be 99%.

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> |
|---|---|--|
|---|---|--|

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Sand Storage and Transfer (P011)

Activity Description: Sand is stored in concrete silos and conveyed pneumatically throughout the facility, sand is received via trucks

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> |
|---|---------------------------------------|--|
| sand storage and transfer, with baghouse | OAC rule 3745-17-07(A) | 20% opacity, as a 6-minute average, except as provided by rule |
| | OAC rule 3745-17-11(B) | 10.4 lbs particulate emissions (PE)/hr |

2. Additional Terms and Conditions

- 2.a All the PE from this emissions unit shall be vented to the baghouse.

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 6 to 10 inches of water while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be 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 that all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above. All quarterly reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

V. Testing Requirements

1. Compliance with the emission limitations in section A.I of the terms and conditions of this permit shall be determined in accordance with the following methods:

- 1.a Emission Limitation: 20% opacity, as a 6-minute average, except as provided by rule

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the visible emissions limitation above pursuant to OAC rule 3745-17-03(B)(1).

V. Testing Requirements (continued)

1.b Emission Limitation: 10.4 lbs PE/hr

Applicable Compliance Method: Compliance may be determined by multiplying the emission factor of 3.6 pounds of PE per ton of sand handled (from FIRE v. 6.22, SCC 3-04-003-50) by the maximum production rate (tons/hr), and then multiplying by a baghouse control factor of (1-0.99).*

If required, the permittee shall determine compliance with the emission limit above pursuant to OAC rule 3745-17-03(B)(10).

* The baghouse control efficiency is assumed to be 99%.

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> |
|---|---|--|
|---|---|--|

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: Ball Mill Crusher (P012)

Activity Description: Prepares sand for foundry use by crushing agglomerated sand into useable (grain) sand

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> |
|---|--|--|
| ball mill crusher, with baghouse | OAC rule 3745-17-07(A) OAC rule 3745-17-11(B) | 20% opacity, as a 6-minute average, except as provided by rule 14.2 lbs particulate emissions (PE)/hr |

2. Additional Terms and Conditions

- 2.a All the PE from this emissions unit shall be vented to the baghouse.

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 6 to 10 inches of water while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be 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 that all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above. All quarterly reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

V. Testing Requirements

1. Compliance with the emission limitations in section A.I of the terms and conditions of this permit shall be determined in accordance with the following methods:

- 1.a Emission Limitation: 20% opacity, as a 6-minute average, except as provided by rule

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the visible emissions limitation above pursuant to OAC rule 3745-17-03(B)(1).

V. Testing Requirements (continued)

1.b Emission Limitation: 14.2 lbs PE/hr

Applicable Compliance Method: Compliance may be determined by multiplying the emission factor of 3.6 pounds of PE per ton of sand handled (from FIRE v. 6.22, SCC 3-04-003-50) by the maximum production rate (tons/hr) and then multiplying by a baghouse control factor of (1-0.99).*

If required, the permittee shall determine compliance with the emission limit above pursuant to OAC rule 3745-17-03(B)(10).

* The baghouse control efficiency is assumed to be 99%.

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> |
|---|---|--|
|---|---|--|

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: Electric-Heated Thermal Sand Reclamation System (P016)

Activity Description: Reclamation of spent foundry sand through use of an indirect electric radiant heat thermal sand reclamation system with a gas heated center fired temperature controlled exhaust system; hot fluidizing air oxidizes, destroying the binder and organic matter on the sand grains

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> |
|--|---------------------------------------|---|
| electric-heated thermal sand reclamation system, with baghouse | OAC rule 3745-17-07(A) | 20% opacity, as a 6-minute average, except as provided by rule |
| | OAC rule 3745-17-11(B) | 6.0 lbs particulate emissions (PE)/hr |
| | OAC rule 3745-31-05 (PTI #03-9119) | 0.02 grain/standard cubic foot per minute |
| | | 0.1 lb organic compounds (OC)/hr The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A) and 3745-17-11(B). |

2. Additional Terms and Conditions

- 2.a All the PE from this emissions unit shall be vented to the baghouse.

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 3 to 6 inches of water while the emissions unit is in operation.
2. The permittee shall operate and maintain this emissions unit in accordance with the manufacturer's specifications. This emissions unit shall be operated within a temperature range of 1200 to 1600 degrees Fahrenheit to ensure efficient destruction of organic compounds.

III. Monitoring and/or Record Keeping Requirements

1. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install #03-9119, issued on November 15, 1995: paragraphs 2-4. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.
2. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be 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.

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

3. The permittee shall operate and maintain a continuous temperature monitor and recorder that measures and records the the temperature in the calcining vessel while the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee. The permittee shall record the temperature in the calcining vessel on a daily basis.

IV. Reporting Requirements

1. The permittee shall submit quarterly 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.
2. The permittee shall submit temperature deviation (excursion) reports that identify that all periods of time during which the temperature of the emissions unit did not comply with the allowable range specified above.
3. All quarterly reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

V. Testing Requirements

1. Compliance with the emission limitations in section A.I of the terms and conditions of this permit shall be determined in accordance with the following methods:
 - 1.a Emission Limitation: 20% opacity, as a 6-minute average, except as provided by rule

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the visible emissions limitation above pursuant to OAC rule 3745-17-03(B)(1).
 - 1.b Emission Limitation: 6.0 lbs PE/hr

Applicable Compliance Method: The permittee shall demonstrate compliance with the emission limitation above based upon the results of emission testing conducted in accordance with the methods specified in OAC rule 3745-17-03(B)(10).
 - 1.c Emission Limitation: 0.02 gr/dscf

Applicable Compliance Method: The permittee shall demonstrate compliance with the emission limitation above based upon the results of emission testing conducted in accordance with 40 CFR, Part 60, Appendix A, Methods 1 - 5.
 - 1.d Emission Limitation: 0.1 lb OC/hr

Applicable Compliance Method: The permittee shall demonstrate compliance with the emission limitation above based upon the results of emissions testing conducted in accordance with 40 CFR, Part 60, Appendix A, Methods 18, 25 or 25A.

V. Testing Requirements (continued)

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. The emission testing shall be conducted within 3 months 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 mass emission rates for PE and OC.
 - c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates:

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

OC- Methods 18, 25 or 25A of 40 CFR, Part 60, Appendix A

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

- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.
3. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

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

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

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> |
|---|---|--|
|---|---|--|

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: New-bay Chill Blast Machine with Baghouse (P017)
Activity Description: Solidification tool (similar to a shotblast machine) used to clean rough cast iron chills

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> |
|---|---------------------------------------|--|
| new-bay chill blast machine, with baghouse | OAC rule 3745-17-07(A) | 20% opacity, as a 6-minute average, except as provided by rule |
| | OAC rule 3745-17-11(B) | See A.1.2.a. |
| | OAC rule 3745-31-05 (PTI #03-10079) | 3.0 lbs particulate emissions (PE)/hr, 13.14 TPY PE |
| | | 0.30 lb particulate matter less than 10 microns (PM10)/hr, 1.31 TPY PM10 |
| | | The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A). |

2. Additional Terms and Conditions

- 2.a The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
- 2.b All the PE from this emissions unit shall be vented to the baghouse.

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 5 to 7 inches of water while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be 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. All quarterly reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.

V. Testing Requirements

1. Compliance with the emission limitations in section A.I of the terms and conditions of this permit shall be determined in accordance with the following methods:

- 1.a Emission Limitation: 20% opacity, as a 6-minute average, except as provided by rule

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the visible emissions limitation above pursuant to OAC rule 3745-17-03(B)(1).

- 1.b Emission Limitations: 3.0 lbs PE/hr, 13.14 TPY PE

Applicable Compliance Method: Compliance may be determined by multiplying the emission factor of 17.0 pounds of PE per ton of gray iron produced (from FIRE v. 6.22, SCC 3-04-003-40) by the maximum production rate (tons/hr), and then multiplying by the baghouse control factor of (1-0.99).*

The annual limitation was developed by multiplying the hourly limitation by 8760, and then dividing by 2000. Therefore, if compliance is shown with the hourly limitation, compliance shall be shown with the annual limitation.

If required, compliance with the hourly PE limitation shall be determined pursuant to Methods 1 - 5 of 40 CFR, Part 60, Appendix A.

* The baghouse control efficiency is assumed to be 99%.

- 1.c Emission Limitations: 0.30 lb PM10, 1.31 TPY PM10

Applicable Compliance Method: Compliance may be determined by multiplying the emission factor of 1.7 pounds of PE per ton of gray iron produced (from FIRE v. 6.22, SCC 3-04-003-40) by the maximum production rate (tons/hr), and then multiplying by the baghouse control factor of (1-0.99).*

The annual limitation was developed by multiplying the hourly limitation by 8760, and then dividing by 2000. Therefore, if compliance is shown with the hourly limitation, compliance shall be shown with the annual limitation.

If required, compliance with the hourly PM10 limitation shall be determined pursuant to Methods 1 - 5 of 40 CFR, Part 60, Appendix A (including the back half of the sampling train and a particle size distribution), or Methods 201 or 201A .

*The baghouse control efficiency is assumed to be 99%.

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> |
|---|---|--|
|---|---|--|

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Sand Silo for New Bay Mixer (P018)

Activity Description: Silo receives sand from west silo (reclaimed sand) and feeds, via gravity, sand to new bay mixer (mixing of sand and binders)

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> |
|---|---------------------------------------|---|
| sand silo for new bay mixer, with baghouse | OAC rule 3745-17-07(A) | 20% opacity, as a 6-minute average, except as provided by rule |
| | OAC rule 3745-17-11(B) | See A.1.2.a. |
| | OAC rule 3745-31-05 (PTI #03-13316) | 0.02 grain/dry standard cubic foot (dscf), 0.89 lb particulate emissions (PE)/hr, 3.90 TPY PE The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A). |

2. Additional Terms and Conditions

- 2.a The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
- 2.b All the PE from this emissions unit shall be vented to the baghouse.

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 5 to 7 inches of water while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be 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.

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

2. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the baghouse serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the location and color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

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

V. Testing Requirements

1. Compliance with the emission limitations in section A.I of the terms and conditions of this permit shall be determined in accordance with the following methods:

- 1.a Emission Limitation: 20% opacity, as a 6-minute average, except as provided by rule

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the visible emissions limitation above pursuant to OAC rule 3745-17-03(B)(1).

- 1.b Emission Limitations: 0.02 gr/dscf, 0.89 lb PE/hr, 3.90 TPY PE

Applicable Compliance Method: The permittee shall demonstrate compliance with the hourly and gr/dscf limitations above based upon the results of emission testing conducted in accordance with 40 CFR, Part 60, Appendix A, Methods 1 - 5.

The annual limitation was developed by multiplying the hourly limitation by 8760, and then dividing by 2000. Therefore, if compliance is shown with the hourly limitation, compliance shall be shown with the annual limitation.

V. Testing Requirements (continued)

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. The emission testing shall be conducted within 3 months 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 mass emission rates for PE.
 - c. The following test methods shall be employed to demonstrate compliance with the allowable hourly mass emission rate:

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

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

- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.
3. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

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

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

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> |
|---|---|--|
|---|---|--|

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 Blowout Room (P019)

Activity Description: Excess sand is removed from castings via compressed air and disposed

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> |
|---|---------------------------------------|---|
| casting blowout room, with baghouse | OAC rule 3745-17-07(A) | 20% opacity, as a 6-minute average, except as provided by rule |
| | OAC rule 3745-17-11 | See A.I.2.a. |
| | OAC rule 3745-31-05 (PTI #03-13473) | 0.13 lb particulate emissions (PE)/hr, 0.57 TPY PE 0.09 lbs particulate matter less than 10 microns (PM10)/hr, 0.40 TPY PM10 See A.I.2.b. The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A). |

2. Additional Terms and Conditions

- 2.a The emissions limitation specified in this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
- 2.b All the PE from this emissions unit shall be vented to the baghouse.

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 6 to 10 inches of water while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be 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.

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

2. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the baghouse serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the location and color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.

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. All quarterly reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.
2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the baghouse serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitations in section A.I of the terms and conditions of this permit shall be determined in accordance with the following methods:

1.a Emission Limitation: 20% opacity, as a 6-minute average, except as provided by rule

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the visible emissions limitation above pursuant to OAC rule 3745-17-03(B)(1).

1.b Emissions Limitations: 0.13 lb PE/hr, 0.57 TPY PE

Applicable Compliance Method: The permittee may demonstrate compliance with the hourly limitation by multiplying the maximum process weight (tons/hr) by the emission factor from AP-42, Section 12.10.3 (revised 1/95) of 3.2 lbs PE/ton gray iron, and then multiplying by the baghouse control factor of (1-0.99).*

The annual limitation was developed by multiplying the hourly limitation by 8760, and then dividing by 2000. Therefore, if compliance is shown with the hourly limitation, compliance shall be shown with the annual limitation.

If required, compliance with the hourly PE limitation shall be determined pursuant to Methods 1 - 5 of 40 CFR, Part 60, Appendix A.

* The baghouse control efficiency is assumed to be 99%.

V. Testing Requirements (continued)

1.c Emission Limitations: 0.09 lb PM10/hr, 0.40 TPY PM10

Applicable Compliance Method: The permittee may demonstrate compliance with the hourly limitation by multiplying the maximum process weight (tons/hr) by the emission factor from AP-42, Section 12.10.3 (revised 1/95) of 3.2 lbs PE/ton gray iron and by 0.7*, and then multiplying by the baghouse control factor of (1-0.99).**

The annual limitation was developed by multiplying the hourly limitation by 8760, and then dividing by 2000. Therefore, if compliance is shown with the hourly limitation, compliance shall be shown with the annual limitation.

If required, compliance with the hourly PM10 limitation shall be determined pursuant to Methods 1 - 5 of 40 CFR Part 60, Appendix A (including the back half of the sampling train and a particle size distribution), or with Methods 201 or 201A .

* Based on AP-42, Chapter 12, Section 12.10.3 , 70% of the total particulates is PM10.

** The baghouse control efficiency is assumed to be 99%.

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> |
|---|---|--|
|---|---|--|

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: Natural Gas Fired Scrap Preheater (P020)

Activity Description: Raw scrap (pig iron, iron, scrap steel, foundry returns) is conveyed into preheater to remove water and residue (combustion of organics) prior to melting

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 preheater | OAC rule 3745-17-07(A) | none (See A.I.2.a.) |
| | OAC rule 3745-17-11(B) | none (See A.I.2.b.) |
| | OAC rule 3745-31-05 (PTI #03-13473) | 2.56 lbs particulate emissions (PE)/hr, 11.21 TPY PE |
| | | 1.5 lbs particulate matter less than 10 microns (PM10)/hr, 6.57 TPY PM10 |
| | | 1.07 lbs carbon monoxide (CO)/hr, 4.69 TPY CO |
| | | 1.27 lbs nitrogen oxides (NOx)/hr, 5.56 TPY NOx |
| | | See A.I.2.c. |

2. Additional Terms and Conditions

- 2.a This emissions unit is exempt from the visible particulate emissions limitation specified in OAC rule 3745-17-07(A), pursuant to OAC rule 3745-17-07(A)(3)(h), because OAC rule 3745-17-11 is not applicable.
- 2.b The uncontrolled mass rate of particulate emissions from this emissions unit is less than 10 lbs/hr. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(ii), Figure II of OAC rule 3745-17-11 does not apply. Also, Table I does not apply because the facility is located in Auglaize County.
- 2.c Visible PE from this emissions unit shall not exceed 20% opacity, as a 6-minute average.

II. Operational Restrictions

1. The permittee shall burn only natural gas in this emissions unit.

III. Monitoring and/or Record Keeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

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

2. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emissions limitations in section A.I of the terms and conditions of this permit shall be determined in accordance with the following methods:

1.a Emission Limitations: 2.56 lbs PE/hr, 11.21 TPY PE

Applicable Compliance Method: The permittee may demonstrate compliance with the hourly PE limitations as follows:

- i. for natural gas combustion, multiply the maximum natural gas combustion rate (mm cu. ft/hr) by the AP-42, Section 1.4 (revised 7/98) emission factor of 1.9 lbs PE/mm cu. ft of natural gas;
- ii. for the emissions from the scrap, multiply the maximum hourly process weight (tons/hr) by the AP-42, Section 12.10 (revised 1/95) emission factor of 0.6 lb PE/ton of gray iron; and
- iii. add 1.a.i + 1.a.ii.

The annual limitation was developed by multiplying the hourly limitation by 8760, and then dividing by 2000. Therefore, if compliance is shown with the hourly limitation, compliance shall be shown with the annual limitation.

If required, compliance with the hourly PE limitation shall be determined pursuant to Methods 1 - 5 of 40 CFR, Part 60, Appendix A.

V. Testing Requirements (continued)

1.b Emission Limitations: 1.5 lbs PM10/hr, 6.57 TPY PM10

Applicable Compliance Method: The permittee may demonstrate compliance with the hourly PE limitations as follows:

i. for natural gas combustion, multiply the maximum natural gas combustion rate (mm cu. ft/hr) by the AP-42, Section 1.4 (revised 7/98) emission factor of 1.9 lbs PE/mm cu. ft of natural gas;

ii. for the emissions from the scrap, multiply the maximum hourly process weight (tons/hr) by the FIRES Version 6.2 (SCC 3-04-003-15) emission factor of 0.6 lb PM10/ton of gray iron; and

iii. add 1.b.i + 1.b.ii.

The annual limitation was developed by multiplying the hourly limitation by 8760, and then dividing by 2000. Therefore, if compliance is shown with the hourly limitation, compliance shall be shown with the annual limitation.

If required, compliance with the hourly PM10 limitation shall be determined pursuant to Methods 1- 5 of 40 CFR Part 60, Appendix A (including the back half of the sampling train and a particle size distribution), or Methods 201 or 201A.

1.c Emissions Limitations: 1.07 lbs CO/hr, 4.69 TPY CO

Applicable Compliance Method: The permittee may demonstrate compliance with the hourly limitation by multiplying the maximum natural gas combustion rate (mm cu. ft/hr) by the emission factor from AP-42, Section 1.4 (revised 7/98) of 84 lbs CO/mm cu. ft.

The annual limitation was developed by multiplying the hourly limitation by 8760, and then dividing by 2000. Therefore, if compliance is shown with the hourly limitation, compliance shall be shown with the annual limitation.

If required, compliance with the hourly CO limitation shall be determined pursuant to Method 10 of 40 CFR, Part 60, Appendix A.

1.d Emission Limitations: 1.27 lbs NOx/hr, 5.56 TPY NOx

Applicable Compliance Method: The permittee may demonstrate compliance with the hourly limitation by multiplying the maximum natural gas combustion rate (mm cu. ft/hr) by the emission factor from AP-42, Section 1.4 (revised 7/98) of 100 lbs NOx/mm cu. ft.

The annual limitation was developed by multiplying the hourly limitation by 8760, and then dividing by 2000. Therefore, if compliance is shown with the hourly limitation, compliance shall be shown with the annual limitation.

If required, compliance with the hourly NOx limitation shall be determined pursuant to Method 7 of 40 CFR, Part 60, Appendix A.

1.e Emissions Limitation: Visible PE from this emissions unit shall not exceed 20% opacity, as a six-minute average.

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with 40 CFR, Part 60, Appendix A, Method 9.

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> |
|---|---|--|
|---|---|--|

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: Arc-Air Room (Thermal Cutting) (P021)

Activity Description: Removal of gates and rizers from castings using hand-held arc cutting system. Castings are transferred into arc air room (enclosed room) on a sliding cart. Employees manually cut gates and rizers from castings using a jointed gouging rod.

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> |
|---|---------------------------------------|--|
| thermal cutting (arc-air room), with baghouse | OAC rule 3745-17-07(A) | none (See A.I.2.a.) |
| | OAC rule 3745-17-11 | none (See A.I.2.b.) |
| | OAC rule 3745-31-05 (PTI #03-13473) | 0.003 lb particulate emissions (PE)/hr, 0.01 TPY PE |
| | | See A.I.2.c and A.I.2.d. |

2. Additional Terms and Conditions

- 2.a This emissions unit is exempt from the visible particulate emissions limitation specified in OAC rule 3745-17-07(A), pursuant to OAC rule 3745-17-07(A)(3)(h), because OAC rule 3745-17-11 is not applicable.
- 2.b The uncontrolled mass rate of particulate emissions from this emissions unit is less than 10 lbs/hr. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(ii), Figure II of OAC rule 3745-17-11 does not apply. Also, Table I does not apply because the facility is located in Auglaize County.
- 2.c All the PE from this emissions unit shall be vented to the baghouse.
- 2.d Visible PE from this emissions unit shall not exceed 20% opacity, as a 6-minute average.

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 6 to 10 inches of water while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

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

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

2. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the baghouse serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

1. The permittee shall submit quarterly 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. All quarterly reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.
2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the baghouse serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emissions limitations in section A.I of the terms and conditions of this permit shall be determined in accordance with the following methods:

1.a Emission Limitations: 0.003 lb PE/hr, 0.01 TPY PE

Applicable Compliance Method: The permittee may demonstrate compliance with the hourly limitation by multiplying the maximum process weight rate (lbs electrodes consumed/hr) by the emission factor from AP-42, Section 12.19.2 (revised 1/95), for flux cored arc welding using electrode E11018, of 57 lbs PE/1000 lbs electrode consumed, and then multiplying by the baghouse control factor of (1-0.99).*

The annual limitation was developed by multiplying the hourly limitation by 8760, and then dividing by 2000. Therefore, if compliance is shown with the hourly limitation, compliance shall be shown with the annual limitation.

If required, the permittee shall demonstrate compliance in accordance with 40 CFR, Part 60, Appendix A, Methods 1 - 5.

* The baghouse control efficiency is assumed to be 99%.

1.b Emissions Limitation: Visible PE from this emissions unit shall not exceed 20% opacity as a six-minute average.

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with 40 CFR, Part 60, Appendix A, Method 9.

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> |
|---|---|--|
|---|---|--|

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: Tumbleblast Machine (Clean Room) (P022)
Activity Description: Rough clean of castings using steel shot

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> |
|---|--|--|
| tumbleblast machine, with baghouse | OAC rule 3745-17-07(A) OAC rule 3745-17-11 OAC rule 3745-31-05 (PTI #03-13488) | 20% opacity, as a 6-minute average, except as provided by rule See A.1.2.a. 0.70 lb particulate emissions (PE)/hr, 3.05 TPY PE (see A.1.2.b) The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A). |

2. Additional Terms and Conditions

- 2.a The emission limitation based on this rule is less stringent than the limitation established pursuant to OAC rule 3745-31-05(A)(3).
- 2.b All the PE from this emissions unit shall be vented to the baghouse.

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 6 to 10 inches of water while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

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

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

2. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the baghouse serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

1. The permittee shall submit 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. All quarterly reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.
2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the baghouse serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emissions limitations in section A.I of the terms and conditions of this permit shall be determined in accordance with the following methods:

1.a Emission Limitations: 0.70 lb PE/hr, 3.05 TPY PE

Applicable Compliance Method: The permittee may demonstrate compliance with the hourly limitation by multiplying the maximum process weight rate (tons gray/hr) by the emission factor from AP-42, Section 12.10.3 (revised 1/95) of 17 lbs PE/ton gray iron produced, and then multiplying by the baghouse control factor of (1-0.99).*

The annual limitation was developed by multiplying the hourly limitation by 8760, and then dividing by 2000. Therefore, if compliance is shown with the hourly limitation, compliance shall be shown with the annual limitation

If required, the permittee shall demonstrate compliance in accordance with of 40 CFR, Part 60, Appendix A, Methods 1 - 5.

* The baghouse control efficiency is assumed to be 99%.

1.b Emissions Limitation: 20% opacity, as a 6-minute average, except as provided by rule

Applicable Compliance Method: If required, the permittee shall demonstrate compliance with the visible PE limitation above pursuant to OAC rule 3745-17-03(B)(1).

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/ Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|---|---|--|
|---|---|--|

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: Core/Mold Coating Operations (R001)

Activity Description: Coating is applied to cores and molds via over-pour, swabbing (brush), and portable spray guns, after application, the part is ignited and coating is burned-off

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> |
|---|--|--|
| core/mold coating operations | OAC rule 3745-17-07(A) | none (See A.I.2.a.) |
| | OAC rule 3745-17-11 | none (See A.I.2.b.) |
| | OAC rule 3745-21-07(G) | none (See A.II.1.) |
| | OAC rule 3745-31-05 (PTI #03-13316) | 7.48 lbs organic compounds (OC)/hr, 32.76 TPY OC (from coatings usage) |
| | | 2,303 lbs OC/month, 13.82 TPY OC (from cleanup materials usage) |
| | | 3.46 lbs of particulate emissions (PE)/hr, 15.15 TPY PE |
| | | See A.I.2.c. |

2. Additional Terms and Conditions

- 2.a This emissions unit is exempt from the visible particulate emissions limitation specified in OAC rule 3745-17-07(A), pursuant to OAC rule 3745-17-07(A)(3)(h), because OAC rule 3745-17-11 is not applicable.
- 2.b The uncontrolled mass rate of particulate emissions from this emissions unit is less than 10 lbs/hr. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(ii), Figure II of OAC rule 3745-17-11 does not apply. Also, Table 1 does not apply because the facility is located in Auglaize County.
- 2.c The "best available technology" (BAT) for this emissions unit has been determined to be the use of flammable solvent-based core and molding coatings with "light off" properties that will reduce emissions (see A.II.2).
- 2.d The 7.48 lbs OC/hr and 3.46 lbs PE/hr emission limitations were established for PTI purposes to reflect the emissions unit's potentials to emit. Therefore, it is not necessary to establish monitoring, record keeping and/or reporting requirements to ensure compliance with these limitations.

II. Operational Restrictions

1. The use of any photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5), in this emissions unit is prohibited.

II. Operational Restrictions (continued)

2. The permittee shall "light" the coating on the molds/cores within one minute of application.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain daily records of the following information for this emissions unit:
 - a. the company identification for each liquid organic material employed; and
 - b. documentation on whether or not each liquid organic material employed is a photochemically reactive material.
2. The permittee shall collect and record the following each month for this emissions unit:
 - a. the name and identification of each coating employed;
 - b. the OC content of each coating employed, in pounds per gallon, as applied;
 - c. documentation on whether or not each coating is a flammable solvent-based material;
 - d. the number of gallons of each coating employed;
 - e. the total OC emissions for each coating employed, in pounds $[(b \times d) \times (1 - ER)]$, where ER = % reduction of OC due to "light off" (70%);
 - f. documentation of the "light off" time interval for each coating employed (see section A.II.2); and
 - g. the total OC emissions for all the coatings employed, in pounds (summation of e for all coatings).
3. The permittee shall calculate and record the following information each month for this emissions unit:
 - a. the name and identification number of each cleanup material employed;
 - b. the OC content of each cleanup material employed, in pounds/gallon;
 - c. the number of gallons of each cleanup material employed;
 - d. the total emissions of OC for each cleanup material, in pounds (b x c); and
 - e. the total emissions of OC for all the cleanup materials employed, in pounds (summation of d for all cleanup materials).

IV. Reporting Requirements

1. The permittee shall notify the Director (the appropriate Ohio EPA District Office or local air agency) in writing of any daily record showing the use of any noncomplying material (i.e., photochemically reactive material) in this emissions unit. The notification shall include a copy of such record and shall be sent to the Director (the appropriate Ohio EPA District Office or local air agency) within 45 days after the exceedance occurs.
2. The permittee shall submit annual written reports that summarize the actual annual OC emissions (from cleanup materials usage) and the actual annual OC emissions (from coatings usage) for this emissions unit. The reports shall be submitted by January 31 of each year and shall cover the previous calendar year.
3. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the monthly OC limitation of 2,303 pounds (from cleanup materials usage). The reports shall be submitted in accordance with paragraph A.1.c of the General Terms and Conditions of this permit.
4. The permittee shall submit quarterly summaries that include the following information:
 - a. all periods of time during which a non-flammable-based mold/core coating was employed; and
 - b. all periods of time during which the "light off" time interval exceeded one minute.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitations: 7.48 lbs OC/hr, 32.76 TPY OC, from coatings usage

Applicable Compliance Method: Compliance with the hourly limitation shall be determined by multiplying the maximum coatings usage rate (gallons/hr) by the maximum OC content of all coatings (lbs/gallon), and then multiplying by a factor of (1-0.7).*

The annual limitation was developed by multiplying the hourly limitation by 8760, and then dividing by 2000. Therefore, if compliance is shown with the hourly limitation, compliance shall be shown with the annual limitation.

* The reduction percentage for OCs due to "lighting off" the coatings is assumed to be 70%.

1.b Emission Limitations: 2,303 lbs OC/month, 13.82 TPY, OC from cleanup operations

Applicable Compliance Method: Compliance shall be based upon the record keeping requirements specified in section A.III.3 of this permit.

Compliance with the annual limitation shall be based upon the record keeping requirements specified in section A.III.3 of this permit and shall be the summation of the 12 monthly OC emission rates for the calendar year.

1.c Emission Limitations: 3.46 lbs PE/hr, 15.15 TPY PE

Applicable Compliance Method: To determine the actual worst case particulate emissions rate (E), the following equation shall be used for the paint spraying operation:

$E = \text{particulate emissions rate (lbs/hr)}$

$E = \text{maximum coating solids usage, in pounds per hour} \times (1-TE) (1-CE)$

TE = transfer efficiency, which is the ratio of the amount of coating solids deposited on the coated part to the amount of coating solids used (assumed to be 60%)

CE = control efficiency of the control equipment (lighting the coating on the molds/cores immediately) (assumed to be 70%)

The annual limitation was developed by multiplying the hourly limitation by 8760, and then dividing by 2000. Therefore, if compliance is shown with the hourly limitation, compliance shall be shown with the annual limitation.

If required, the permittee shall demonstrate compliance with the emission limit above pursuant to OAC rule 3745-17-03(B)(10).

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> |
|---|---|--|
|---|---|--|

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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