



State of Ohio Environmental Protection Agency

Street Address:

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

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

05/03/04

CERTIFIED MAIL

**RE: Preliminary Proposed Title V
Chapter 3745-77 permit TVP009**

05-75-00-0174

Honda of America Mfg., Inc. Anna Engine Plant
Mark Tufts
12500 Meranda Road
Anna, OH 45302-9699

Dear Mark Tufts:

Enclosed is the Ohio EPA Preliminary Proposed Title V permit that was issued in draft form on 08/18/03. The comment period for the Draft permit has ended. We are now ready to submit this permit to USEPA for approval.

We are submitting this for your review and comment. If you do not agree with the Preliminary Proposed Title V permit as written, you now have the opportunity to raise your concerns. **In order to facilitate our review of all the comments or concerns you may have with the enclosed preliminary proposed permit, please provide a hand marked-up copy of the permit showing the changes you think are necessary, along with any additional summary comments, within fourteen (14) days from your receipt of this letter to:**

**Ohio EPA, Division of Air Pollution Control
Jim Orlemann, Manager, Engineering Section
Preliminary Proposed Title V Permit Correspondence
122 South Front Street
Columbus, Ohio 43215**

and

Southwest District Office
401 East Fifth Street
Dayton, OH 45402-2911
(513) 285-6357

Also, if you believe that it is necessary to have an informal conference with us, then, as part of your written comments, you should request a conference concerning the written comments.

If comments are not submitted within fourteen (14) days of your receipt of this letter, we will forward the proposed permit to USEPA for approval. All comments received will be carefully considered before proceeding to the proposed permit.

Sincerely,

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

cc: Southwest District Office
File, DAPC PMU



State of Ohio Environmental Protection Agency

PRELIMINARY PROPOSED TITLE V PERMIT

Issue Date: 05/03/04

Effective Date: To be entered upon final issuance

Expiration Date: To be entered upon final issuance

This document constitutes issuance of a Title V permit for Facility ID: 05-75-00-0174 to: Honda of America Mfg., Inc. Anna Engine Plant 12500 Meranda Road Anna, OH 45302-9699

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

Table with 3 columns: Emissions Unit ID (Company ID), Emissions Unit Activity Description, and Emissions Unit Activity Description. Rows include units like P001, P006, P015, P017, P018, P020, P024, P025, P048, P056, P057, P058, P059, P061, P071, P073, P075, P076, P078, P079, P080, P081, P082, P083, P084, P087, P901, P902, P904, P905, P906, P907, P908, and Z002.

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:

Southwest District Office
401 East Fifth Street
Dayton, OH 45402-2911
(513) 285-6357

OHIO ENVIRONMENTAL PROTECTION AGENCY

Christopher Jones
Director

PART I - GENERAL TERMS AND CONDITIONS

A. State and Federally Enforceable Section

1. Monitoring and Related Record Keeping and Reporting Requirements

a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, i.e., in Section A.III of Part III of this Title V permit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:

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

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

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

- i. **All reporting required in accordance with OAC rule 3745-77-07(A)(3)(c) for deviations caused by malfunctions shall be submitted in the following manner:**

Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be promptly reported to the Ohio EPA in accordance with OAC rule 3745-15-06. In addition, to fulfill the OAC rule 3745-77-07(A)(3)(c) deviation reporting requirements for malfunctions, written reports that identify each malfunction that occurred during each calendar quarter (including each malfunction reported only verbally in accordance with OAC rule 3745-15-06) shall be submitted by January 31, April 30, July 31, and October 31 of each year in accordance with General Term and Condition A.1.c.ii below; and each report shall cover the previous calendar quarter.

In accordance with OAC rule 3745-15-06, a malfunction constitutes a violation of an emission limitation (or control requirement) and, therefore, is a deviation of the federally enforceable permit requirements. Even though verbal notifications and written reports are required for malfunctions pursuant to OAC rule 3745-15-06, the written reports required pursuant to this term must be submitted quarterly to satisfy the prompt reporting provision of OAC rule 3745-77-07(A)(3)(c).

In identifying each deviation caused by a malfunction, the permittee shall specify the emission limitation(s) (or control requirement(s)) for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. For a specific malfunction, if this information has been provided in a written report that was submitted in accordance with OAC rule 3745-15-06, the permittee may simply reference that written report to identify the deviation. Nevertheless, all malfunctions, including those reported only verbally in accordance with OAC rule 3745-15-06, must be reported in writing on a quarterly basis.

Any scheduled maintenance, as referenced in OAC rule 3745-15-06(A)(1), that results in a deviation from a federally enforceable emission limitation (or control requirement) shall be reported in the same manner as described above for malfunctions.

(Authority for term: OAC rule 3745-77-07(A)(3)(c))

- ii. **Except as may otherwise be provided in the terms and conditions for a specific emissions unit, i.e., in Section A.IV of Part III of this Title V permit or, in some cases, in Part II of this Title V permit, all reporting required in accordance with OAC rule 3745-77-07(A)(3)(c) for deviations of the emission limitations, operational restrictions, and control device operating parameter limitations shall be submitted in the following manner:**

Written reports of (a) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures taken, shall be promptly made to the appropriate Ohio EPA District Office or local air agency. Except as provided below, the written reports shall be submitted by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

In identifying each deviation, the permittee shall specify the emission limitation(s), operational restriction(s), and/or control device operating parameter limitation(s) for which the deviation occurred, describe each deviation, and provide the estimated magnitude and duration of each deviation.

These written reports shall satisfy the requirements (in part) of OAC rule 3745-77-07(A)(3)(c) pertaining to the submission of monitoring reports every six months and to the prompt reporting of all deviations. OAC rule 3745-77-07(A)(3)(c) is not fully satisfied until the permittee addresses all other deviations of the federally enforceable requirements specified in the permit.

If an emissions unit has a deviation reporting requirement for a specific emission limitation, operational restriction, or control device operating parameter limitation that is not on a quarterly basis (e.g., within 30 days following the end of the calendar month, or within 30 or 45 days after the exceedance occurs), that deviation reporting requirement overrides the reporting requirements specified in this General Term and Condition for that specific emission limitation, operational restriction, or control device parameter limitation. Following the provisions of that non-quarterly deviation reporting requirement will also satisfy the requirements (in part) of OAC rule 3745-77-07(A)(3)(c) pertaining to the submission of monitoring reports every six months and to the prompt reporting of all deviations, and additional quarterly deviation reports for that specific emission limitation, operational restriction, or control device parameter limitation are not required pursuant to this General Term and Condition.

See B.6 below if no deviations occurred during the quarter.

(Authority for term: OAC rule 3745-77-07(A)(3)(c))

- iii. **All reporting required in accordance with the OAC rule 3745-77-07(A)(3)(c) for other deviations of the federally enforceable permit requirements which are not reported in accordance with General Term and Condition A.1.c.ii above shall be submitted in the following manner:**

Written reports that identify all other deviations of the federally enforceable requirements contained in this permit, including the monitoring, record keeping, and reporting requirements, which are not reported in accordance with General Term and Condition A.1.c.ii above shall be submitted to the appropriate Ohio EPA District Office or local air agency by January 31 and July 31 of each year; and each report shall cover the previous six calendar months.

In identifying each deviation, the permittee shall specify the federally enforceable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation.

These semi-annual written reports shall satisfy the reporting requirements of OAC rule 3745-77-07(A)(3)(c) for any deviations from the federally enforceable requirements contained in this permit that are not reported in accordance with General Term and Condition A.1.c.ii above.

If no such deviations occurred during a six-month period, the permittee shall submit a semi-annual report which states that no such deviations occurred during that period.

(Authority for term: OAC rules 3745-77-07(A)(3)(c)(i) and (ii))

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

(Authority for term: OAC rule 3745-77-07(A)(3)(c)(iv))

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

(Authority for term: OAC rule 3745-77-07(A)(3)(c))

2. Scheduled Maintenance

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. Except as provided in OAC rule 3745-15-06(A)(3), any scheduled maintenance 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). Any scheduled maintenance, as defined in OAC rule 3745-15-06(A)(1), that results in a deviation from a federally enforceable emission limitation (or control requirement) shall be reported in the same manner as described for malfunctions in General Term and Condition A.1.c.i above.

(Authority for term: OAC rule 3745-77-07(A)(3)(c))

3. Risk Management Plans

If applicable, the permittee shall 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"); and, pursuant to 40 C.F.R. 68.215(a), the permittee shall submit either of the following:

- a. a compliance plan for meeting the requirements of 40 C.F.R. Part 68 by the date specified in 40 C.F.R. 68.10(a) and OAC 3745-104-05(A); or
- b. as part of the compliance certification submitted under 40 C.F.R. 70.6(c)(5), a certification statement that the source is in compliance with all requirements of 40 C.F.R. Part 68 and OAC Chapter 3745-104, including the registration and submission of the risk management plan.

(Authority for term: OAC rule 3745-77-07(A)(4))

4. Title IV Provisions

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain, the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.

(Authority for term: OAC rule 3745-77-07(A)(5))

5. Severability Clause

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

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

6. General Requirements

- a. The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and reissuance, or modification, or for denial of a permit renewal application.
- b. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.
- c. This permit may be modified, reopened, revoked, or revoked and reissued, for cause, in accordance with A.10 below. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.
- d. This permit does not convey any property rights of any sort, or any exclusive privilege.
- e. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

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

7. Fees

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

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

8. Marketable Permit Programs

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

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

9. Reasonably Anticipated Operating Scenarios

The permittee is hereby authorized to make changes among operating scenarios authorized in this permit without notice to the Ohio EPA, but, contemporaneous with making a change from one operating scenario to another, the permittee must record in a log at the permitted facility the scenario under which the permittee is operating. The permit shield provided in these general terms and conditions shall apply to all operating scenarios authorized in this permit.

(Authority for term: OAC rule 3745-77-07(A)(10))

10. Reopening for Cause

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

- a. Additional applicable requirements under the Act become applicable to one or more emissions units covered by this permit, and this permit has a remaining term of three or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to paragraph (E)(1) of OAC rule 3745-77-08.
- b. This permit is issued to an affected source under the acid rain program and additional requirements (including excess emissions requirements) become applicable. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the permit, and shall not require a reopening of this permit.
- c. The Director of the Ohio EPA or the Administrator of the U.S. EPA determines that the federally applicable requirements in this permit are based on a material mistake, or that inaccurate statements were made in establishing the emissions standards or other terms and conditions of this permit related to such federally applicable requirements.
- d. The Administrator of the U.S. EPA or the Director of the Ohio EPA determines that this permit must be revised or revoked to assure compliance with the applicable requirements.

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

11. Federal and State Enforceability

Only those terms and conditions designated in this permit as federally enforceable, that are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA, the State, and citizens under the Act. All other terms and conditions of this permit shall not be federally enforceable and shall be enforceable under State law only.

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

12. Compliance Requirements

- a. Any document (including reports) required to be submitted and required by a federally applicable requirement in this Title V permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.
- b. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
 - i. At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
 - ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with paragraph (E) of OAC rule 3745-77-03.
 - iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
 - iv. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.

- c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually, or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
 - i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
 - ii. An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.
- d. Compliance certifications concerning the terms and conditions contained in this permit that are federally enforceable emission limitations, standards, or work practices, shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) and the Administrator of the U.S. EPA in the following manner and with the following content:
 - i. Compliance certifications shall be submitted annually on a calendar year basis. The annual certification shall be submitted on or before April 30th of each year during the permit term.
 - ii. Compliance certifications shall include the following:
 - (a) An identification of each term or condition of this permit that is the basis of the certification.
 - (b) The permittee's current compliance status.
 - (c) Whether compliance was continuous or intermittent.
 - (d) The method(s) used for determining the compliance status of the source currently and over the required reporting period.
 - (e) Such other facts as the Director of the Ohio EPA may require in the permit to determine the compliance status of the source.
 - iii. Compliance certifications shall contain such additional requirements as may be specified pursuant to sections 114(a)(3) and 504(b) of the Act.

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

13. Permit Shield

- a. Compliance with the terms and conditions of this permit (including terms and conditions established for alternate operating scenarios, emissions trading, and emissions averaging, but excluding terms and conditions for which the permit shield is expressly prohibited under OAC rule 3745-77-07) shall be deemed compliance with the applicable requirements identified and addressed in this permit as of the date of permit issuance.
- b. This permit shield provision shall apply to any requirement identified in this permit pursuant to OAC rule 3745-77-07(F)(2), as a requirement that does not apply to the source or to one or more emissions units within the source.

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

14. Operational Flexibility

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

air agency as soon as possible after learning of the need to make the change. The notification shall contain the items required under OAC rule 3745-77-07(H)(2)(d).
(Authority for term: OAC rules 3745-77-07(H)(1) and (2))

15. Emergencies

The permittee shall have an affirmative defense of emergency to an action brought for noncompliance with technology-based emission limitations if the conditions of OAC rule 3745-77-07(G)(3) are met. This emergency defense provision is in addition to any emergency or upset provision contained in any applicable requirement.
(Authority for term: OAC rule 3745-77-07(G))

16. Off-Permit Changes

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

- a. The change does not result in conditions that violate any applicable requirements or that violate any existing federally enforceable permit term or condition.
- b. The permittee provides contemporaneous written notice of the change to the Director and the Administrator of the U.S. EPA. Such written notice shall describe each such change, the date of such change, any change in emissions or pollutants emitted, and any federally applicable requirement that would apply as a result of the change.
- c. The change shall not qualify for the permit shield under OAC rule 3745-77-07(F).
- d. The permittee shall keep a record describing all changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes.
- e. The change is not subject to any applicable requirement under Title IV of the Act or is not a modification under any provision of Title I of the Act.

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

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

17. Compliance Method Requirements

Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defenses otherwise available to the permittee, including but not limited to, any challenge to the Credible Evidence Rule (see 62 Fed. Reg. 8314, Feb. 24, 1997), in the context of any future proceeding.

(This term is provided for informational purposes only.)

18. Insignificant Activities

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

(Authority for term: OAC rule 3745-77-07(A)(1))

19. Permit to Install Requirement

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

20. Air Pollution Nuisance

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

21. Permanent Shutdown of an Emissions Unit

The permittee may notify Ohio EPA of any emissions unit that is permanently shut down by submitting a certification by the responsible official of the date on which the emissions unit was permanently shut down. Authorization to operate the affected part or activity of the stationary source shall cease upon the date certified by the responsible official that the emissions unit was permanently shut down.

If an emissions unit is permanently shut down (i.e., that has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent “modification” or “installation” as defined in OAC Chapter 3745-31 and therefore ceases to meet the definition of an “emissions unit” as defined in OAC rule 3745-77-01(O)), rendering existing permit terms and conditions irrelevant, the permittee shall not be required, after the date of the certification and submission to Ohio EPA, to meet any monitoring, record keeping, reporting, or testing requirements, applicable to that emissions unit, except for any residual requirements, such as the quarterly deviation reports, semi-annual deviation reports and annual compliance certification covering the period during which the emissions unit last operated. All records relating to the shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law.

No emissions unit certified by the responsible official as being permanently shut down may resume operation without first applying for and obtaining a permit to install pursuant to OAC Chapter 3745-31.

B. State Only Enforceable Section

1. Reporting Requirements Related to Monitoring and Record Keeping Requirements

The permittee shall submit required reports in the following manner:

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

2. Records Retention Requirements

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

3. Inspections and Information Requests

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

4. Scheduled Maintenance/Malfunction Reporting

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

5. Permit Transfers

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

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

If no emission limitation (or control requirement), operational restriction and/or control device parameter limitation 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 by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

The permittee is not required to submit a quarterly report which states that no deviations occurred during that quarter for the following situations:

- a. where an emissions unit has deviation reporting requirements for a specific emission limitation, operational restriction, or control device parameter limitation that override the deviation reporting requirements specified in General Term and Condition A.1.c.ii;
- b. where an uncontrolled emissions unit has no monitoring, record keeping, or reporting requirements and the emissions unit's applicable emission limitations are established at the potentials to emit; and
- c. where the company's responsible official has certified that an emissions unit has been permanently shut down.

Part II - Specific Facility Terms and Conditions

A. State and Federally Enforceable Section

1. This facility is not located in an Appendix A area as described in OAC rule 3745-17-08; therefore, OAC rules 3745-17-07(B) and 3745-17-08(B) do not apply to the fugitive emissions from the affected emissions units at this facility.
2. The particulate emissions (PE) from baghouse BH-1 serving emissions units P018, P056, P058, and P904 shall not exceed 0.010 grain/dry standard cubic foot (dscf) of the total exhaust gases. On June 25, 1998, PE testing was conducted for BH-1. The results of the emission testing demonstrated that BH-1 was in compliance with the allowable PE limitations.

The PE from baghouse BH-3 serving emissions units P018, P056, P057, and P061 shall not exceed 0.010 grain/dscf of the total exhaust gases. On June 25, 1998, PE testing was conducted for BH-3. The results of the emission testing demonstrated that BH-3 was in compliance with the allowable PE limitations.

The PE from baghouse BH-7 serving emissions units P076, P901, P905, and P908 shall not exceed 0.010 grain/dscf of the total exhaust gases. On June 25, 1998, PE testing was conducted for BH-7. The results of the emission testing demonstrated that BH-7 was in compliance with the allowable PE limitations.

The permittee reserves the right to direct the PE from any other existing or new emissions units to these baghouses with the understanding that emissions will not exceed 0.010 grain/dscf of the total exhaust gases and/or individual emission unit's permitted allowable emission limitation.

This right is allowed as long as the permittee does not trigger the modification definition pursuant to Ohio Administrative Code (OAC) rule 3745-31-01 and submits information to Ohio EPA within 30 days after the change(s) documenting the change(s). This information would include, but not limited to, the following: a description of which emissions units were redirected to which baghouse, and calculations supporting the permittee's contention that the redirection of existing emissions units would not trigger the modification definition pursuant to OAC rule 3745-31-01.

3. The PE from baghouse BH-2, serving ferrous casting line #4 (emissions units P078, P079, P080, P081, P082 and P083), shall not exceed 0.004 grain/dscf of the total exhaust gases. On August 22, 2002, PE testing was conducted for BH-2. The results of the emission testing demonstrated that BH-2 was in compliance with the allowable PE limitations.

The permittee reserves the right to direct the PE from any other existing or new emissions units to baghouse BH-2 with the understanding that emissions will not exceed 0.004 grain/dscf of the total exhaust gases, and total flow directed to fabric filter BH-2 will not exceed 65,000 acfm (+ 5% variability).

The fugitive PE limitations for the ferrous casting line #4 are based on a iron throughput of 2.2 tons/hour (maximum hourly iron throughput capacity), and an annual iron throughput restriction of 8,268 tons/year, based on a rolling, 12-month summation.

This right is allowed as long as the permittee does not trigger the modification definition pursuant to OAC rule 3745-31-01 and submits information to Ohio EPA within thirty days after documenting the change(s). This information would include, but is not limited to, the following: a description of which emissions units were redirected to which baghouse, and calculations supporting the permittee's contention that the redirection of existing emissions units would not trigger the modification definition pursuant to OAC rule 3745-31-01.

4. The permittee will be subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Iron and Steel Foundries, 40 CFR Part 63, Subpart EEEEE. U.S. EPA failed to promulgate this standard by May 15, 2002, the Maximum Achievable Control Technology (MACT) hammer date. In accordance with 40 CFR Part 63, Subpart B (40 CFR Parts 63.50 through 63.56), the permittee shall submit an application to revise the permit to include equivalent emission limitations as a result of a case-by-case MACT determination. The application shall be submitted in two parts. The deadline to submit the Part I application, as specified in 40 CFR Part 63.53, was May 15, 2002.

A. State and Federally Enforceable Section (continued)

5. If the final MACT standard is not promulgated by the deadline specified by U.S. EPA, the permittee shall submit the Part II application as specified in 40 CFR Part 63.53. The Part II application shall be submitted within 60 days after the deadline to promulgate the respective standard, as specified by the settlement between U.S. EPA and Sierra Club. It must contain the following information:
 - a. for a new affected source, the anticipated date of startup of operation;
 - b. the hazardous air pollutants (HAPs) emitted by each affected source in the relevant source category and an estimated total uncontrolled and controlled emission rate for HAPs from the affected source;
 - c. any existing federal, State, or local limitations or requirements applicable to the affected source;
 - d. for each affected emission point or group of affected emission points, an identification of control technology in place;
 - e. information relevant to establishing the MACT floor (or MACT emission limitation), and, at the option of the permittee, a recommended MACT floor; and
 - f. any other information reasonably needed by the permitting authority including, at the discretion of the permitting authority, information required pursuant to Subpart A of 40 CFR Part 63.
6. If the NESHAP is promulgated before May 15, 2004, the facility shall be subject to the rule as an existing major source with a compliance date as specified in the NESHAP. Pursuant to the Subpart, the permittee shall submit the following notifications:
 - a. Within 120 days after promulgation of 40 CFR, Part 63, Subpart EEEEE, the permittee shall submit an Initial Notification Report which certifies whether or not the permittee is subject to the promulgated standard. If the permittee is subject to the final standard, the following information shall also be included in the Initial Notification Report, in accordance with 40 CFR Part 63.9(b)(2):
 - i. the name and mailing address of the permittee;
 - ii. the physical location of the source if it is different from the mailing address;
 - iii. identification of the relevant MACT standard and the source's compliance date;
 - iv. a brief description of the nature, design, size, and method of operation of the source, including the operating design capacity and an identification of each emission point of each HAP; and
 - v. a statement confirming the facility is a major source for HAPs.

A. State and Federally Enforceable Section (continued)

7. B002- Old North Mechanical 7.3 MMBTU steam boiler (PTI #05-1017, issued 4/13/84);
B004- South 7.3 MMBTU steam boiler (PTI #05-2886, issued 3/2/88);
B005- AH12, 4.44 MMBTU/Hour Heater (PTI #05-2943, issued 3/18/88);
B006- AH13, 8.55 MMBTU/Hour Heater (PTI #05-2943, issued 3/18/88);
B007- AH14, 8.55 MMBTU/Hour Heater (PTI #05-2943, issued 3/18/88);
B008- AH15, 4.44 MMBTU/Hour Heater (PTI #05-2943, issued 3/18/88);
B009- AH16, 8.55 MMBTU/Hour Heater (PTI #05-2943, issued 3/18/88);
B010- AH17, 8.55 MMBTU/Hour Heater (PTI #05-2943, issued 3/18/88);
B011- AH18, 3.55 MMBTU/Hour Heater (PTI #05-2943, issued 3/18/88);
B012- AH19, 3.56 MMBTU/Hour Heater (PTI #05-2943, issued 3/18/88);
B013- HV15, 5.50 MMBTU/Hour Heater (PTI #05-2943, issued 3/18/88);
B014- HV16, 5.50 MMBTU/Hour Heater (PTI #05-2943, issued 3/18/88);
B015- HV17, 5.50 MMBTU/Hour Heater (PTI #05-2943, issued 3/18/88);
B016- HV18, 5.50 MMBTU/Hour Heater (PTI #05-2943, issued 3/18/88);
B017- HV19, 5.50 MMBTU/Hour Heater (PTI #05-2943, issued 3/18/88);
B018- HV20, 5.50 MMBTU/Hour Heater (PTI #05-2943, issued 3/18/88);
B019- HV21, 5.50 MMBTU/Hour Heater (PTI #05-2943, issued 3/18/88);
B020- HV22, 5.50 MMBTU/Hour Heater (PTI #05-2943, issued 3/18/88);
B021- HV23, 5.50 MMBTU/Hour Heater (PTI #05-2943, issued 3/18/88);
B022- HV101, 7.88 MMBTU/Hour Heater (PTI #05-2943, issued 3/18/88);
B023- HV102, 7.88 MMBTU/Hour Heater (PTI #05-2943, issued 3/18/88);
B024- HV103, 6.36 MMBTU/Hour Heater (PTI #05-2943, issued 3/18/88);
B025- HV104, 6.36 MMBTU/Hour Heater (PTI #05-2943, issued 3/18/88);
B027- HV106, 7.95 MMBTU/Hour Heater (PTI #05-2943, issued 3/18/88);
B028- HV106, 7.95 MMBTU/Hour Heater (PTI #05-2943, issued 3/18/88);
B029- HV107, 7.95 MMBTU/Hour Heater (PTI #05-2943, issued 3/18/88);
B030- AH101, 5.83 MMBTU/Hour Heater (PTI #05-2943, issued 3/18/88);
B031- AH102, 5.63 MMBTU/Hour Heater (PTI #05-2943, issued 3/18/88);
B032- AH103, 6.00 MMBTU/Hour Heater (PTI #05-2943, issued 3/18/88);

A. State and Federally Enforceable Section (continued)

P033- 630-Ton Forging Press (PTI #05-3640, issued 9/13/89);
P034- 2500-Ton Forging Press (PTI #05-3640, issued 9/13/89);
P035- Outboard Blast Machine (PTI #05-3640, issued 9/13/89);
P036- Inner Blast Machine (PTI #05-3640, issued 9/13/89);
P037- Sandblast (PTI #05-3640, issued 9/13/89);
P040- Aluminum HPDC Operation No. 5 (EA-210); (PTI #05-3640, issued 9/13/89);
P042- Aluminum HPDC Operation No. 6 (EA-230); (PTI #05-3640, issued 9/13/89);
P044- Aluminum HPDC Operation No. 7 (PTI #05-3640, issued 9/13/89);
P045- Journal Lathes (PTI #05-3640, issued 9/13/89);
P046- Pin Lathes (PTI #05-3640, issued 9/13/89);
P047- Hole Drilling (PTI #05-3640, issued 9/13/89);
P055- Electronic Fuel Injector Test Stand (PTI #05-5942, issued 4/14/93);
P062- Bulk Chemical Handling System (PTI # 05-6833, issued 7/27/94);
P063- Quick Cast Shotblast (PTI #05-7140, issued 2/23/95);
P064- Zero Line Machining (Aluminum); (PTI #05-7926, issued 1/31/96);
P065- Line No. 1 Machining (Aluminum); (PTI #05-7926, issued 1/31/96);
P066- Head Machining Line No. 1 (Aluminum); (PTI #05-7926, issued 1/31/96);
P067- ATM Machining Line (Aluminum); (PTI #05-7926, issued 1/31/96);
T003- Waste Oil Tank (PTI #05-1698, issued 3/18/88);
T004- ATF Return Oil Tank (PTI #05-1698, issued 3/18/88);
T005- Ethylene Glycol Tank (PTI #05-1698, issued 3/18/88);
T006- WWTP Waste Oil Tank(PTI #05-1698, issued 3/18/88);
T007- Engine Oil Storage Tank (PTI #05-2556, issued 7/29/87);
T008- Engine Oil Storage Tank (PTI #05-1698, issued 3/18/88);
T009- ATF Storage Tank (PTI #05-1698, issued 3/18/88);
T010- MTF Storage Tank (PTI #05-1698, issued 3/18/88);
T011- Diesel Oil Tank (South); (PTI #05-2886, issued 3/2/88);
T012- Engine Oil Tank (Motorcycle); (PTI #05-2886, issued 3/2/88);
T013- Methanol Storage Tank (PTI #05-3236, issued 11/2/88);
T014- Leaded Gasoline Storage Tank (PTI #05-7386, issued 4/19/95); and
T015- Gasoline Storage Tank (PTI #05-7386, issued 4/19/95).

Each insignificant emissions unit at this facility must comply with all applicable State and federal regulations, and well as any emission limitations and/or control requirements contained within the identified permit to install for the emissions unit. Insignificant emissions units listed above that are not subject to specific permit to install requirements are subject to one or more of the applicable requirements contained in the federally-approved versions of OAC Chapters 3745-17, 3745-18, and/or 3745-21.

B. State Only Enforceable Section

1. The following insignificant emissions units located at this facility are exempt from permit requirements because they are not subject to any applicable requirement (as defined in OAC rule 3745-77-01(H)); or because they meet the "de minimis" criteria established in OAC rule 3745-15-05:

Z007- Miscellaneous VOC Usage Line O Assembly;
Z008- Miscellaneous VOC Usage Line No. 1 Assembly;
Z009- Miscellaneous VOC Usage ATM Assembly;
Z010- Zero Line Machining (Aluminum);;
Z011- Line No. 1 Machining (Aluminum);;
Z012- Head Machining Line No. 1 (Aluminum);;
Z013- ATM Machining Line (Aluminum);ATM Machining Line (Aluminum);;
Z015- Safety Kleen Parts Washer;
Z016- Graymills Parts Washer (Water Based);;
Z017- Yoneda TD-920-TC Copy Mill;
Z018- Horizontal Milling Center;
Z019- Vertical Milling Center;
Z020- Electrical Discharge Machine;
Z021- Polishing Lathe Forging Area;
Z022- Mori Seiki SL-3 CNC Lathe;
Z023- Mori Seiki SL-65 CNC Lathe;
Z024- Balder Pedestal Grinder Cat. No. 500;
Z025- Balder Pedestal Grinder;
Z026- Balder Pedestal Grinder;
Z027- Amino BUP600A Hydraulic Press;
Z028- Kellenberger 1000U OD, ID, Face Grinder;
Z029- Makino C-40 Tool Grinder;
Z030- Pedestal Grinder Cat. No. 612R;
Z031- Ewag RS-12 Tool Grinder;
Z032- Okamoto 1632N Surface Grinder;
Z033- Bridgeport Mill;
Z034- Clausing Lathe;
Z035- Okamoto Surface Grinder;
Z036- Rigid 535 Pipe Threader;
Z037- Band Saw Model H9AW;
Z038- Wilton Drill Press;
Z039- EMS: Miscellaneous Spray Paint Use;
Z040- EMS: Miscellaneous Paint Use;
Z041- EMS: Wheel Grinder;
Z042- EMS: Belt Grinder;
Z043- EMS: Safety Kleen Parts Washer;
Z044- EQ: ATM Parts Washer (Solvent Based);;
Z045- FAC: Solvent Cold Cleaner 1;
Z046- FAC: Solvent Cold Cleaner 2;
Z047- Industrial Waste Water Treatment Plant;
Z048- Cold Cleaner E.S. 0 Line;
Z049- Cold Cleaner E.S. Head Line;
Z050- Cold Cleaner - Head Tool Area;
Z051- Cold Cleaner - 0 Line Tool Area;
Z052- Cold Cleaner - No. 1 Block Hone;

B. State Only Enforceable Section (continued)

Z053- QSG: Parts Cleaning Tank (Solvent Based);
Z054- QSG: Crack Check;
Z055- HV8, 4.72 MMBTU/Hour Heater;
Z056- HV9, 4.72 MMBTU/Hour Heater;
Z073- AH1, 7.5 MMBTU/Hour Heater;
Z085- AH123, 6.95 MMBTU/Hour Heater;
Z088- Driveshaft Outboard Lathing;
Z089- Driveshaft Inboard Lathing;
Z090- Driveshaft Inner Lathing;
Z091- Impregnation Machine No. 1;
Z092- Impregnation Machine No. 2;
Z093- Dross Handling and Storage;
Z094- 9,000-Gallon Nitrogen Tank ;
Z095- 9,000-Gallon Nitrogen Tank ;
Z096- 9,000-Gallon Oxygen Tank;
Z097- LPDC-Accord Finish Line;
Z098- LPDC-Civic Finish Line;
Z099- LPDC-Pre Finish #1;
Z100- LPDC-Pre Finish #2;
Z101- LPDC Sandblast;
Z102- LPDC Head Tig Weld;
Z103- FMC Parts Washer Tank-Forging;
Z104- FMC Pedestal Grinder-Forging;
Z105- FMC Pedestal Sander;
Z106- FMC Part Saw-D/S Heat Treat;
Z107- FMC Pedestal Grinder-D/S Heat Treat;
Z108- FMC Polishing Discs-D/S Heat Treat;
Z109- FMC Part Saw-C/S;
Z110- FMC Polishing Disks-C/S Heat Treat;
Z111- FMC Sanding Disks-C/S Heat Treat;
Z112- FMC Parts Washer Tank-ES;
Z113- FMC Parts Washer Tank-ES;
Z114- FMC Parts Washer Tank-ES;
Z115- FMC Parts Washer Tank-Sleeve Line;
Z116- FMC Disk Lines Die Penetrant;
Z117- FC Test Lab Melt Furnace;
Z118- FC Test Lab Sand Mixer;
Z119- FC Test Lab Core M/C;
Z120- FC Test Lab Cut-Off Saw;
Z121- FC Test Lab-Sander (Belt);;
Z122- FC Pattern Area Parts Washer;
Z123- FC Pattern Area Resins/Glue/Sicomet;
Z124- FC Pattern Area QCK Bench Grinder;
Z125- FC-Die Penetrant Inspection;
Z126- HPDC-ES Main Solvent Tank;
Z127- HPDC-ES Brng Solvent Tank;
Z128- FC-ES Parts Washer;
Z129- EMS Instafoam;

B. State Only Enforceable Section (continued)

Z130- QSG Crack Check Table;
Z131- HPDC 3500 #1;
Z132- Durr Parts Washer-Tool Service;
Z133- Parts Washer-Tech Service;
Z134- HPDC-Service Area;
Z135- LPDC-Service Area;
Z136- Miscellaneous VOC Usage Suspension Assembly;
Z154- 2.431MMBTU/hr Diesel Generator (PH#1);
Z155- 2.517 MMBTU/hr Diesel Generator (PH#2);
Z156- 5.612 MMBTU/hr Diesel Generator (1N);
Z157- 5.612 MMBTU/hr Diesel Generator (2N);
Z158- 5.612 MMBTU/hr Diesel Generator (3N);
Z159- 5.612 MMBTU/hr Diesel Generator (1S);
Z160- 5.612 MMBTU/hr Diesel Generator (2S);
Z161- 5.612 MMBTU/hr Diesel Generator (3S);
Z162- 2.9 MMBTU/hr Diesel Generator (WTP); and
Z163- 0.29 MMBTU/hr Diesel Generator (WWTP).

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Plant Roadways and Parking Lots (F001)

Activity Description: Plant Roadways and Parking Lots

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>
plant roadways and parking areas	OAC rule 3745-31-05(A)(3) (PTI 05-8004)	<p>10.58 tons of particulate emissions (PE)/yr, from paved roadways and parking areas combined</p> <p>No PE from any paved roadway or parking area except for a period of time not to exceed 6 minutes during any 60-minute observation period.</p> <p>Best available control measures that are sufficient to minimize or eliminate visible PE of fugitive dust.</p> <p>See Section A.I.2 below.</p>

2. Additional Terms and Conditions

- 2.a The permittee shall employ best available control measures on all paved roadways and parking areas for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to treat the paved roadways and parking areas by sweeping at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.
- 2.b The needed frequencies of implementation of the control measures shall be determined by the permittee's inspections pursuant to the monitoring section of this permit. Implementation of the control measures shall not be necessary for a paved roadway or parking area that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Implementation of any control measure may be suspended if unsafe or hazardous driving conditions would be created by its use.

2. Additional Terms and Conditions (continued)

- 2.c** The permittee shall promptly remove, in such a manner as to minimize or prevent resuspension, earth and/or other material from paved streets onto which such material has been deposited by trucking or earth moving equipment or erosion by water or other means.
- 2.d** Open-bodied vehicles transporting materials likely to become airborne shall have such materials covered at all times if the control measure is necessary for the materials being transported.
- 2.e** Implementation of the above-mentioned control measures in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the best available technology requirements of OAC rule 3745-31-05(A)(3).

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

- 1.** The permittee shall perform inspections of the paved roadways and parking areas on a quarterly basis.
- 2.** The purpose of the inspections is to determine the need for implementing the above-mentioned control measures. The inspections shall be performed during representative, normal traffic conditions. No inspection shall be necessary for a roadway or parking area that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Any required inspection that is not performed due to any of the above-identified events shall be performed as soon as such event(s) has (have) ended, except if the next required inspection is within one week.
- 3.** The permittee may, upon receipt of written approval from the Ohio EPA, Southwest District Office, modify the above-mentioned inspection frequencies if operating experience indicates that less frequent inspections would be sufficient to ensure compliance with the above-mentioned applicable requirements.
- 4.** The permittee shall maintain records of the following information:
 - a. the date and reason any required inspection was not performed, including those inspections that were not performed due to snow and/or ice cover or precipitation;
 - b. the date of each inspection where it was determined by the permittee that it was necessary to implement the control measures;
 - c. the dates the control measures were implemented; and
 - d. on a calendar quarter basis, the total number of days the control measures were implemented and the total number of days where snow and/or ice cover or precipitation were sufficient to not require the control measures.

The information required in 4.d shall be kept separately for (1) the paved roadways and parking areas and (2) the unpaved roadways and parking areas, and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

IV. Reporting Requirements

- 1.** The permittee shall submit quarterly deviation reports that identify any of the following occurrences:
 - a. each day during which an inspection was not performed by the required frequency, excluding an inspection which was not performed due to an exemption for snow and/or ice cover or precipitation; and
 - b. each instance when a control measure, that was to be implemented as a result of an inspection, was not implemented.

IV. Reporting Requirements (continued)

2. The quarterly deviation reports shall be submitted in accordance with the reporting requirements specified in Part I - General Terms and Conditions A.1.c.ii.

V. Testing Requirements

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

- 1.a Emissions Limitation:

No visible PE except for 6 minutes during any 60-minute observation period (for paved roadways and parking areas).

Applicable Compliance Method:

Compliance with the visible PE limitation for the paved roadways and parking areas specified in Section A of this permit shall be determined in accordance with Test Method 22 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources," as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(4)(a) through (B)(4)(d) of OAC rule 3745-17-03.

- 1.b Emission Limitation: 10.58 tons of PE/yr from paved roadways and parking areas combined.

Compliance Method: Compliance with the annual PE limitation for paved roadways and parking areas shall be determined using the following methodology (calculation) for paved roadways and parking lots, as referenced from AP-42, 5th Edition, Chapter 13.2.1, dated October 1997.

The formula for determining compliance with the annual emission limitation is the following:

$$E = k[(sL/2)^{0.65}] [(w/3)^{1.5}]$$

where:

k = 38g of PE/vehicle mile traveled;
sL = 0.06g of PE/square mile; and
w = mean vehicle weight.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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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: Nine Cell Engine Test Dynamometers (P006)
Activity Description: Engine Test Dynamometer Cells 1 through 9

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>
9-cell engine test dynamometer, equipped with a thermal incinerator	OAC rule 3745-31-05(A)(3) (PTI 05-7193)	0.155 lb of lead (Pb) emissions/ hr 0.0245 ton of Pb emissions/yr 11.38 lbs of nitrogen oxides (NOx) emissions/hr 20.15 tons of NOx emissions/yr 2.48 lbs of organic compound (OC) emissions/hr 4.39 tons of OC emissions/year 48.1 lbs of carbon monoxide (CO) emissions/hr 85.31 tons of CO emissions/yr The hourly NOx, OC and CO emissions limitations specified above are based upon the emissions unit's potentials to emit, while employing a thermal incinerator. Therefore, no additional monitoring record keeping or reporting is required to demonstrate compliance with these emission limitations.
		See Section A.I.2 below.
	OAC rule 3745-21-08(B)	None, see Section A.I.2.c below.
	OAC rule 3745-23-06(B)	None, see Section A.I.2.d below.

2. Additional Terms and Conditions

- 2.a The emissions unit shall be controlled with a thermal incinerator designed to destroy at least 95%, by weight, of the expected concentrations of CO.

2. Additional Terms and Conditions (continued)

- 2.b** The permittee shall only employ leaded, unleaded, premium or compressed gas, or gasohol fuel when operating this emissions unit.
- 2.c** The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 05-7193.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.d** The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 05-7193.

II. Operational Restrictions

- 1.** The average combustion temperature within the thermal incinerator shall not drop below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
- 2.** The engines associated with the test dynamometer cells shall not burn more than a combined total of 124 gallons of leaded gasoline per hour and not more than a combined total of 39,200 gallons of leaded gasoline per year.
- 3.** The 9 engine dynamometer test cells shall be restricted to a combined total of 27,000 hours of operation/year.

III. Monitoring and/or Record Keeping Requirements

- 1.** The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal incinerator when 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 installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.

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

- a.** All times during which the combustion temperature within the thermal incinerator, when the emissions unit was in operation, was less than 1,300 degrees Fahrenheit.
 - b.** A log of all downtime periods for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.
- 2.** The permittee shall maintain daily records that specify the total amount of leaded gasoline employed (burned) for each hour of each day for this emissions unit, in gallons.
- 3.** The permittee shall maintain monthly records that specify the total operating hours for the calendar month for this emissions unit.
- 4.** The permittee shall maintain annual records of the total amount of leaded gasoline employed, in gallons, employed in this emissions unit for the calendar year [Summation of the usage records as recorded in Section A.III.2].
- 5.** The permittee shall maintain annual records of the total operating hours for this emissions unit for the calendar year [Summation of the monthly records recorded in Section A.III.3].

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the following:
 - a. the hourly leaded gasoline usage restriction; and
 - b. all 3-hour blocks of time during which the average combustion temperature within the thermal incinerator does not comply with the temperature limitation specified above.
2. The quarterly deviation reports shall be submitted in accordance with paragraph A.1.c.ii of the General Terms and Conditions of this permit.
3. The permittee shall submit annual reports that specify the total amount of leaded gasoline employed in this emissions unit for the calendar year. The reports shall be submitted to the Ohio EPA, Southwest District Office by January 31 of each year and cover the previous calendar year.
4. The permittee shall submit annual reports that specify the total operating hours for this emissions unit for the calendar year. The reports shall be submitted to the Hamilton County Department of Environmental Services by January 31 of each year and cover the previous calendar year.

V. Testing Requirements

1. Compliance with the emission limitations and operational restrictions specified in Sections A.I.1, A.I.2 and A.II shall be determined in accordance with the following methods:

- 1.a Emission Limitation: 48.13 lbs of CO emissions/hr

Applicable Compliance Method: The hourly CO emission limitation is based upon the emissions unit's potential to emit and was established by the following methodology:

$$\text{HAER} = (\text{V6UER} \times \text{V6C}) + (\text{L4UER} \times \text{L4C}) \times (1 - \text{DRE}) = 48.13 \text{ lbs of CO emissions/hr}$$

where:

HAER = the maximum hourly emission rate (48.13 lbs of CO/hr);

V6HER = the uncontrolled V6 hourly emission rate (131.25 lbs of CO/hr), based on emission testing data supplied by Honda;

V6C = number of cells that run V-6 engines (4 Cells);

L4HER = the uncontrolled L4 hourly emission rate (87.5 lbs of CO/hr), based on emission testing data supplied by Honda;

L4C = number of cells that run L-4 engines (5 Cells); and

DRE = destruction removal efficiency (95%), based on the destruction efficiency of the incinerator as supplied by the incinerator manufacturer.

The permittee shall demonstrate compliance with the CO limitation based upon the results of emissions testing conducted in accordance with Methods 1-4, and 10 of 40 CFR Part 60, Appendix A.

V. Testing Requirements (continued)

1.b Emission Limitation: 85.31 tons of CO emissions/yr

Applicable Compliance Method: The annual CO emission limitation was established by the following methodology:

$AAER = (V6UER \times V6C \times V6AOH) + (L4UER \times L4C \times L4AOH) \times (1-DRE) \times (CONV) = 48.13$ tons of CO emissions/yr

where:

AAER = the allowable annual emission rate (85.31 tons of CO/yr);

V6HER = the uncontrolled V6 hourly emission rate (131.25 lbs of CO/hr), based on emission testing data supplied by Honda;

V6C = number of cells that run V-6 engines (4 Cells);

V6AOH = annual operating hours for V-6 engines (24,000 hours);

L4HER = the uncontrolled L4 hourly emission rate (87.5 lbs of CO/hr) based on emission testing data supplied by Honda;

L4C = number of cells that run L-4 Engines (5 Cells);

L4AOH = annual operating hours for L-4 engines (3,000 hours);

DRE = destruction removal efficiency (95%) based on the destruction efficiency of the incinerator as supplied by the incinerator manufacturer; and

CONV = conversion factor (1 ton/2,000 lbs).

Compliance with the annual emission limitation is ensured while compliance is maintained with the annual hours of operation and use of the thermal incinerator.

1.c Emission Limitation: 11.35 lbs of NOx emissions/hr

Applicable Compliance Method: The hourly NOx emission limitation is based upon the emissions unit's potential to emit and was established by the following methodology:

$HAER = (V6UER \times V6C) + (L4UER \times L4C) = 11.35$ lbs of NOx emissions/hr

where:

HAER = the maximum hourly emission rate (11.35 lbs of NOx emissions/hr);

V6HER = the V6 hourly emission rate (1.55 lbs of NOx/hr), based on emission testing data supplied by Honda;

V6C = number of cells that run V-6 engines (4 Cells);

L4HER = the L4 hourly emission rate (1.03 lbs of NOx/hr), based on emission testing data supplied by Honda;

and

L4C = number of cells that run L-4 engines (5 Cells).

The permittee shall demonstrate compliance with the NOx limitation based upon the results of emissions testing conducted in accordance with Methods 1-4, and 7 of 40 CFR Part 60, Appendix A.

V. Testing Requirements (continued)

1.d Emission Limitation: 20.15 tons of NO_x emissions/yr

Applicable Compliance Method: The annual NO_x limitation was established by the following methodology:

$$AAER = (V6UER \times V6C \times V6AOH) + (L4UER \times L4C \times L4AOH) \times (CONV) = 20.15 \text{ tons of NO}_x \text{ emissions/yr}$$

where:

AAER = the allowable annual emission rate (20.15 tons of NO_x/yr);
V6HER = the V6 hourly emission rate (1.55 lbs of NO_x/hr), based on emission testing data supplied by Honda;
V6C = number of cells that run V-6 Engines (4 Cells);
V6AOH = annual operating hours for V-6 Engines (24,000 hours);
L4HER = the hourly L-4 emission rate (1.03 lbs of NO_x/hr), based on emission testing data supplied by Honda;
L4C = number of cells that run L-4 engines (5 Cells);
L4AOH = annual operating hours for L-4 Engines (3,000 hours); and
CONV = conversion factor (1 ton/2,000 lbs).

Compliance with the annual emission limitation is ensured while compliance is maintained with the annual fuel usage restriction and the annual hours of operation.

1.e Emission Limitation: 2.48 lbs of OC emissions/hr

Applicable Compliance Method: The hourly OC emission limitation is based upon the emissions unit's potential to emit and was established by the following methodology:

$$HAER = (V6UER \times V6C) + (L4UER \times L4C) \times (1-DRE) = 2.48 \text{ lbs of OC emissions/hr}$$

where:

HAER = the maximum hourly emission rate (2.48 lbs of OC emissions/hr);
V6HER = the uncontrolled V6 hourly emission rate (6.75 lbs of OC emissions/hr), based on emission testing data supplied by Honda;
V6C = number of cells that run V-6 engines (4 Cells);
L4HER = the uncontrolled L4 hourly emission rate (4.5 lbs of OC/hr), based on emission testing data supplied by Honda;
L4C = number of cells that run L-4 engines (5 Cells); and
DRE = destruction removal efficiency (95%), based on the destruction efficiency of the incinerator as supplied by the incinerator manufacturer.

If required, the permittee shall demonstrate compliance with the hourly OC emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, 18, and 25, as appropriate. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

V. Testing Requirements (continued)

1.f Emission Limitation: 4.39 tons of OC emissions/yr

Applicable Compliance Method: The annual OC emission limitation was established by the following methodology:

$AAER = (V6UER \times V6C \times V6AOH) + (L4UER \times L4C \times L4AOH) \times (1-DRE) \times (CONV) = 4.39 \text{ lbs of OC emissions/hr}$

where:

AAER = the allowable annual emission rate (4.39 tons of OC/yr);

V6HER = the uncontrolled V6 hourly emission rate (6.75 lbs of OC/hr), based on emission testing data supplied by Honda;

V6C = number of cells that run V-6 engines (4 Cells);

V6AOH = annual operating hours for V-6 engines (24,000 hours);

L4HER = the uncontrolled L4 hourly emission rate (4.5 lbs of OC/hr), based on emission testing data supplied by Honda;

L4C = number of cells that run L-4 engines (5 Cells);

L4AOH = annual operating hours for L-4 Engines (3,000 hours);

DRE = destruction removal efficiency (95%), based on the destruction efficiency of the incinerator as supplied by the incinerator manufacturer; and

CONV = conversion factor (1 ton/2,000 lbs).

Compliance with the annual emission limitation is ensured while compliance is maintained with the the annual hours of operation and use of the thermal incinerator.

1.g Emission Limitation: 0.155 lb of Pb emissions/hr

Applicable Compliance Method: The hourly Pb emissions limitation was established by the following methodology:

$HAER = (PbEF) \times (GPH) \times (GCONV) \times (CONV) = 0.155 \text{ lb of Pb emissions/hr}$

where:

HAER = the maximum hourly emission rate (0.155 lb of Pb emissions/hr);

PbEF = the Pb emission factor (0.15 gram/liter of gasoline). This is based on the data provided by Honda;

GPH = maximum allowable gallons of leaded gasoline/hour throughput (124 gallons/hr);

GCONV = gallon conversion factor (3.785 liters/gallon); and

CONV = conversion factor (2.2054 lbs/1,000 grams).

Compliance with the hourly emission limitation is ensured while compliance is maintained with the hourly leaded gasoline throughput (124 gallons/hr).

If required, the permittee shall demonstrate compliance with the hourly Pb emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 12, as appropriate. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

V. Testing Requirements (continued)

1.h Emission Limitation: 0.0245 ton of Pb emissions/yr

Applicable Compliance Method: The annual Pb limitation was established by the following methodology:

$$AAER = (PbEF) \times (GPY) \times (GCONV) \times (CONV) = 0.0245 \text{ ton of Pb emissions/yr}$$

where:

AAER = the annual allowable emission rate (0.0245 ton of Pb emissions/yr);
PbEF = the Pb emission factor (0.15 gram/liter of Gasoline). This is based on the data provided by Honda;
GPY = gallons of leaded gasoline per year. (39,200 gallons/year);
GCONV = gallon conversion factor (3.785 liters/gallon); and
CONV = conversion factor (2.2054 lbs/1,000 grams).

Compliance with the annual emission limitation is ensured while compliance is maintained with the annual fuel usage restriction.

1.i Material Usage Restrictions: 124 gallons/hr and 39,200 gallons/yr of leaded gasoline

Applicable Compliance Method: Compliance with the leaded gasoline usage restrictions shall be determined by the record keeping requirements specified in Section A.III.2 and A.III.4.

1.j Dynamometer Operating Restriction: The 9 engine dynamometer test cells shall be restricted to a combined total of 27,000 hours of operation/year.

Applicable Compliance Method: Compliance with the dynamometer operating restriction shall be determined by the record keeping requirements specified in Section A.III.5.

V. Testing Requirements (continued)

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

- i. The emission testing shall be conducted within 2.5 years after issuance of the permit and within 6 months prior to permit expiration.
- ii. The emission testing shall be conducted to demonstrate compliance for allowable emissions limitations for CO and NOx.
- iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s) and control efficiency:

CO: Methods 1-4 and 10 of 40 CFR Part 60, Appendix A

NOx: Methods 1-4 and 7 or 7A of 40 CFR Part 60, Appendix A

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

iv. 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 Ohio EPA, Southwest District Office.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Southwest District Office. 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, Southwest District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA 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 Ohio EPA, Southwest District Office 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 Ohio EPA, Southwest District Office.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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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 Making Machine No. 3 (P015)
Activity Description: Ferrous Foundry Core Making Machine No. 3

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
ferrous foundry core making machine #3, equipped with a baghouse and a wet scrubber	OAC rule 3745-31-05(A)(3) (PTI 05-10346)	1.19 lbs of particulate emissions (PE)/hr (stack emissions)
		5.21 tons of PE/yr (stack emissions)
		0.007 lb of PE/hr (fugitive emissions)
		0.031 ton of PE/yr (fugitive emissions)
		0.010 grain of PE/dscf
		0.441 lb of organic compound (OC) emissions/hr (stack emissions)
		1.926 tons of OC/yr (stack emissions)
		0.061 lb of OC/hr (fugitive emissions)
		0.267 ton of OC/yr (fugitive emissions)
		1.15 lbs of sulfur dioxide (SO ₂) emissions/hr (stack emissions)
5.05 tons of SO ₂ emissions/yr (stack emissions)		
1.16 lbs of SO ₂ emissions/hr (fugitive emissions)		
5.08 tons of SO ₂ emissions/yr (fugitive emissions)		
Visible PE shall not exceed 0% opacity, as a 6-minute average, from any stack.		
Visible PE shall not exceed 20% opacity, as a 3-minute average, from any fugitive dust emissions point.		

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
	OAC 3745-17-07(A)(1)	The hourly and annual emission limitations specified above represent the emissions unit's potentials to emit, while employing a baghouse and wet scrubber. Therefore, no additional monitoring, record keeping or reporting is required to demonstrate compliance with these emission limitations.
	OAC rule 3745-17-11(B)(1)	The visible PE limitation specified by this rule is less stringent than the visible PE limitation established pursuant to OAC rule 3745-31-05 (A)(3). The PE limitation specified by this rule is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

2.a Best available technology has been determined to be the use of a baghouse and a wet scrubber.

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 1 to 15 inches of water while any emissions unit controlled by the baghouse is in operation except for the first 45 days following a change of a least 50% of the fabric bags, when the pressure drop shall be maintained below 15 inches of water while any emissions unit controlled by the baghouse is in operation.
2. The pressure drop across the scrubber shall be maintained at a value of not less than 0.5 inches of water at all times while the emissions unit is in operation.
3. The pH of the scrubber liquor shall be maintained at or below 4.5 if triethanolamine (TEA) curing is employed, and at or above 7.5 if SO2 curing is employed.
4. The scrubber water flow rate shall be continuously maintained at a value of not less than 22 gallons per minute at all times while this emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate, and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be calibrated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse once each operating day.
2. The permittee shall properly operate and maintain equipment to monitor the static pressure drop across the scrubber, the scrubber water flow, and the pH of the scrubber liquor while the emissions unit is in operation. The monitoring devices and any recorders shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

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

3. The permittee shall collect and record the following information each operating day:
 - a. the pressure drop across the scrubber, in inches of water;
 - b. the scrubber water flow rate, in gallons per minute;
 - c. the pH of the scrubber liquor; and
 - d. a log of all downtime periods for the capture (collection) system, control device and monitoring equipment when the associated emissions unit was in operation.
4. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive PE from the egress points (i.e., from the building enclosure) serving this emissions unit. The presence or absence of any visible fugitive emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the location and color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to minimize or eliminate the visible emissions.

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

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the following:
 - a. the static pressure drop across the scrubber;
 - b. the scrubber water flow rate;
 - c. the pH of the scrubber liquor; and
 - d. the pressure drop across the baghouse did not comply with the allowable range specified in this permit.
2. The quarterly deviation reports shall be submitted in accordance with paragraph A.1.c.ii of the General Terms and Conditions of this permit.
3. The permittee shall submit semiannual written reports that (a) identify all days during which any visible fugitive PE were observed from the egress points (i.e., from the building enclosure) serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible fugitive particulate emissions. These reports shall be submitted to the Ohio EPA, Southwest District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

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

V. Testing Requirements (continued)

1.a Emission Limitations: 1.19 lbs/hr of PE; 0.010 grains of PE/dscf

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

$$\text{AHER} = (\text{BFR}) \times (\text{AV}) \times (\text{ST}/\text{BET}) \times (\text{BEF}) \times (\text{TI}) \times (\text{CONV}) = 1.19 \text{ lbs of PE/hr}$$

where:

AHER = allowable hourly emission rate (1.19 lbs of PE/hr);
BFR = baghouse flow rate (10,228 + 2,000 acfm);
AV = the air variability factor (120%);
ST = standard temperature (530 degrees Rankine);
BET = baghouse exit temperature (560 degrees Rankine);
BEF = baghouse efficiency (0.010 grains of PE/dscf);
TI = time (60 minutes/hour); and
CONV = conversion factor (1 lb/7,000 grains).

The permittee shall demonstrate compliance with the PE limitations based upon the results of emission testing conducted in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A.

1.b Emission Limitation: 5.21 tons of PE/yr (stack emissions)

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

$$(\text{MAER}) \times (\text{MAH}) \times (\text{CONV}) = 5.21 \text{ tons of PE/yr}$$

where:

MAER = the maximum hourly emission rate (1.19 lbs of PE/hr);
MAH = the maximum annual hours of operation (8,760 hrs/yr);
CONV = conversion factor (1 ton/2,000 lbs).

1.c Emission Limitation: 0.007 lb of PE/hr (fugitive emissions)

Applicable Compliance Method: The hourly emission limitation is based upon the emissions unit's potential to emit and was established by the following methodology:

$$(\text{MPWR}) \times (\text{CONV}) \times (\text{EF}) \times (1 - \text{CEF}) = 0.007 \text{ lb of PE/hr}$$

where:

MPWR = maximum process weight rate (2,162 lbs of sand/hr);
CONV = conversion factor (1 ton/2,000 pounds);
EF = emission factor (0.65 lb of PE/ton of sand); and
CEF = capture efficiency (99%).

V. Testing Requirements (continued)

1.d Emission Limitation: 0.031 ton of PE/yr (fugitive emissions)

Applicable Compliance Method: The annual emission limitation is based upon the emissions unit's potential to emit and was established by the following methodology:

$$(\text{MAER}) \times (\text{MAH}) \times (\text{CONV}) = 0.031 \text{ ton of PE /yr of fugitive emissions}$$

where:

MAER = the maximum hourly emission rate (0.007 lb of PE/hr (fugitive emissions));
MAH = the maximum annual hours of operation (8,760 hrs/yr); and
CONV = conversion factor (1 ton/2,000 lbs).

1.e Emission Limitation: 0.441 lb of OC emissions/hr (stack emissions)

Applicable Compliance Method: The hourly emission limitation is based upon the emissions unit's potential to emit and was established by the following methodology:

$$[\text{UEB} + \text{CEC} + \text{UEPS}] \times [\text{CEF}] = 0.441 \text{ lb of OC emissions/hr (stack emissions)}$$

where:

UEB = the uncontrolled emission rate from the binder (0.14 lb of OC/hr);
CEC = the controlled emission rate from the triethylamine (TEA); catalyst (0.297 lb of OC emissions/hr);
UEPS = the uncontrolled emission rate from the parting spray (0.005 lb of OC emissions/hr); and
CEF = capture efficiency (99%).

where:

$\text{UEB} = (\text{PSH}) \times (\text{CONV}) \times (\text{EF}) = 0.14 \text{ lb of OC/hr}$
PSH = pounds of sand per hour (2,162 lbs of sand/hr);
CONV = conversion factor (1 ton/2,000 lbs); and
EF = emission factor (0.127 lb of OC/ton sand, OCMA/ Ohio EPA OC study).

where:

$$\text{CEC} = (\text{PCH}) \times (\text{CE}) \times (100 - \text{CEF}/100) = 0.297 \text{ lb of OC emissions/hr}$$

PCH = pounds of triethylamine (TEA) catalyst per hour (6.0 lbs/hr);
CE = triethylamine captured (99%); and
CEF = the control efficiency of the scrubber (95%).

where:

$\text{UEPS} = (\text{GPS}) \times (\text{OCC}) = 0.005 \text{ lb of OC emissions/hr}$
GPS = gallons of parting spray per hour (0.5 gallon of parting spray/hr); and
OCC = Organic compound content (0.01 lb of OC/gallon).

If required, the permittee shall demonstrate compliance with the hourly OC emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, 18, and 25, as appropriate. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

V. Testing Requirements (continued)

1.f Emission Limitation: 1.926 tons of OC emissions/yr (stack emissions)

Applicable Compliance Method: The annual emission limitation is based upon the emissions unit's potential to emit and was established by the following methodology:

$$(\text{MAER}) \times (\text{MAH}) \times (\text{CONV}) = 1.926 \text{ tons of OC emissions/yr (stack emissions)}$$

where:

MAER = the maximum hourly emission rate (0.441 lb of OC emissions/hr);
MAH = the maximum annual hours of operation (8,760 hrs/yr); and
CONV = conversion factor (1 ton/2,000 lbs).

1.g Emission Limitation: 0.061 lb of OC emissions/hr (fugitive emissions)

Applicable Compliance Method: The hourly emission limitation is based upon the emissions unit's potential to emit and was established by the following methodology:

$$[\text{UEB} + \text{UEC} + \text{UEPS}] \times [1 - \text{CEF}] = 0.061 \text{ lb of OC emissions/hr (fugitive emissions)}$$

where:

UEB = the uncontrolled emission rate from the binder (0.14 lb of OC/hr);
UEC = the uncontrolled emission rate from the triethylamine (TEA) catalyst (6.0 lbs of OC/hr); and
UEPS = the uncontrolled emission rate from the parting spray (0.005 lb of OC/hr).
CEF = capture efficiency (0.99).

where:

UEB = (PSH) x (CONV) x (EF) = 0.14 lb of OC emissions/hr;
PSH = pounds of sand per hour (2,162 lbs of sand/hr);
CONV = conversion factor (1 ton/2,000 lbs); and
EF = emission factor (0.127 lb of OC/ton sand, established pursuant to OCMA/Ohio EPA OC study).

where:

UEC = (PCH) = 6.0 lbs of OC emissions/hr;
PCH = pounds of triethylamine (TEA) catalyst/hour (6.0 lbs/hr);

where:

UEPS = (GPS) x (OCC) = 0.005 lb of OC emissions/hr;
GPS = gallons of parting spray per hour (0.5 gallon of parting spray/hr); and
OCC = OC content (0.01 lb of OC/gallon).

V. Testing Requirements (continued)

1.h Emission Limitation: 0.267 ton of OC emissions/yr (fugitive emissions)

Applicable Compliance Method: The annual emission limitation is based upon the emissions unit's potential to emit and was established by the following methodology:

$$(\text{MAER}) \times (\text{MAH}) \times (\text{CONV}) = 0.267 \text{ ton of OC emissions/yr (fugitive emissions)}$$

where:

MAER = the maximum hourly emission rate (0.061 lb of OC emissions/hr);
MAH = the maximum annual hours of operation (8,760 hrs/yr); and
CONV = conversion factor (1 ton/2,000 lbs).

1.i Emission Limitation: 1.15 lbs of SO₂ emissions/hr (stack emissions)

Applicable Compliance Method: The hourly SO₂ emission limitation represents the emissions unit's potential to emit and was established by the following methodology:

$$(\text{PCH}) \times (1 - \text{CEF}) \times (\text{CE}) = 1.15 \text{ lbs of SO}_2 \text{ emissions/hr (stack emissions)}$$

where:

PCH = maximum pounds of SO₂ catalyst/hr (116 lbs of catalyst/hr);
CEF = control efficiency of scrubber (99%); and
CE = capture efficiency (99%).

If required, the permittee shall demonstrate compliance with the hourly SO₂ emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 6, as appropriate. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

1.j Emission Limitation: 5.05 tons of SO₂ emissions/yr (stack emissions)

Applicable Compliance Method: The annual emission limitation is based upon the emissions unit's potential to emit and was established by the following methodology:

$$(\text{MAER}) \times (\text{MAH}) \times (\text{CONV}) = 5.05 \text{ tons of SO}_2 \text{ emissions/yr (stack emissions)}$$

where:

MAER = the maximum hourly emission rate (1.15 lbs of SO₂ emissions/hr);
MAH = the maximum annual hours of operation (8,760 hrs/yr); and
CONV = conversion factor (1 ton/2,000 lbs).

1.k Emission Limitation: 1.16 lbs of SO₂ emissions/hr (fugitive emissions)

Applicable Compliance Method: The hourly emission limitation is based upon the emissions unit's potential to emit and was established by the following methodology:

$$(\text{PCH}) \times (1 - \text{CE}) = 1.16 \text{ lbs of SO}_2 \text{ emissions/hr (fugitive emissions)}$$

where:

PCH = maximum pounds of SO₂ catalyst/hour (116 lbs of catalyst/hr); and
CE = capture efficiency (99%).

V. Testing Requirements (continued)

- 1.l** Emission Limitation: 5.08 tons of SO₂ emissions/yr (fugitive emissions)

Applicable Compliance Method: The annual emission limitation is based upon the emissions unit's potential to emit and was established by the following methodology:

$$(\text{MAER}) \times (\text{MAH}) \times (\text{CONV}) = 5.08 \text{ tons of SO}_2 \text{ emissions/yr (fugitive emissions)}$$

where:

MAER = the maximum hourly emission rate (1.16 lbs of SO₂ emissions/hr);
MAH = the maximum annual hours of operation (8,760 hrs/yr); and
CONV = conversion factor (1 ton/2,000 lbs).

- 1.m** Emission Limitation: Visible PE shall not exceed 0% opacity, as a 6-minute average, from any stack.

Applicable Compliance Method: If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

- 1.n** Emission Limitation: Visible PE shall not exceed 20% opacity, as a 3-minute average, from any fugitive dust emissions point.

Applicable Compliance Method: If required, compliance shall be determined according to 40 CFR Part 60, Method 9, with opacity readings taken from any exit of the building.

- 2.** The permittee shall conduct, or have conducted, emission testing for the baghouse to demonstrate compliance with the allowable PE limitations.
- The emission testing shall be conducted within 2.5 years after issuance of the permit and within 6 months prior to permit expiration.
 - The emission testing shall be conducted to demonstrate compliance with the allowable PE limitation.
 - The following test methods shall be employed to demonstrate compliance with the allowable mass emission limitations.

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.

- 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 Ohio EPA, Southwest District Office.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Southwest District Office. 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, Southwest District Office's refusal to accept the results of the emission test(s).

V. Testing Requirements (continued)

Personnel from the Ohio EPA 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 emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Southwest District Office 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 Ohio EPA, Southwest District Office.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
ferrous foundry core making machine #3, equipped with a baghouse and a wet scrubber		

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

- The permit to install for this emissions unit was evaluated based on the actual materials employed (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. Ohio EPA's "Review of New Sources of Air Toxics Emissions" policy ("Air Toxics Policy") was applied for each toxic pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC).

The following summarizes the results of the modeling for the "worst case" pollutant:

Pollutant: triethylamine

TLV (mg/m3): 4.1

Maximum Hourly Emission Rate (lbs/hr): 0.3

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 0.64

MAGLC (ug/m3): 98.52

Physical changes to or in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxics Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxics Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxics Policy" will not be satisfied, the permittee shall not make the change. Changes that can affect the parameters used in the "Air Toxics Policy" include the following:

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

- a. changes in the composition of the materials used, or the use of new materials that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxics Policy" will be satisfied with the above changes, Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition [other than (VV)(1)(a)(ii)], then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will satisfy the "Air Toxics Policy":

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxics Policy"; and
- c. when the computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxics Policy" for the change.

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Mold Making Line No. 1 (P017)
Activity Description: Ferrous Foundry Mold Making Line No. 1

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
mold making line no. 1, equipped with a baghouse	OAC rule 3745-31-05(A)(3) (PTI 05-08921)	0.53 lb of particulate emissions (PE)/hr and 1.59 tons PE/yr 0.01 grain of PE/dscf 0.015 lb of organic compound (OC) emissions/hr 0.045 ton of OC emissions/yr Visible PE shall not exceed 0% opacity, as a 6-minute average, from any stack The hourly PE and OC emissions limitations represents the emissions unit's potentials to emit, while employing a baghouse. Therefore, no additional monitoring, record keeping or reporting is required to demonstrate compliance with these emissions limitations.
	OAC rule 3745-17-07(A)(1)	The visible PE limitation specified by this rule is less stringent than the visible PE limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-11(B)(1)	The PE limitation specified by this rule is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- 2.a** The PE from this emissions unit shall be controlled by venting the emissions to a baghouse with a designed control efficiency of at least 99%, by weight, and an emission rate less than or equal to 0.01 grain of PE/dscf.

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 1 to 15 inches of water while any emission unit controlled by the baghouse is in operation. The exception is for the first 45 days following a change of at least 50% of the fabric bags. During that time, the pressure drop shall be maintained below 15 inches of water while any emission unit controlled by the baghouse is in operation.
2. The maximum annual operating hours for this emissions unit shall not exceed 6,000 hours/year, based upon a rolling, 12-month summation of the operating hours.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain monthly records of the following information for this emissions unit:
 - a. the operating hours for each calendar month; and
 - b. the rolling, 12-month summation of the operating hours.
2. The permittee shall properly operate, and maintain equipment to monitor the pressure drop across the baghouse(s) while the emissions unit is in operation. The monitoring equipment shall be calibrated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse once each operating day.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - a. all periods of time in which this emissions unit was in operation and the pressure drop across the baghouse(s) did not comply with the allowable range; and
 - b. all exceedances of the rolling, 12-month summation of the operating hours.
2. The deviation reports shall be submitted in accordance with paragraph A.1.c.ii of the General Terms and Conditions of this permit.

V. Testing Requirements

1. Compliance with the emission limitation(s) and operational restriction specified in Sections A.I.1 and A.II shall be determined in accordance with the following methods:

V. Testing Requirements (continued)

1.a Emission Limitations: 0.53 lb of PE/hr and 0.01 grain of PE/dscf

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

$$\text{AHER} = (\text{BFR}) \times (\text{AV}) \times (\text{ST/BET}) \times (\text{BEP/SP}) \times (\text{BEF}) \times (\text{TI}) \times (\text{CONV}) = 0.53 \text{ lb of PE/hr}$$

where:

AHER = allowable hourly emission rate (0.53 lb of PE/hr);
BFR = baghouse flow rate (5,422 acfm);
AV = the air variability factor (120%);
ST = standard temperature (530 degrees Rankine);
BET = baghouse exit temperature (560 degrees Rankine)
BEP = baghouse exit pressure (14.69 lbs/in²);
SP = standard pressure (14.69 lbs/in²);
BEF = baghouse efficiency (0.010 grain of PE/dscf);
TI = time (60 minutes/hour); and
CONV = conversion factor (1 lb/7,000 grains).

The permittee shall demonstrate compliance with the PE limitations based upon the results of emission testing conducted in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A.

1.b Emission Limitation: 1.59 tons of PE/yr

Applicable Compliance Method: The annual PE limitation was established by the following methodology:

$$\text{AAER} = (\text{BFR}) \times (\text{AV}) \times (\text{ST/BET}) \times (\text{BEP/SP}) \times (\text{BEF}) \times (\text{TI}) \times (\text{CONV}) \times (\text{AOH}) (\text{CONV}2) = 1.59 \text{ tons of PE/yr}$$

where:

AHER = allowable hourly emission rate (0.53 lb of PE/hr);
BFR = baghouse flow rate (5,422 acfm);
AV = the air variability factor (120%);
ST = standard temperature (530 degrees Rankine);
BET = baghouse exit temperature (560 degrees Rankine);
BEP = baghouse exit pressure (14.69 lb/in²);
SP = standard pressure (14.69 lb/in²);
BEF = baghouse efficiency (0.010 grain of PE/dscf);
TI = Time (60 minutes/hour);
CONV = conversion factor (1 lb/7,000 grains);
CONV2 = conversion factor (1 ton/2,000 lbs); and
AOH = annual operating hours (6,000 hrs/yr, based on a rolling, 12-month summation).

Compliance with the annual PE limitation is ensured while compliance is maintained with the annual operating hours restriction.

1.c Emission Limitation: Visible PE shall not exceed 0% opacity, as a 6-minute average, from any stack.

Applicable Compliance Method: If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

V. Testing Requirements (continued)

1.d Emission Limitation: 0.015 lb of OC emissions/hr

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

$$\text{AHER} = (\text{UR}) \times (\text{EF}) = 0.015 \text{ lb of OC/hr}$$

where:

AHER = maximum hourly emission rate (0.015 lb of OC emissions/hr);

UR = maximum usage rate (15 gallons/hour); and

EF = emission factor (0.1/100 lb of OC/gallon, manufacturer information - MSDS).

If required, the permittee shall demonstrate compliance with the hourly OC emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, 18, and 25, as appropriate. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

1.e Emission Limitation: 0.045 ton of OC emissions/yr

Applicable Compliance Method: The annual CO emission limitation may be determined by the following methodology:

$$\text{AAER} = (\text{UR}) \times (\text{EF}) \times (\text{AOH}) \times (\text{CONV}) = 0.045 \text{ ton of OC/yr}$$

where:

AAER = allowable annual emission rate (0.045 ton of OC/yr);

UR = maximum usage rate (15 gallons/hour);

EF = emission factor (0.1/100 lb of OC emissions/gallon, manufacturer information - MSDS);

AOH = annual operating hours (6,000 hours/yr); and

CONV = conversion factor (1 ton/2,000 lbs).

Compliance with the annual OC limitation is ensured while compliance is maintained with the annual operating hours restriction.

1.f Operating Hours Restriction: The maximum annual operating hours for this emissions unit shall not exceed 6,000 hours/yr, based upon a rolling, 12-month summation of the operating hours.

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

V. Testing Requirements (continued)

2. The permittee shall conduct, or have conducted, emission testing for the baghouse to demonstrate compliance with the allowable PE limitations.
 - a. The emission testing shall be conducted within 2.5 years 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 PE limitations.
 - c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission limitations.

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 Ohio EPA, Southwest District Office.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Southwest District Office. 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, Southwest District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA 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 emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Southwest District Office 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 Ohio EPA, Southwest District Office.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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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: Rough Finishing System (P018)
Activity Description: Ferrous Foundry Rough Finishing and Deburring Machines

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>
rough finishing system w/sleeve deburr machine nos. 1 and 2, drum deburr machine no. 1 and disc deburr machine nos. 1 and 2, with PE vented to a baghouse system	OAC rule 3745-31-05(A)(3) (PTI 05-08921)	1.73 lbs of particulate emissions (PE)/hr 7.58 tons of PE/yr
		0.01 grain of PE/dscf from the stack
		Visible PE emissions from any stack source shall not exceed 0% opacity, as a 6-minute average.
		The hourly and annual PE emissions limitations represents the emissions unit's potential to emit, while employing a baghouse. Therefore, no additional monitoring, record keeping or reporting is required to demonstrate compliance with these emission limitations.
	OAC rule 3745-17-07(A)(1)	The visible PE limitation specified by this rule is less stringent than the visible PE limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-11(B)(1)	The PE limitation specified by this rule is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- 2.a The PE from this emissions unit shall be controlled by venting the emissions to a baghouse with a designed control efficiency of at least 99%, by weight, an emission rate of less than or equal to 0.01 grain of PE/dscf.

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 1 to 15 inches of water while any emission unit controlled by the baghouse is in operation. The exception is for the first 45 days following a change of at least 50% of the fabric bags. During that time, the pressure drop shall be maintained below 15 inches of water while any emission unit controlled by the baghouse 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(s) while the emissions unit(s) is in operation. The monitoring equipment shall be calibrated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse once each operating day.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify all periods of time during which the emissions unit was in operation and the pressure drop across the baghouse did not comply with the allowable range.
2. The deviation reports shall be submitted in accordance with paragraph A.1.c.ii of the General Terms and Conditions of this permit.

V. Testing Requirements

1. Compliance with the emission limitations specified in Section A.I.1 shall be determined in accordance with the following methods:
 - 1.a Emission Limitations: 1.73 lbs of PE/hr; 0.01 grain of PE/dscf from the stack

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

$$\text{AHER} = (\text{BFR}) \times (\text{AV}) \times (\text{ST}/\text{BET}) \times (\text{BEP}/\text{SP}) \times (\text{BEF}) \times (\text{TI}) \times (\text{CONV}) = 1.73 \text{ lbs of PE/hr}$$

where:

AHER = maximum hourly emission rate (1.73 lbs of PE/hr);
BFR = baghouse flow rate (17,780 acfm);
AV = the air variability factor (120%);
ST = standard temperature (530 degrees Rankine);
BET = baghouse exit temperature (560 degrees Rankine);
BEP = baghouse exit pressure (14.69 lb/in²);
SP = standard pressure (14.69 lb/in²);
BEF = baghouse efficiency (0.010 grain PE/dscf);
TI = time (60 minutes/hour); and
CONV = conversion factor (1 lb/7,000 grains).

The permittee shall demonstrate compliance with the PE limitations based upon the results of emissions testing conducted in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A.

V. Testing Requirements (continued)

1.b Emission Limitation: 7.58 tons of PE/yr

Applicable Compliance Method: The annual PE limitation represent the emissions unit's potential to emit and was established by the following methodology:

$$\text{AHER} = (\text{BFR}) \times (\text{AV}) \times (\text{ST/BET}) \times (\text{BEP/SP}) \times (\text{BEF}) \times (\text{TI}) \times (\text{CONV}) \times (\text{AOH}) \times (\text{CONV2}) = 7.58 \text{ tons of PE/yr}$$

where:

AHER = maximum hourly emission rate (1.73 lbs PE/hr);
BFR = baghouse flow rate (17,780 acfm);
AV = the air variability factor (120%);
ST = standard temperature (530 degrees Rankine);
BET = baghouse exit temperature (560 degrees Rankine);
BEP = baghouse exit pressure (14.69b/in²);
SP = standard pressure (14.69b/in²);
BEF = baghouse efficiency (0.010 grain of PE/dscf);
TI = time (60 minutes per hour);
CONV = conversion factor (1 lb/7,000 grains);
AOH = annual operating hours (8,760 hours/yr); and
CONV2= conversion factor (1 ton/2,000 lbs).

1.c Emission Limitation: Visible PE shall not exceed 0% opacity, as a 6-minute average, from any stack.

Applicable Compliance Method: If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

2. The permittee shall conduct, or have conducted, emissions testing for the baghouse to demonstrate compliance with the allowable PE limitations.

- a. The emission testing shall be conducted within 2.5 years 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 PE limitations.
- c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission limitations.

PE: Methods 1-4 and 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 Ohio EPA, Southwest District Office.

Personnel from the Ohio EPA 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 Ohio EPA, Southwest District Office 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 Ohio EPA, Southwest District Office.

Facility Name: **Honda of America Mfg., Inc. Anna Engine Plant**
Facility ID: **05-75-00-0174**
Emissions Unit: **Rough Finishing System (P018)**

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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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: Extraction/Shakeout/Sand Sep. and Cooling Line 1 (P020)
Activity Description: Ferrous Foundry Extraction/Shakeout/Sand Separation and Cooling Operations Line 1

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
extraction/shakeout/sand separation and cooling line #1 w/conveyors, sand and metal separation drum, sorting/degating conveyors, and casting cooling conveyors, equipped with a baghouse	OAC rule 3745-31-05(A)(3) (PTI 05-08921)	7.37 lbs of particulate emissions (PE)/hr 22.11 tons of PE/yr
		0.010 grain of PE/dscf
		4.33 lbs of volatile organic compound (VOC) emissions/hr 12.99 tons of VOC emissions/yr
		Visible PE shall not exceed 0% opacity, as a 6-minute average, from any stack.
	OAC rule 3745-17-07(A)(1)	The hourly PE and OC emissions limitations represents the emissions unit's potentials to emit, while employing a baghouse. Therefore, no additional monitoring, record keeping or reporting is required to demonstrate compliance with these emissions limitations.
	OAC rule 3745-17-11(B)(1)	The visible PE limitation specified by this rule is less stringent than the visible PE limitation established pursuant to OAC rule 3745-31-05 (A)(3). The PE limitation specified by this rule is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- 2.a** The PE from this emissions unit shall be vented to a baghouse with a minimum control efficiency of 99%, by weight, and have a PE rate of no greater than 0.01 grain of PE/dscf.

II. Operational Restrictions

1. The maximum annual operating hours for this emissions unit shall not exceed 6,000 hrs/year, based upon a rolling, 12-month summation of the operating hours.
2. The pressure drop across the baghouse shall be maintained within the range of 1 to 15 inches of water while any emission unit controlled by the baghouse is in operation except for the first 45 days following a change of at least 50% of the fabric bags, when the pressure drop shall be maintained below 15 inches of water while any emission unit controlled by the baghouse is in operation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain monthly records of the following information for this emissions unit:
 - a. the operating hours for each calendar month; and
 - b. the rolling, 12-month summation of the operating hours.
2. The permittee shall properly operate, and maintain equipment to monitor the pressure drop across the baghouse(s) while the emissions unit is in operation. The monitoring equipment shall be calibrated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse once each operating day.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - a. all periods of time in which this emissions unit was in operation and the pressure drop across the baghouse(s) did not comply with the allowable range; and
 - b. all exceedances of the rolling, 12-month summation of the operating hours.
2. The deviation reports shall be submitted in accordance with paragraph A.1.c.ii of the General Terms and Conditions of this permit.

V. Testing Requirements

1. Compliance with the emission limitation(s) and operational restriction specified in Sections A.I.1 and A.II shall be determined in accordance with the following methods:

V. Testing Requirements (continued)

1.a Emission Limitations: 7.37 lbs of PE/hr and 0.010 grain of PE/dscf from the stack

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

$$(BFR) \times (AV) \times (ST/BET) \times (BEP/SP) \times (BEF) \times (TI) \times (CONV) = 7.37 \text{ lbs of PE/hr}$$

where:

BFR = baghouse flow rate (75,700 acfm);
AV = the air variability factor (120%);
ST = standard temperature (530 degrees Rankine);
BET = baghouse exit temperature (560 degrees Rankine);
BEP = baghouse exit pressure (14.69 lb/in²);
SP = standard pressure (14.69 lb/in²);
BEF = baghouse efficiency (0.010 grain of PE/dscf);
TI = time (60 minutes/hour); and
CONV = conversion factor (1 lb/7,000 grains).

The permittee shall demonstrate compliance with the PE limitations based upon the results of emissions testing conducted in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A.

1.b Emission Limitation: 22.11 tons of PE/yr

Applicable Compliance Method: The annual PE limitation was established by the following methodology:

$$AAER = (BFR) \times (AV) \times (ST/BET) \times (BEP/SP) \times (BEF) \times (TI) \times (CONV) \times (AOH) \times (CONV2) = 22.11 \text{ tons of PE/yr}$$

where:

AAER = the annual allowable emission rate (22.11 tons of PE/yr);
BFR = baghouse flow rate (75,700 acfm);
AV = the air variability factor (120%);
ST = standard temperature (530 degrees Rankine);
BET = baghouse exit temperature (560 degrees Rankine);
BEP = baghouse exit pressure (14.69 lb/in²);
SP = standard pressure (14.69 lb/in²);
BEF = baghouse efficiency (0.010 grain of PE/dscf);
TI = time (60 minutes/hour);
CONV = conversion factor (1 lb/7,000 grains);
AOH = annual operating hours (6,000 hours/yr);
CONV2 = conversion factor (1 tons/2,000 lbs).

Compliance with the annual PE limitation is ensured while compliance is maintained with the annual operating hours.

1.c Emission Limitation: Visible PE shall not exceed 0% opacity, as a 6-minute average, from any stack.

Applicable Compliance Method: If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

V. Testing Requirements (continued)

1.d Emission Limitation: 4.33 lbs of VOC emissions/hr

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

$$\text{HAER} = (\text{MPWR}) \times (\text{EF}) \times (\text{CONV}) = 4.33 \text{ lbs of VOC emissions/hr}$$

where:

HAER = the hourly emission rate (4.33 lbs of VOC emissions/hr);
MPWR = the maximum process weight rate (36,000 lbs of Fe/hr);
EF = emission factor (0.2405 lb of VOC/ton of Fe). This is based on the 02/19/95, Method 25A emission testing of a Honda emissions unit at this facility; and
CONV = 1 ton/2,000 lbs.

The permittee shall demonstrate compliance with the VOC emission limitation based upon the results of emissions testing conducted in accordance with Methods 1-4, 18 and 25 of 40 CFR part 60, Appendix A.

1.e Emission Limitation: 12.99 tons of VOC emissions/yr

Applicable Compliance Method: The annual VOC emission limitation was established by the following methodology:

$$\text{AAER} = (\text{AER}) \times (\text{AOH}) \times (\text{CONV}) = 12.99 \text{ tons of VOC emissions/yr}$$

where:

AAER = the annual allowable emission rate (12.99 tons of VOC emissions/yr);
AER = the hourly emission rate (4.33 lbs of VOC emissions/hr);
AOH = the maximum allowable operating hours (6,000 hrs/yr); and
CONV = 1 ton/2,000 lbs.

Compliance with the annual VOC emission limitation is ensured while compliance is maintained with the annual operating hours restriction.

V. Testing Requirements (continued)

2. The permittee shall conduct, or have conducted, emission testing for the baghouse to demonstrate compliance with the allowable PE limitations and emission testing to demonstrate compliance with the allowable OC emission limitation.
 - a. The emission testing shall be conducted within 2.5 years 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 PE and OC emission limitations.
 - c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission limitations.

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

VOC: Methods 1-4, 18 and 25 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 Ohio EPA, Southwest District Office.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Southwest District Office. 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, Southwest District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA 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 emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Southwest District Office 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 Ohio EPA, Southwest District Office.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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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: LPDC Heat Treat Operation (P024)
Activity Description: Heat Treat Operation for Low Pressure Die Casting (LPDC)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
LPDC heat treatment furnace rated @ 2.8 tons/hour (TPH)	OAC Rule 3745-31-05(A)(3) (PTI 05-12461)	0.10 lb of particulate emissions (PE)/hr 0.444 ton of PE/yr 1.12 lbs of carbon monoxide(CO) emissions/hr 4.91 tons of CO emissions/yr 1.33 lbs nitrogen oxides (NOx) emissions/hr 5.84 tons NOx emissions/yr 0.008 lb of sulfur dioxide (SO2) emissions/hr 0.04 ton of SO2 emissions/yr 0.073 lb of organic compound (OC) emissions/hr 0.32 ton of OC emissions/yr Visible PE shall not exceed 10% opacity, as a 6-minute average, from the stack. The hourly and annual emission limitations specified above represent the emissions unit's potentials to emit. Therefore, no additional monitoring, record keeping or reporting is required to demonstrate compliance with these emission limitations.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
	OAC 3745-17-07(A)(1)	The visible PE limitation specified by this rule is less stringent than the visible PE limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-11(B)(1)	The PE limitation specified by this rule is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- 2.a Best available technology for this emissions unit will be demonstrated by using natural gas for combustion.

II. Operational Restrictions

1. The maximum throughput for the LPDC heat treatment furnace shall not exceed 2.8 tons of aluminum castings/hour. The 2.8 TPH rating represents the emissions unit's maximum throughput design capacity.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible PE from the stack 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 semiannual written reports that (a) identify all days during which any visible PE were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible PE. These reports shall be submitted to the Ohio EPA, Southwest District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

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

V. Testing Requirements (continued)

1.a Emission Limitation: 0.10 lb of PE/hr

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

$$\text{AER} = (\text{BBTU}) \times (1/\text{BCONV}) \times (\text{COEF}) = 0.10 \text{ lb of PE/hr}$$

where:

AER = maximum allowable emission rate;
BBTU = burner Btu/hr (13,600,000 Btu/hr);
BCONV = Btu to scf conversion factor (1,020 Btu/scf); and
COEF = CO emission factor (7.6 lbs of PE/106 scf *).

* AP-42, 5th Edition, Table 1.4-2, dated July, 1998

If required, the permittee shall demonstrate compliance with the hourly PE limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-5, as appropriate. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

1.b Emission Limitation: 0.444 ton of PE/yr

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

$$\text{AER} = (\text{HER}) \times (\text{AOH}) \times (\text{CONV}) = 0.444 \text{ ton of PE/yr}$$

where:

AER = maximum allowable emission rate (0.444 ton of PE/yr);
HER = maximum hourly emission rate (0.10 lb of PE/hr);
AOH = maximum annual operating hours (8,760 hours/year); and
CONV = conversion factor (1 ton/2,000 lbs).

1.c Emission Limitation: 1.12 lbs of CO emissions/hr

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

$$\text{AER} = (\text{BBTU}) \times (1/\text{BCONV}) \times (\text{COEF}) = 1.12 \text{ lbs of CO emissions/hr}$$

where:

AER = maximum allowable emission rate;
BBTU = burner Btu/hr (13,600,000 Btu/hr);
BCONV = Btu to scf conversion factor (1,020 Btu/scf); and
COEF = CO emission factor (84.0 lbs of CO/106 scf *).

* AP-42, 5th Edition, Table 1.4-1, dated July, 1998

If required, the permittee shall demonstrate compliance with the hourly CO emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 10, as appropriate. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

V. Testing Requirements (continued)

1.d Emission Limitation: 4.91 tons of CO emissions/yr

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

$$\text{AER} = (\text{HER}) \times (\text{AOH}) \times (\text{CONV}) = 4.91 \text{ tons of CO emissions/yr}$$

where:

AER = maximum allowable emission rate;
HER = maximum hourly emission rate (1.12 lbs of CO emissions/hr);
AOH = the maximum operating hours (8,760 hours/yr); and
CONV = conversion factor (1 ton/2,000 lbs).

1.e Emission Limitation: 1.33 lbs NOx emissions/hr

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

$$\text{AER} = (\text{BBTU}) \times (1/\text{BCONV}) \times (\text{NOxEF}) = 1.33 \text{ lbs of NOx emissions/hr}$$

where:

AER = maximum allowable emission rate;
BBTU = burner Btu/hr (13,600,000 BTU/hr);
BCONV = Btu to scf conversion factor (1020 Btu/scf); and
NOxEF = NOx emission factor (100 lbs of NOx/106 scf *)

* AP-42, 5th Edition, Table 1.4-1, dated 7/98

If required, the permittee shall demonstrate compliance with the hourly NOx emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 7, as appropriate. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

1.f Emission Limitation: 5.84 tons of NOx emissions/yr

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

$$\text{AER} = (\text{HER}) \times (\text{AOH}) \times (\text{CONV}) = 5.84 \text{ tons of NOx emissions/ yr}$$

where:

AER = allowable emission rate;
HER = hourly emission rate (1.33 lbs NOx emissions/hr);
AOH = the maximum annual operating hours (8,760 hours/yr); and
CONV = conversion factor (1 ton/2,000 lbs).

V. Testing Requirements (continued)

1.g Emission Limitation: 10% opacity, as a 6-minute average, from the stack.

Applicable Compliance Method: If required, compliance shall be determined through visible emissions observations performed 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>
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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: Aluminum LPDC Core Making Operations (P025)

Activity Description: Core Making Operations for Aluminum Low Pressure Die Casting (LPDC) Operations

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
aluminum LPDC core making operation	OAC Rule 3745-31-05(A)(3) (PTI 05-11476)	1.3 lbs of particulate emissions (PE)/hr 5.6 tons of PE/yr
		3.4 lbs of ammonia emissions/hr 14.9 tons of ammonia emissions/yr
		0.005 lb of organic compound (OC) emissions/hr 0.022 ton of OC emissions/yr
		Visible PE shall not exceed 10% opacity, as a 6-minute average, from the stack.
		The hourly and annual emission limitations specified above represent the emissions unit's potentials to emit. Therefore, no additional monitoring, record keeping or reporting is required to demonstrate compliance with these emission limitations.
	OAC 3745-17-07(A)(1)	The visible PE limitation specified by this rule is less stringent than the visible PE limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-11(B)(1)	The PE limitation specified by this rule is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC 3745-21-07(G)(2)	Exempt, see Section A.I.2.b below.

2. Additional Terms and Conditions

- 2.a The permittee may vary the types of sand used so long as the ammonia emission rate from the sand does not exceed the limitations listed in Section A.I.1.
- 2.b The permittee shall not employ any photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5), in this emissions unit.
- 2.c The resin coated sand used in this process contains various amounts of phenol and formaldehyde. Emissions of these pollutants are presumed to be "0" (zero) based on information from the manufacturer.

II. Operational Restrictions

- 1. The LPDC core making machine's resin coated sand throughput shall not exceed 2,528 lbs of resin coated sand/hour. Compliance with this throughput limitation shall be determined by the following calculation:

Maximum Sand Usage = (Core Weight (by core type) x (Maximum Cores Per Hour (per machine)) x (Number of Machines)

III. Monitoring and/or Record Keeping Requirements

- 1. The permittee shall maintain daily records of each liquid organic material employed in this emissions unit indicating whether or not the liquid organic material is a photochemically reactive material as identified in OAC rule 3745-21-01(C)(5).
- 2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible PE from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

- 1. The permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - a. the use of any photochemically reactive material [as defined in OAC rule 3745-21-01(C)(5)] that was employed in this emissions unit; and
 - b. all exceedances of the hourly resin coated sand throughput restriction (2,528 lbs/hr).
- 2. The quarterly deviation reports shall be submitted in accordance with paragraph A.1.c.ii of the General Terms and Conditions of this permit.
- 3. The permittee shall submit semiannual written reports that (a) identify all days during which any visible PE were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible PE. These reports shall be submitted to the Ohio EPA, Southwest District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

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

V. Testing Requirements (continued)

1.a Emission Limitation: 1.3 lbs of PE/hr

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

$$(PEER) \times (MSUR) \times (CONV) = 1.3 \text{ lbs of PE/hr}$$

where:

PEER = the PE emission rate (1.0 lb of PE/ton of sand, based on 01/26/99 Emission Test of AEP source P025);
MSUR = maximum sand usage rate (2,528 pounds of sand/hour) based on the maximum calculated process rate of sand per hour; and
CONV = conversion factor (1 ton/2,000 lbs).

If required, the permittee shall demonstrate compliance with the hourly PE limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-5, as appropriate. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

1.b Emission Limitation: 5.6 tons of PE/yr

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

$$(PEER) \times (Conv) \times (MSUR) \times (MOH) \times (CONV) = 5.6 \text{ tons of PE/yr}$$

where:

PEER = the PE Emission rate (1.0 lb of PE emissions/ton of sand)(Based on 01/26/99 Emission Test of AEP source P025);
MSUR = maximum sand usage rate (2,528 pounds of sand/hr) based on the maximum calculated process rate of sand/hr;
MOH = maximum annual operating hours (8,760 hrs);
CONV = conversion factor (1 ton/2,000 lbs).

1.c Emission Limitation: 3.4 lbs of ammonia emissions/hr

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

$$(EF) \times (CONV) \times (MSUR) = 3.4 \text{ lbs of ammonia emissions/hr}$$

where:

EF = emission factor (2.69 lbs of ammonia/ton of sand)*;
CONV = conversion factor (1 ton/2000 lbs); and
MSUR = maximum sand usage rate (2,528 lbs of sand/hr), based on the maximum calculated process rate of sand/hour.

* The ammonia emission factor is based on information provided by the resin coated sand supplier.

If required, the permittee shall demonstrate compliance with the hourly ammonia emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and conditional Test Method 027. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

V. Testing Requirements (continued)

1.d Emission Limitation: 14.9 tons of ammonia emissions/yr

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

$$\text{AER} = (\text{EF}) \times (\text{CONV}) \times (\text{MSUR}) \times (\text{MOH}) \times (\text{CONV}) = 14.9 \text{ tons of ammonia/yr}$$

where:

AER = annual emission rate (14.9 tons of ammonia emissions/yr);
EF = emission factor (2.69 lbs of ammonia emissions/ton of sand) Based on information provided by the resin coated sand supplier x safety factor;
MSUR = maximum sand usage rate (2,528 lbs of sand/hour) based on the maximum calculated process rate of sand/hour;
MOH = maximum annual operating hours (8,760 hours); and
CONV = conversion factor (1 ton/2,000 lbs).

1.e Emission Limitation: 0.005 lb of OC emissions/hr

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

$$(\text{PSU}) \times (\text{PSOC}) \times (\text{Density}) = 0.005 \text{ lb of OC emissions/hr}$$

where:

PSU = parting spray usage (0.02 gallon/hour);
PSOC = parting spray organic content (0.03 lb of VOC/gallon); and
Density = density of parting spray (8.26 lbs/gallon).

If required, the permittee shall demonstrate compliance with the hourly OC emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, 18, and 25, as appropriate. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

1.f Emission Limitation: 0.022 ton of OC emissions/yr

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

$$(\text{PSU}) \times (\text{PSOC}) \times (\text{Density}) \times (\text{MOH}) \times (\text{CONV}) = 0.022 \text{ ton of OC emissions/yr}$$

where:

PSU = maximum parting spray usage (0.02 gallons/hr);
PSOC = parting spray organic content (0.03 lb of VOC/gallon);
Density = density of parting spray (8.26 lbs/gallon);
MOH = maximum annual operating hours (8,760 hours); and
CONV = conversion factor (1 ton/2,000 lbs).

1.g Emission Limitation: Visible PE shall not exceed 10% opacity, as a 6-minute average, from the stack.

Applicable Compliance Method: If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

Facility Name: **Honda of America Mfg., Inc. Anna Engine Plant**
Facility ID: **05-75-00-0174**
Emissions Unit: **Aluminum LPDC Core Making Operations (P025)**

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

1. The permit to install for this emissions unit was evaluated based on the actual materials employed (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. Ohio EPA's "Review of New Sources of Air Toxics Emissions" policy ("Air Toxics Policy") was applied for each toxic pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC).

The following summarizes the results of the modeling for the "worst case" pollutant:

Pollutant: Ammonia
 TLV (ug/m3): 25,000 ug/m3
 Maximum Hourly Emission Rate: 3.5 lbs of ammonia emissions/hour
 Predicted 1-Hour Maximum Ground Level Concentration: 25.25 ug/m3
 MAGLC: 414.6 ug/m3

Physical changes to or in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxics Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxics Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxics Policy" will not be satisfied, the permittee shall not make the change. Changes that can affect the parameters used in the "Air Toxics Policy" include the following:

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

- a. changes in the composition of the materials used, or the use of new materials that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxics Policy" will be satisfied with the above changes, Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition [other than (VV)(1)(a)(ii)], then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will satisfy the "Air Toxics Policy":

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxics Policy"; and
- c. when the computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxics Policy" for the change.

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Gas Soft Nitriting Heat Treat Furnace #1 (P048)

Activity Description: Nitriting Furnace for Heat Treatment #1

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
gas soft nitriting heat furnace #1 for heat treatment of crankshafts	OAC rule 3745-31-05(A)(3) (PTI 05-08011)	0.12 lb of particulate emissions (PE)/hr 0.53 tons of PE/yr
		0.624 lb of nitrogen oxides (NOx) emissions/hr 2.73 tons of NOx emissions/yr
		1.2 lbs of organic compounds (OC) emissions/hr 5.26 tons of OC emissions/year
		0.0025 lb of sulfur dioxide (SO2) emissions/hr 0.01 ton of SO2 emissions/yr
		2.04 lbs of carbon monoxide (CO) emissions/hr 8.94 tons of CO emissions/yr
		0.0336 lb of cyanide (CN) emissions/hr 0.15 ton of CN emissions/yr

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
		Visible PE shall not exceed 20% opacity, as a 6-minute average, from any stack.
		The hourly and annual emission limitations specified above represent the emissions unit's potentials to emit. Therefore, no additional monitoring, record keeping or reporting is required to demonstrate compliance with these emission limitations.
		See Section A.2.a below.
	OAC rule 3745-18-06(E)(2)	The SO2 emissions limitation specified by this rule is less stringent than the SO2 emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-21-08(B)	None, see Section A.1.2.b below.
	OAC rule 3745-17-07(A)(1)	The visible PE limitation specified by this rule is equivalent to the visible PE limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-11(B)(1)	The PE limitation specified by this rule is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-23-06(B)	See Section A.2.c below.

2. Additional Terms and Conditions

- 2.a** The use of natural gas or propane fuel represents best available technology for this source.
- 2.b** The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in PTI 05-08011.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.c** The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in PTI 05-08011.

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

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

- 1.a Emission Limitation: 0.12 lb of PE/hr

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

$$\text{HAER} = (\text{PEER}) \times (\text{AF}) = 0.12 \text{ lb of PE/hour}$$

where:

HAER = maximum hourly emission rate (0.12 lb of PE/hr);

PEER = the PE rate (0.10 lb of PE/hr)*; and

AF = adjustment factor of 120%.

* This is based on the 02/19/95 Method 5 emission test of this emissions unit

If required, the permittee shall demonstrate compliance with the hourly PE limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-5, as appropriate. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

- 1.b Emission Limitation: 0.53 ton of PE/yr

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

$$\text{AAER} = (\text{PEER}) \times (\text{AF}) \times (\text{AOH}) \times (\text{CONV}) = 0.53 \text{ ton of PE/year}$$

where:

AAER = maximum annual allowable emission rate (0.53 ton of PE/yr);

PEER = the hourly PE rate (0.10 lb/hr);

AF = the adjustment factor of 120%;

AOH = the maximum operating hours (8,760 hrs/yr); and

CONV = conversion factor (1 ton/2,000 lbs).

V. Testing Requirements (continued)

1.c Emission Limitation: 0.624 lb of NOx emissions/hr

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

$$\text{HAER} = (\text{PEER}) \times (\text{AF}) = 0.624 \text{ lb of NOx emissions/hour}$$

where:

HAER = maximum hourly allowable emission rate (0.624 lb of NOx emissions/hr);
PEER = the hourly NOx emission rate (0.52 lb NOx/hr)*; and
AF = adjustment factor of 120%.

* This is based on the 02/19/95, Method 7E emission testing of this emissions unit.

If required, the permittee shall demonstrate compliance with the hourly NOx emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 7, as appropriate. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

1.d Emission Limitation: 2.73 tons of NOx emissions/yr

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

$$\text{AAER} = (\text{PEER}) \times (\text{AF}) \times (\text{AOH}) \times (\text{CONV}) = 2.73 \text{ tons of NOx emissions/yr}$$

where:

AAER = maximum annual allowable emission rate (2.73 tons NOx emissions/yr);
PEER = maximum hourly NOx emission rate (0.52 lb/hr);
AF = the adjustment factor of 120%;
AOH = the maximum operating hours (8,760 hrs/yr); and
CONV = conversion factor (1 ton/2,000 lbs).

1.e Emission Limitation: 2.04 lbs of CO emissions/hr

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

$$\text{HAER} = (\text{PEER}) \times (\text{AF}) = 2.04 \text{ lbs of CO emissions/hour}$$

where:

HAER = maximum hourly allowable emission rate (2.04 lbs of CO emissions/hr);
PEER = the hourly CO emission rate (1.70 lbs of CO emissions/hr)*; and
AF = adjustment factor of 120%.

* This is based on the 04/27/95, Method 10 emission testing of this emissions unit.

If required, the permittee shall demonstrate compliance with the hourly CO emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 10, as appropriate. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

V. Testing Requirements (continued)

1.f Emission Limitation: 8.94 tons of CO emissions/yr

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

$$AAER = (PEER) \times (AF) \times (AOH) \times (CONV) = 8.94 \text{ tons of CO emissions/yr}$$

where:

AAER = maximum annual allowable emission rate (8.94 tons of CO emissions/yr);

PEER = CO emission rate (1.70 lbs/hr);

AF= adjustment factor of 120%;

AOH = maximum operating hours (8,760 hrs/yr); and

CONV = conversion factor (1 ton/2000 lbs).

1.g Emission Limitation: 1.20 lbs of OC emissions/hr

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

$$HAER = (PEER) \times (AF) = 1.20 \text{ lbs of OC emissions/hr}$$

where:

HAER = maximum hourly allowable emission rate (1.20 lbs OC emissions/hr)

PEER = OC emission rate (0.59 lb of OC emissions/hr)*; and

AF = adjustment factor of 200%.

* This is based on the 02/19/95, Method 25A emission testing of this emissions unit.

If required, the permittee shall demonstrate compliance with the hourly OC emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, 18 and 25, as appropriate. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

1.h Emission Limitation: 5.26 tons of OC emissions/yr

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

$$AAER = (PEER) \times (AF) \times (AOH) \times (CONV) = 5.26 \text{ tons of OC emissions/year}$$

where:

AAER = maximum annual allowable emission rate (5.26 tons of OC emissions/yr);

PEER = maximum hourly OC emission rate (0.59 lbs/hr);

AF = adjustment factor of 200%;

AOH = annual operating hours (8,760 hrs/yr); and

CONV = conversion factor (1 ton/2,000 lbs).

V. Testing Requirements (continued)

1.i Emission Limitation: 0.0336 lb of CN emissions/hr

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

$$\text{HAER} = (\text{PEER}) \times (\text{AF}) = 0.0336 \text{ lb of CN emissions/hr}$$

where:

HAER = maximum hourly allowable emission rate (0.0336 lb of CN emissions/hr);
PEER = the CN emission rate (0.028 lb of CN emissions/hr)*; and
AF = adjustment factor of 120%.

* This is based on the 02/19/95, California Air Resource Board, Method 426, emission testing of this emissions unit.

If required, the permittee shall demonstrate compliance with the hourly CN emission limitation through emission tests performed in accordance with the California Air Resource Board, Method 426, emission testing. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

1.j Emission Limitation: 0.15 ton of CN emissions/yr

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

$$\text{AAER} = (\text{PEER}) \times (\text{AF}) \times (\text{AOH}) \times (\text{CONV}) = 0.15 \text{ ton of CN emissions/yr}$$

where:

AAER = maximum annual allowable emission rate (0.15 ton of CN emissions/yr)
PEER = maximum hourly CN emission rate (0.028 lb/hr);
AF = adjustment factor of 120%;
AOH = maximum operating hours (8,760 hrs/yr); and
CONV = conversion factor (1 ton/2,000 lbs).

V. Testing Requirements (continued)

1.k Emission Limitation: 0.0025 lb of SO₂ emissions/hr

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

$$(SCP) \times (CONV1) \times (PFR) \times (CONV2) = 0.0025 \text{ lb of SO}_2 \text{ emissions/hr}$$

where:

SCP = sulfur content of propane (14.3 kg/million cubic meters), based on information provided by propane supplier;

CONV1 = conversion factor elemental sulfur to sulfur dioxide (2.087);

PFR = propane flow rate (38.1 million cubic meters/hr), based on maximum design capacity of the equipment; and

CONV2 = conversion of kilograms to pounds (2.21 lbs/kg).

If required, the permittee shall demonstrate compliance with the hourly SO₂ emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 6, as appropriate. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

1.l Emission Limitation: 0.01 lb of SO₂ emissions/yr

Applicable Compliance Method: The annual emission limitation is based upon the emissions unit's potential to emit and was established by the following methodology:

$$(HER) \times (AOH) \times (CONV) = 0.01 \text{ ton of SO}_2 \text{ emissions/yr}$$

where:

HER = maximum hourly emission rate (0.0025 lbs of SO₂ emissions/hr);

AOH = maximum operating hours (8,760 hrs/yr); and

CONV = conversion factor (1 ton/2,000 lbs).

1.m Emission Limitation: Visible PE shall not exceed 20% opacity, as a 6-minute average, from any stack.

Applicable Compliance Method: If required, compliance shall be determined through visible emissions observations performed 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>
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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 Cooling, Degating and Sorting System Line No. 2 (P056)
Activity Description: Ferrous Foundry Casting Cooling, Degating and Sorting System Line No. 2

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
casting cooling, degating and sorting line #2, with cooling, degating, feed, transfer and sorting oscillation conveyors, with PE vented to a baghouse system	OAC rule 3745-31-05(A)(3) (PTI 05-10137)	2.39 lbs of PE/hr (stack emissions) 0.004 lbs of PE/hr (fugitive emissions) 0.010 grain of PE/dscf Visible PE shall not exceed 0% opacity, as a 6-minute average, from any stack. Visible PE shall not exceed 20% opacity, as a 3-minute average, from any fugitive dust emissions point. The hourly PE limitations (both stack and fugitive emissions) are based upon the emissions unit's potential to emit. Therefore, no additional monitoring, record keeping or reporting is required to demonstrate compliance with these emission limitations.
	OAC Rule 3745-31-05(C) (PTI 05-10137)	7.17 tons of particulate emissions (PE)/yr, based on a rolling, 12-month summation (stack emissions)
		0.12 tons of PE/year, based on a rolling, 12-month summation (fugitive emissions)
	OAC rule 3745-17-07(A)(1)	The visible PE limitation specified by this rule is less stringent than the visible PE limitation established pursuant to OAC rule 3745-31-05(A)(3).

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

**Applicable Rules/
Requirements**

**Applicable Emissions
Limitations/Control
Measures**

OAC rule 3745-17-11(B)(1)

The PE limitation specified by this rule is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

None

II. Operational Restrictions

1. The maximum annual operating hours for this emissions unit shall not exceed 6,000 hours/year, based upon a rolling, 12-month summation of the operating hours.
2. The pressure drop across the baghouse shall be maintained within the range of 1 to 15 inches of water while any emission unit controlled by the baghouse is in operation except for the first 45 days following a change of at least 50% of the fabric bags, when the pressure drop shall be maintained below 15 inches of water while any emission unit controlled by the baghouse 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 and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual. The permittee shall record the pressure drop across the baghouse once each operating day.
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive PE from the egress points (i.e., from the building enclosure) serving this emissions unit. The presence or absence of any visible fugitive emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the location and color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to minimize or eliminate the visible emissions.

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

3. The permittee shall maintain monthly records of the following information:
 - a. The operating hours for each calendar month.
 - b. The rolling, 12-month summation of the operating hours (the total operating hours for the current month, plus the total operating hours for the previous 11 calendar months).

IV. Reporting Requirements

1. The permittee shall quarterly deviation (excursion) reports that specify the following information:
 - a. all exceedances of the rolling, 12-month summation operating hours restriction, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06; and
 - b. all periods of time during which the emission unit was in operation and the pressure drop across the baghouse did not comply with the allowable operational range.
2. The quarterly deviation reports shall be submitted in accordance with paragraph A.1.c.ii of the General Terms and Conditions of this permit.
3. The permittee shall submit semiannual written reports that (a) identify all days during which any visible fugitive PE were observed from the egress points (i.e., from the building enclosure) serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible fugitive particulate emissions. These reports shall be submitted to the Ohio EPA, Southwest District Office 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 and operational restriction specified in Section A.I.1 and A.II shall be determined in accordance with the following methods:
 - 1.a Emission Limitations: 2.39 lbs of PE/hr; 0.10 grain of PE/dscf

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

$$\text{AHER} = (\text{BFR}) \times (\text{AV}) \times (\text{ST} / \text{BET}) \times (\text{BEF}) \times (\text{TI}) \times (\text{CONV}) = 2.39 \text{ lbs of PE/hr}$$

where:

AHER = maximum hourly emission rate (2.39 lbs of PE/hr);
BFR = baghouse flow rate (24,500 acfm);
AV = the air variability factor (120%);
ST = standard temperature (530 degrees Rankine);
BET = baghouse exit temperature (560 degrees Rankine);
BEF = baghouse efficiency (0.010 grains/dscf);
TI = time (60 minutes/hour); and
CONV = conversion factor 1 lb/7,000 grains).

The permittee shall demonstrate compliance with the PE limitations based upon the results of emissions testing conducted in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A.

V. Testing Requirements (continued)

- 1.b** Emission Limitation: 7.17 tons of PE/year, as a rolling, 12-month summation (stack emissions)

Applicable Compliance Method: The annual emission limitation was established by the following methodology:

$$(\text{MASER}) \times (\text{AOH}) \times (\text{CONV}) = 7.17 \text{ tons of PE/year}$$

where:

MASER = the maximum allowable stack emission rate (2.39 lbs of PE/hr);

AOH = the allowable annual operating hours (6,000 hrs, per rolling 12-month period); and

CONV = conversion factor (1 ton/2,000 lbs).

Compliance with the annual PE limitation is ensured while compliance with the annual operating hours restriction is maintained.

- 1.c** Emission Limitation: 0.004 lb of PE/hr (fugitive emissions)

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

$$\text{FPER} = (\text{MPWR}) \times (\text{EF}) \times (1 - \text{CAP}) = 0.004 \text{ lb of PE/hr}$$

where:

FPER = the fugitive process emission rate (0.004 lb of PE/hr);

MPWR = the maximum process weight rate (24,600 lbs/hr, based upon the maximum design capacity of the equipment);

EF = the emission factor (0.3 lb of PE/ton of metal poured, SCC ID 3-04-003-25)*;

CONV = the conversion factor (1 ton/ 2,000 lbs); and

CAP = control device capture efficiency (99.9%)**.

* Emission factor reference obtained from the fire database "Industrial Process for Gray Iron Casting and Cooling Systems", dated 1985.

** 99.9% of the emissions from this source are controlled by the baghouse, 0.1% escapes as fugitive emissions.

- 1.d** Emission Limitation: 0.12 ton of PE/year, as a rolling, 12-month summation, (fugitive emissions)

Applicable Compliance Method: The annual emission limitation was established by the following methodology:

$$(\text{MAFER}) \times (\text{AOH}) \times (\text{CONV}) = 0.12 \text{ ton of PE/year}$$

where:

MAFER = the maximum hourly fugitive emission rate (0.004 lb of PE/hr);

AOH = the allowable annual operating hours (6,000 hrs, per rolling, 12-month period); and

CONV = conversion factor (1 ton/2,000 lbs.)

Compliance with the annual PE limitation is ensured while compliance with the annual operating hours restriction is maintained.

- 1.e** Emission Limitation: Visible PE shall not exceed 0% opacity, as a 6-minute average, from any stack.

Applicable Compliance Method: If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

V. Testing Requirements (continued)

- 1.f** Emission Limitation: Visible PE shall not exceed 20% opacity, as a 3-minute average, from any fugitive dust emissions point.

Applicable Compliance Method: If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

- 1.g** Operating Hours Restriction: The maximum annual operating hours for this emissions unit shall not exceed 6,000 hours/yr, based upon a rolling, 12-month summation of the operating hours.

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

- 2.** The permittee shall conduct, or have conducted, emission testing for the baghouse to demonstrate compliance with the allowable PE limitations.
- a. The emission testing shall be conducted within 2.5 years 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 PE limitation.
 - c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission limitations.

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 Ohio EPA, Southwest District Office.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Southwest District Office. 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, Southwest District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA 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 Ohio EPA, Southwest District Office 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 Ohio EPA, Southwest District Office.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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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 Shotblast System No. 2 (P057)
Activity Description: Ferrous Foundry Casting Shotblast System Line No. 2

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
casting shotblast system #2 w/rocker barrel blast machine, with PE vented to a baghouse system	OAC rule 3745-31-05(A)(3) (PTI 05-10137)	1.89 lbs of particulate emissions (PE)/hr, (stack emissions) 0.010 grain of PE/dscf (stack emissions) 0.19 lb of PE/hr (fugitive emissions) Visible PE shall not exceed 0% opacity, as a 6-minute average, from any stack. Visible PE shall not exceed 20% opacity, as a 3-minute average, from any fugitive dust emissions point.
	OAC rule 3745-31-05(C) (PTI 05-10137)	The hourly PE limitations (both stack and fugitive) represent the emissions unit's potential to emit. Therefore, no additional monitoring, record keeping or reporting is required to demonstrate compliance with these emission limitations. 5.67 tons of PE/yr, as a rolling, 12-month summation (stack emissions) 0.57 ton of PE/yr, as a rolling, 12-month summation (fugitive emissions)
		See Section A.II.1 below.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
	OAC rule 3745-17-07(A)(1)	The visible PE limitation specified by this rule is less stringent than the visible PE limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-11(B)(1)	The PE limitation specified by this rule is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

None

II. Operational Restrictions

1. The maximum annual operating hours for this emissions unit shall not exceed 6,000 hours per year, based upon a rolling, 12-month summation of the operating hours.
2. The pressure drop across the baghouse shall be maintained within the range of 1 to 15 inches of water while any emission unit controlled by the baghouse is in operation except for the first 45 days following a change of at least 50% of the fabric bags, when the pressure drop shall be maintained below 15 inches of water while any emission unit controlled by the baghouse 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(s) while this emissions unit is in operation. The monitoring equipment shall be calibrated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse once each operating day.
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive PE from the egress points (i.e., from the building enclosure) serving this emissions unit. The presence or absence of any visible fugitive emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the location and color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to minimize or eliminate the visible emissions.

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

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

3. The permittee shall maintain monthly records of the following information for this emissions unit:
 - a. the total operating hours for the calendar month; and
 - b. the rolling, 12-month summation of the operating hours (summation of the current month, plus the 11 previous calendar months).

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - a. all periods of time in which this emissions unit was in operation and the pressure drop across the baghouse(s) did not comply with the allowable range; and
 - b. all exceedances of the rolling, 12-month summation of the operating hours.
2. The deviation reports shall be submitted in accordance with paragraph A.1.c.ii of the General Terms and Conditions of this permit.
3. The permittee shall submit semiannual written reports that (a) identify all days during which any visible fugitive PE were observed from the egress points (i.e., from the building enclosure) serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible fugitive particulate emissions. These reports shall be submitted to the Ohio EPA, Southwest District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitations specified in Section A.I.1 and the operational restrictions specified in Section A.II shall be determined in accordance with the following methods:
 - 1.a Emission Limitations: 1.89 lbs of PE/hr and 0.010 grain of PE/dscf (stack emissions)

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

$$AHER = (BFR) \times (AV) \times (ST/BET) \times (BEF) \times (TI) \times (CONV) = 1.89 \text{ lbs of PE/hr}$$

where:

AHER = maximum hourly emission rate (1.89 lbs of PE/hr);
BFR = baghouse flow rate (19,400 acfm);
AV = the air variability factor (120%);
ST = standard temperature (530 degrees Rankine);
BET = baghouse exit temperature (560 degrees Rankine);
BEF = baghouse efficiency (0.010 grains/dscf);
TI = time (60 minutes/hour); and
CONV = conversion factor 1 lb/7,000 grains).

The permittee shall demonstrate compliance with the PE limitations based upon the results of emissions testing conducted in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A.

V. Testing Requirements (continued)

1.b Emission Limitation: 5.67 tons of PE/year, as a rolling 12-month (stack emissions)

Applicable Compliance Method: The annual PE limitation was established by the following methodology:

$$(\text{MASER}) \times (\text{AOH}) \times (\text{CONV}) = 5.67 \text{ tons of PE/year}$$

where:

MASER = maximum allowable stack emission rate (1.89 lbs of PE/hr);
AOH = annual operating hours (6,000 hrs/yr, based on a rolling, 12-month summation); and
CONV = conversion factor (1 ton/2,000 lbs).

Compliance with the annual PE limitation is ensured while compliance is maintained with the annual operating hours restriction.

1.c Emission Limitation: Visible PE shall not exceed 0% opacity, as a 6-minute average, from any stack.

Applicable Compliance Method: If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

1.d Emission Limitation: Visible PE shall not exceed 20% opacity, as a 3-minute average, from any fugitive dust emissions point.

Applicable Compliance Method: If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

1.e Emission Limitation: 0.19 lb of PE/hr (fugitive emissions).

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

$$\text{FPER} = (\text{MPWR}) \times (\text{EF}) \times (1-\text{CAP}) \times (\text{CONV}) = 0.19 \text{ lb of PE/hr}$$

where:

FPER = fugitive process emission rate (0.19 lb of PE/hr);
MPWR = maximum process weight rate (24,600 lbs/hr, based upon the maximum design capacity of the equipment);
EF = emission factor (15.5 lb of PE/ton of metal poured, Reference from "Modern Casting", dated January, 1972);
CONV = conversion factor (1 ton/2,000 lbs); and
CAP = control device capture Efficiency (99.9%)*.

* 99.9% of the PE from this source are controlled by the baghouse, 0.1% escapes as fugitive emissions.

V. Testing Requirements (continued)

- 1.f** Emission Limitation: 0.57 ton of PE/year, based on a rolling 12-month summation (fugitive emissions).

Applicable Compliance Method: The annual PE limitation was established by the following methodology:

$$(\text{MAFER}) \times (\text{AOH}) \times (\text{CONV}) = 0.57 \text{ ton of PE/year}$$

where:

MAFER = maximum allowable fugitive emission rate (0.19 lb of PE/hr);

AOH = annual operating hours (6,000 hrs/year, based on a rolling, 12-month summation);

CONV = conversion factor (1 ton/2,000 lbs).

Compliance with the annual PE limitation is ensured while compliance is maintained with the annual operating hours restriction.

- 1.g** Operating Hours Restriction: The maximum annual operating hours for this emissions unit shall not exceed 6,000 hours/yr, based upon a rolling, 12-month summation of the operating hours.

Applicable Compliance Method: Compliance with the annual operating hours restriction shall be determined by the record keeping requirements specified in Section A.III.1.

- 2.** The permittee shall conduct, or have conducted, emission testing for the baghouse to demonstrate compliance with the allowable PE limitations.
- The emission testing shall be conducted within 2.5 years after issuance of the permit and within 6 months prior to permit expiration.
 - The emission testing shall be conducted to demonstrate compliance with the allowable PE limitations.
 - The following test methods shall be employed to demonstrate compliance with the allowable mass emission limitations.

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.

- 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 Ohio EPA, Southwest District Office.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Southwest District Office. 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, Southwest District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA 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 emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Southwest District Office 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 Ohio EPA, Southwest District Office.

Facility Name: **Honda of America Mfg., Inc. Anna Engine Plant**
Facility ID: **05-75-00-0174**
Emissions Unit: **Casting Shotblast System No. 2 (P057)**

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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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: Mold Making Line No. 2 (P058)
Activity Description: Ferrous Foundry Mold Making Line No. 2

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
ferrous foundry mold making line number 2, with PE vented to a baghouse system	OAC rule 3745-31-05(A)(3) (PTI 05-10137)	0.48 lb of particulate emissions (PE)/hr (stack emission) 0.00049 lb of PE/hr (fugitive emissions) 0.010 grain of PE/dscf (stack emissions) Visible PE shall not exceed 0% opacity, as a 6-minute average, from any stack. Visible PE shall not exceed 20% opacity, as a 3-minute average, from any fugitive dust emissions point. 8.1 lbs of organic compound (OC) emissions/hr 24.3 tons of OC emissions/yr The hourly PE and OC emissions limitations are based upon the emissions unit's potentials to emit. Therefore, no additional monitoring, record keeping or reporting is required to demonstrate compliance with these emissions limitations.
	OAC rule 3745-31-05(C) (PTI 05-10137)	1.44 tons of PE/yr, based on a rolling, 12-month summation (stack emissions) 0.00147 ton of PE/yr, based on a rolling, 12-month summation (fugitive emissions)

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
	OAC rule 3745-17-07(A)(1)	The visible PE limitation specified by this rule is less stringent than the visible PE limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-11(B)(1)	The PE limitation specified by this rule is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-21-07(G)(2)	See Section A.II.3 below.

2. Additional Terms and Conditions

None

II. Operational Restrictions

1. The maximum annual operating hours for this emissions unit shall not exceed 6,000 hrs/yr, based upon a rolling, 12-month summation of the operating hours.
2. The pressure drop across the baghouse shall be maintained within the range of 1 to 15 inches of water while any emission unit controlled by the baghouse is in operation except for the first 45 days following a change of at least 50% of the fabric bags, when the pressure drop shall be maintained below 15 inches of water while any emission unit controlled by the baghouse is in operation.
3. The use of any photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5), is prohibited in this emissions unit.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain daily records of each liquid organic material employed in this emissions unit indicating whether or not the liquid organic material is a photochemically reactive material as identified in OAC rule 3745-21-01(C)(5).
2. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouse(s) while the emissions unit(s) is in operation. The monitoring equipment shall be calibrated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse once each operating day.

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

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

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

4. The permittee shall maintain monthly records of the following information for this emissions unit:
 - a. the total operating hours for the calendar month; and
 - b. the rolling, 12-month summation of the operating hours (summation of the current month, plus the 11 previous calendar months).

IV. Reporting Requirements

1. The permittee shall notify the Ohio EPA, Southwest District Office, in writing, identifying each day during which any photochemically reactive material [as defined in OAC rule 3745-21-01(C)(5)] was employed in this emissions unit. This report shall identify the cause for the use of the photochemically reactive material(s) and the estimated total quantity of organic compound emissions emitted each such day. This report shall be submitted to the Ohio EPA, Southwest District Office within 45 days after the occurrence.
2. The permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - a. all periods of time in which this emissions unit was in operation and the pressure drop across the baghouse did not comply with the allowable range; and
 - b. all exceedances of the rolling, 12-month summation of the operating hours.
3. The deviation reports shall be submitted in accordance with paragraph A.1.c.ii of the General Terms and Conditions of this permit.
4. The permittee shall submit semiannual written reports that (a) identify all days during which any visible fugitive PE were observed from the egress points (i.e., from the building enclosure) serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible fugitive particulate emissions. These reports shall be submitted to the Ohio EPA, Southwest District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

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

V. Testing Requirements (continued)

- 1.a** Emission Limitations: 0.48 lb of PE/hr and 0.010 grain of PE/dscf (stack emissions)

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

$$\text{AHER} = (\text{BFR}) \times (\text{AV}) \times (\text{ST}/\text{BET}) \times (\text{BEF}) \times (\text{TI}) \times (\text{CONV}) = 0.48 \text{ lb of PE/hr}$$

where:

AHER = maximum hourly emission rate (0.48 lbs of PE/hr);

BFR = baghouse flow rate (4,928 acfm);

AV = the air variability factor (120%);

ST = standard temperature (530 degrees Rankine);

BET = baghouse exit temperature (560 degrees Rankine);

BEF = baghouse efficiency (0.010 grains/dscf);

TI = time (60 minutes/hour); and

CONV = conversion factor 1 lb/7,000 grains).

The permittee shall demonstrate compliance with the PE limitations based upon the results of emissions testing conducted in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A.

- 1.b** Emission Limitation: 1.44 tons of PE/year, based on a rolling 12-month summation (stack emissions)

Applicable Compliance Method: The annual PE limitation was established by the following methodology:

$$(\text{MASER}) \times (\text{AOH}) \times (\text{CONV}) = 1.44 \text{ tons of PE/yr}$$

where:

MASER = maximum allowable stack emission rate (0.48 lb of PE/hr);

AOH = annual operating hours (6,000 hrs/yr, based on a rolling, 12-month summation); and

ONV = conversion factor (1 ton/2,000 lbs).

Compliance with the annual PE limitation is ensured while compliance is maintained with the annual operating hours.

- 1.c** Emission Limitation: 8.1 lbs of OC emissions/hr

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

$$(\text{MXPH}) \times (\text{MANU}) = 8.1 \text{ lbs of OC emissions/hr}$$

where:

MXPH = maximum parting spray employed (2 gallons/hr); and

MANU = the emission factor provided by the manufacturer (MSDS, 4.05 lbs of OC/gallon).

If required, the permittee shall demonstrate compliance with the hourly OC emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, 18 and 25, as appropriate. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

V. Testing Requirements (continued)

1.d Emission Limitation: 24.3 tons of OC emissions/yr

Applicable Compliance Method: The annual OC emission limitation was established by the following methodology:

$$(MXPH) \times (MANU) \times (AOH) \times (CONV) = 24.3 \text{ tons of OC emissions/yr}$$

where:

MXPH = maximum parting spray employed (2 gal/hr);
MANU = the emission factor provided by the manufacturer (4.05 lbs of OC/gallon);
AOH = annual operating hours (6,000 hrs/yr, based on a rolling, 12-month summation); and
CONV = conversion factor (1 ton/2,000 lbs).

Compliance with the annual OC emission limitation is ensured while compliance is maintained with the annual operating hours.

1.e Emission Limitation: Visible PE shall not exceed 0% opacity, as a 6-minute average, from any stack.

Applicable Compliance Method: If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

1.f Emission Limitation: Visible PE shall not exceed 20% opacity, as a 3-minute average, from any fugitive dust emissions point.

Applicable Compliance Method: If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

1.g Emission Limitation: 0.00049 lb of PE/hr (fugitive emissions).

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

$$FPER = (MPWR) \times (EF) \times (1 - CAP) = 0.00049 \text{ lb of PE/hr}$$

where:

FPER = maximum fugitive process emission rate (0.00049 lb of PE/hr);
MPWR = maximum process weight rate (24,600 lbs/hr, based upon the maximum design capacity of the equipment);
EF = the emission factor (0.04 lb/ton of metal poured)*;
CONV = the conversion factor (1 ton/ 2,000 lbs); and
CAP = control device capture efficiency (99.9%)**.

* Reference from the Ohio EPA, RACM Guide.

* 99.9% of the PE from this source are controlled by the baghouse, 0.1% escapes as fugitive emissions.

V. Testing Requirements (continued)

1.h Emission Limitation: 0.00147 ton of PE/yr, as a rolling 12-month summation, from the fugitive dust source.

Applicable Compliance Method: The annual PE limitation was established by the following methodology:

$$(\text{MAFER}) \times (\text{AOH}) \times (\text{CONV}) = 0.00147 \text{ ton of PE/yr}$$

where:

MAFER = maximum allowable fugitive emission rate (0.00049 lb of PE/hr);

AOH = annual operating hours (6,000 hrs/ yr, based on a rolling, 12-month summation); and

CONV = conversion factor (1 ton/2,000 lbs).

Compliance with the annual PE limitation is ensured while compliance is maintained with the annual hours of operation.

1.i Operating Hours Restriction: The maximum annual operating hours for this emissions unit shall not exceed 6,000 hours/yr, based upon a rolling, 12-month summation of the operating hours.

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

2. The permittee shall conduct, or have conducted, emission testing for the baghouse to demonstrate compliance with the allowable PE limitations.

a. The emission testing shall be conducted within 2.5 years 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 PE limitations.

c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission limitations.

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 Ohio EPA, Southwest District Office.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Southwest District Office. 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, Southwest District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA 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 emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Southwest District Office 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 Ohio EPA, Southwest District Office.

Facility Name: **Honda of America Mfg., Inc. Anna Engine Plant**
Facility ID: **05-75-00-0174**
Emissions Unit: **Mold Making Line No. 2 (P058)**

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
ferrous foundry mold making line number 2, equipped with a baghouse		

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

- The permit to install for this emissions unit was evaluated based on the actual materials employed (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. Ohio EPA's "Review of New Sources of Air Toxics Emissions" policy ("Air Toxics Policy") was applied for each toxic pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC).

The following summarizes the results of the modeling for the "worst case" pollutant:

Pollutant: Petroleum Distillate

TLV (ug/m3): 5,000
 Maximum Hourly Emission Rate (lbs/hr): 8.10
 Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 64.15
 MAGLC (ug/m3): 119.04

Physical changes to or in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxics Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxics Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxics Policy" will not be satisfied, the permittee shall not make the change. Changes that can affect the parameters used in the "Air Toxics Policy" include the following:

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

- a. changes in the composition of the materials used, or the use of new materials that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxics Policy" will be satisfied with the above changes, Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition [other than (VV)(1)(a)(ii)], then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will satisfy the "Air Toxics Policy":

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxics Policy"; and
- c. when the computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxics Policy" for the change.

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Core Making Machine No. 2 (P059)
Activity Description: Ferrous Foundry Core Making Machine No. 2

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
core making machine machine no. 2, equipped with a wet scrubber and baghouse	OAC rule 3745-31-05(A)(3) (PTI 05-10090)	0.57 lb particulate emissions (PE)/hr (stack emissions) 2.50 tons of PE/yr (stack emissions) 0.009 lb of PE/hr (fugitive emissions) 0.04 ton of PE/yr (fugitive emissions) 1.223 lbs of organic compound (OC) emissions/hr (stack emissions) 5.351 tons of OC emissions/yr (stack emissions) 0.069 lb of OC emissions/hr (fugitive emissions) 0.304 ton of OC emissions/yr (fugitive emissions) 0.010 grain of PE/dscf (stack emission) Visible PE shall not exceed 0% opacity, as a 6-minute average, from any stack. Visible PE shall not exceed 20% opacity, as a 3-minute average, from any fugitive dust emissions point. The hourly and annual PE and OC emissions limitations represent the emissions unit's potential to emit. Therefore, no additional monitoring, record keeping or reporting is required to demonstrate compliance with these emissions limitations.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
	OAC rule 3745-17-07(A)(1)	The visible PE limitation specified by this rule is less stringent than the visible PE limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-11(B)(1)	The PE limitation specified by this rule is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05 (A)(3).
	OAC rule 3745-21-07(G)(2)	See Section A.II.6 below.

2. Additional Terms and Conditions

None

II. Operational Restrictions

1. The pressure drop across the bag house shall be maintained within the range of 1 to 15 inches of water while any emission unit controlled by the bag house is in operation except for the first 45 days following a change of at least 50% of the fabric bags, when the pressure drop shall be maintained below 15 inches of water while any emission unit controlled by the bag house is in operation.
2. The permittee shall operate a wet scrubber only when the binder system consists of a phenolic urethane cold box process that uses a two part binder and triethylamine to catalyze the reaction. This process is known as PUCB-TEA cured.
3. The pressure drop across the scrubber shall be maintained at a value of not less than 0.5 inches of water while the emissions unit is in operation and PUCB-TEA cured.
4. The scrubber water flow rate shall be maintained at a value of not less than 22 gallons per minute while the emissions unit is in operation and PUCB-TEA cured.
5. The pH of the scrubber liquor shall be maintained at or below 4.5, where 4.5 is the maximum pH level while the emissions unit is in operation and PUCB-TEA cured.
6. The use of any photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5), is prohibited in this emissions unit.

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(s) is in operation. The monitoring equipment shall be calibrated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the bag house once each operating day.
2. The permittee shall properly operate and maintain equipment to continuously monitor the static pressure drop across the scrubber, the scrubber water flow, and record the pH of the scrubber liquor while the emissions unit is in operation. The monitoring devices and any recorders shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

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

3. The permittee shall collect and record the following information each operating day:
 - a. the pressure drop across the scrubber, in inches of water;
 - b. the scrubber water flow rate, in gallons per minute;
 - c. the pH of the scrubber liquor; and
 - d. a log of all downtime periods for the capture (collection) system, control device and monitoring equipment when the associated emissions unit was in operation.
4. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive PE from the egress points (i.e., from the building enclosure) serving this emissions unit. The presence or absence of any visible fugitive emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the location and color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to minimize or eliminate the visible emissions.

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

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the following:
 - a. the static pressure drop across the scrubber;
 - b. the scrubber water flow rate;
 - c. the pH of the scrubber liquor; and
 - d. the pressure drop across the baghouse did not comply with the allowable range specified in this permit.
2. The quarterly deviation reports shall be submitted in accordance with paragraph A.1.c.ii of the General Terms and Conditions of this permit.
3. The permittee shall notify the Ohio EPA, Southwest District Office, in writing, identifying each day during which any photochemically reactive material [as defined in OAC rule 3745-21-01(C)(5)] was employed in this emissions unit. This report shall identify the cause for the use of the photochemically reactive material(s) and the estimated total quantity of organic compound emissions emitted each such day. This report shall be submitted to the Ohio EPA, Southwest District Office within 45 days after the occurrence.

IV. Reporting Requirements (continued)

4. The permittee shall submit semiannual written reports that (a) identify all days during which any visible fugitive PE were observed from the egress points (i.e., from the building enclosure) serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible fugitive particulate emissions. These reports shall be submitted to the Ohio EPA, Southwest District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

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

- 1.a Emission Limitations: 0.57 lb of PE/hr and 0.010 grain of PE/dscf (stack emissions)

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

$$\text{AHER} = (\text{BFR}) \times (\text{AV}) \times (\text{ST/BET}) \times (\text{BEF}) \times (\text{TI}) \times (\text{CONV}) = 0.57 \text{ lbs PE/hr}$$

where:

AHER = maximum hourly emission rate (0.57 lbs of PE/hr);
BFR = baghouse flow rate (5,900 acfm);
AV = the air variability factor (120%);
ST = standard temperature (530 degrees Rankine);
BET = baghouse exit temperature (560 degrees Rankine);
BEF = baghouse efficiency (0.010 grain/dscf);
TI = time (60 minutes/hr); and
CONV = conversion factor 1 lb/7,000 grains).

The permittee shall demonstrate compliance with the PE limitations based upon the results of emissions testing conducted in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A.

- 1.b Emission Limitation: 2.50 tons of PE/yr (stack emissions)

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

$$(\text{MAER}) \times (\text{MAH}) \times (\text{CONV}) = 2.50 \text{ tons of PE/yr (stack emissions)}$$

where:

MAER = maximum hourly emission rate (0.57 lb of PE/hr);
MAH = maximum annual hours of operation (8,760 hrs/yr); and
CONV = conversion factor (1 ton/2,000 lbs).

V. Testing Requirements (continued)

1.c Emission Limitation: 0.009 lb of PE/hr (fugitive emissions)

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

$$(\text{MPWR}) \times (\text{CONV}) \times (\text{EF}) \times (1 - \text{CEF}) = 0.009 \text{ lb of PE/hr}$$

where:

MPWR = maximum process weight rate (2,860 lbs of sand/hr);

CONV = conversion factor (1 ton/2,000 pounds);

EF = emission factor (0.68 lb of PE/ton of sand); and

CEF = capture efficiency (0.99).

1.d Emission limitation: 0.04 ton of PE/yr (fugitive emissions)

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

$$(\text{MAER}) \times (\text{MAH}) \times (\text{CONV}) = 0.04 \text{ ton of PE/year}$$

where:

MAER = maximum hourly emission rate (0.009 lb of PE/hr);

MAH = maximum annual hours of operation (8,760 hrs/yr); and

CONV = conversion factor (1 ton/2,000 lbs).

V. Testing Requirements (continued)

1.e Emission Limitation: 1.223 lbs of OC emissions/hr (stack emissions)

Applicable Compliance Method: The hourly OC emission limitation was established by the following methodology:

$$[\text{UEB} + \text{CEC} + \text{UEPS}] \times [\text{CE}] = 1.223 \text{ lbs of OC emissions/hr}$$

where:

UEB = the uncontrolled emission rate from the binder (0.93 lb of OC emissions/hr);
CEC = the controlled emission rate from the triethylamine (TEA) catalyst (0.30 lbs of OC emissions/hr);
UEPS = the uncontrolled emission rate from the parting spray (0.005 lb of OC emissions/hr); and
CE = capture efficiency (0.99).

where:

UEB = (PSH) x (CONV) x (EF) x (AF) = 0.93 lb of OC emissions/hr;
PSH = maximum pounds of sand/hr (2,860 lbs of sand/hr);
CONV = conversion factor (1 ton/2,000 lbs);
EF = emission factor (0.65 lb of OC/ton sand, Reference from the OCMA/ Ohio EPA OC study);
AF = adjustment factor, provided by applicant in their emission calculations (25%);

where:

$$\text{UEPS} = (\text{PPS}) \times (\text{OCC}) = 0.185 \text{ lb of OC emissions/hr.}$$

where:

PPS = maximum pounds of parting spray/hour (3.7 lbs of OC/hr); and
OCC = MSDS data indicates a maximum 5% OC (0.05).

If required, the permittee shall demonstrate compliance with the hourly OC emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, 18, and 25, as appropriate. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

1.f Emission Limitation: 5.351 tons/yr of OC emissions (stack emissions)

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

$$\text{MAERst} \times (\text{MAH}) \times (\text{CONV}) = 5.351 \text{ tons of OC emissions/yr}$$

where:

MAERst = maximum hourly emission rate (1.223 lbs of OC emissions/hr);
MAH = maximum annual hours of operation (8,760 hrs/yr); and
CONV = conversion factor (1 ton/2,000 lbs).

V. Testing Requirements (continued)

1.g Emission Limitation: 0.069 lb of OC emissions/hr (fugitive emissions)

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

$$[\text{UEB} + \text{CEC} + \text{UEPS}] \times [1 - \text{CE}] = 0.069 \text{ lb of OC emissions/hr}$$

where:

UEB = the uncontrolled emission rate from the binder (0.93 lb of OC emissions/hr)
CEC = the controlled emission rate from the triethylamine (TEA) catalyst (0.30 lb of OC emissions/hr)
UEPS = the uncontrolled emission rate from the parting spray (0.005 lb of OC emissions/hr)
CE = capture efficiency (0.99)

where:

$\text{UEB} = (\text{PSH}) \times (\text{CONV}) \times (\text{EF}) = 0.93 \text{ lb of OC/hr}$
PSH = maximum pounds of sand/hour (2,860 lbs sand/hr.)
CONV = conversion factor (1 ton/2,000 lbs.)
EF = emission factor (0.65 lb of OC/ton sand, Reference from the OCMA/Ohio EPA OC study)

where:

$$\text{UEPS} = (\text{PPS}) \times (\text{OCC}) = 0.005 \text{ lb of OC emissions/hr}$$

where:

PPS = maximum gallons of parting spray/hr (0.5 gallons of OC/hr)
OCC = 0.01 lb of OC/gallon (maximum)

1.h Emission Limitation: 0.304 tons of OC emissions/yr (fugitive emissions)

Applicable Compliance Method: The annual OC limitation may be determined by the following methodology:

$$(\text{MAERfg}) \times (\text{MAH}) \times (\text{CONV}) = 0.304 \text{ tons of OC emissions/yr}$$

where:

MAERfg = the maximum allowable emission rate (0.069 lbs of OC/hr);
MAH = the maximum annual hours of operation (8,760 hrs/yr); and
CONV = conversion factor (1 ton/2,000 lbs).

1.i Emission Limitation: Visible PE shall not exceed 0% opacity, as a 6-minute average, from any stack.

Applicable Compliance Method: If required, compliance shall be determined according to Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR Part 60.

1.j Emission Limitation: Visible PE shall not exceed 20% opacity, as a 3-minute average, from any fugitive dust emissions point.

Applicable Compliance Method: If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

V. Testing Requirements (continued)

2. The permittee shall conduct, or have conducted, emission testing for the baghouse to demonstrate compliance with the allowable PE limitations.
 - a. The emission testing shall be conducted within 2.5 years 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 PE limitations.
 - c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission limitations.

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 Ohio EPA, Southwest District Office.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Southwest District Office. 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, Southwest District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA 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 emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Southwest District Office 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 Ohio EPA, Southwest District Office.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
core making machine machine no. 2, equipped with a wet scrubber and baghouse		

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

1. The permit to install for this emissions unit was evaluated based on the actual materials employed (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. Ohio EPA's "Review of New Sources of Air Toxics Emissions" policy ("Air Toxics Policy") was applied for each toxic pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC).

The following summarizes the results of the modeling for the "worst case" pollutant:

Pollutant: triethylamine
 TLV (ug/m3): 4.1
 Maximum Hourly Emission Rate (lbs/hr): 0.3
 Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 10.36
 MAGLC (ug/m3): 98.52

Physical changes to or in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxics Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxics Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxics Policy" will not be satisfied, the permittee shall not make the change. Changes that can affect the parameters used in the "Air Toxics Policy" include the following:

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

- a. changes in the composition of the materials used, or the use of new materials that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxics Policy" will be satisfied with the above changes, Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition [other than (VV)(1)(a)(ii)], then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will satisfy the "Air Toxics Policy":

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxics Policy"; and
- c. when the computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxics Policy" for the change.

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Sand/Metal Sep, Shakeout and Extract System Line No. 2 (P061)
Activity Description: Ferrous Foundry Sand/Metal Separation, Shakeout and Extraction System Line No. 2

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/metal sep. shakeout and extract system line #2 w/melting furnace, two holding furnaces, transfer trough, dross skimming rake and funnel, with PE vented to a baghouse system	OAC rule 3745-31-05(A)(3) (PTI 05-06208)	1.91 lbs of particulate emissions (PE)/hr 4.30 tons of PE/yr 0.01 grain of PE/dscf Visible PE shall not exceed 0% opacity, as a 6-minute average, from any stack. The hourly PE limitation represents the emissions unit's potential to emit. Therefore, no additional monitoring, record keeping or reporting is required to demonstrate compliance with this emission limitation.
	OAC rule 3745-17-07(A)(1)	The visible PE limitation specified by this rule is less stringent than the visible PE limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-11(B)(1)	The PE limitation specified by this rule is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- 2.a The PE from this emissions unit shall be controlled by a cyclone venting the emissions to a baghouse with a designed control efficiency of at least 99.5%, by weight, and direct venting to the same baghouse which emits less than or equal to 0.01 grain/dscf.

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 1 to 15 inches of water while any emission unit controlled by the baghouse is in operation. The exception is for the first 45 days following a change of at least 50% of the fabric bags. During that time, the pressure drop shall be maintained below 15 inches of water while any emission unit controlled by the baghouse is in operation.
2. The maximum annual operating hours for this emissions unit shall not exceed 4,500 hrs/year, based upon a rolling, 12-month summation of the operating hours.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain monthly records of the following information for this emissions unit:
 - a. the operating hours for each calendar month; and
 - b. the rolling, 12-month summation of the operating hours.
2. The permittee shall properly operate, and maintain equipment to monitor the pressure drop across the baghouse(s) while the emissions unit is in operation. The monitoring equipment shall be calibrated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse once each operating day.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - a. all periods of time in which this emissions unit was in operation and the pressure drop across the baghouse(s) did not comply with the allowable range; and
 - b. all exceedances of the rolling, 12-month summation of the operating hours.
2. The deviation reports shall be submitted in accordance with paragraph A.1.c.ii of the General Terms and Conditions of this permit.

V. Testing Requirements

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

V. Testing Requirements (continued)

1.a Emission Limitation: 1.91 lbs of PE/hr; 0.01 grain/dscf

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

The hourly emission limitation represents the emissions unit's potential to emit and was established by the following methodology:

$$(BFR) \times (AV) \times (ST/BET) \times (BEP / SP) \times (BEF) \times (TI) \times (CONV) = 1.91 \text{ lbs of PE/hr}$$

where:

BFR = baghouse flow rate (19,600 acfm);
AV = the air variability factor (120%);
ST = standard temperature (530 degrees Rankine);
BET = baghouse exit temperature (560 degrees Rankine);
BEP = baghouse exit pressure (14.69 lbs/in²);
SP = standard pressure (14.69 lbs/in²);
BEF = baghouse efficiency (0.010 grain/dscf);
TI = time (60 minutes/hr); and
CONV = conversion factor (1 lb/7,000 grains).

The permittee shall demonstrate compliance with the PE limitations based upon the results of emissions testing conducted in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A.

1.b Emission Limitation: 4.30 tons of PE/yr

Applicable Compliance Method: The annual PE limitation was established by the following methodology:

$$(BFR) \times (AV) \times (ST/BET) \times (BEP/SP) \times (BEF) \times (TI) \times (CONV) \times (AOH) \times (CONV2) = 4.30 \text{ tons of PE/yr}$$

where:

BFR = baghouse flow rate (19,600 acfm)
AV = the air variability factor (120%)
ST = standard temperature (530 degrees Rankine)
BET = baghouse exit temperature (560 degrees Rankine)
BEP = baghouse exit pressure (14.69 lbs/in²);
SP = standard pressure (14.69 lbs/in²);
BEF = baghouse efficiency (0.010 grains of PE/dscf);
TI = time (60 minutes/hr);
AOH = annual operating hours (4,500 hrs/yr, based on a rolling, 12-month summation);
CONV = conversion factor (1 lb/7,000 grains); and
CONV2 = conversion factor (1 ton/2,000 lbs).

Compliance with the annual PE limitation is ensured while compliance is maintained with the annual operating hours restriction.

1.c Emission Limitation: Visible PE shall not exceed 0% opacity, as a 6-minute average, from the stack.

Applicable Compliance Method: If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

V. Testing Requirements (continued)

2. The permittee shall conduct, or have conducted, emission testing for the baghouse to demonstrate compliance with the allowable PE limitations.
 - a. The emission testing shall be conducted within 2.5 years 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 PE limitations.
 - c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission limitations.

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 Ohio EPA, Southwest District Office.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Southwest District Office. 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, Southwest District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA 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 emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Southwest District Office 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 Ohio EPA, Southwest District Office.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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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: Gas Soft Nitriding Heat Treatment Furnace #2 (P071)
Activity Description: Gas Soft Nitriding Heat Treatment Furnace & Quench #2

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
gas soft nitriding heat treat furnace #2 w/quench tank, endothermic gas generators (2), and interlocked safety flares	OAC rule 3745-31-05(A)(3) (PTI 05-08174)	0.12 lb of particulate emissions (PE)/hr
		0.53 ton of PE/yr
		0.62 lb of nitrogen oxides (NOx) emissions/hr
		2.73 tons of NOx emissions/yr
		1.2 lbs of organic compounds (OC) emissions/hr
		5.26 tons of OC emissions/year
		0.0025 lb of sulfur dioxide (SO2) emissions/hr
		0.01 ton of SO2 emissions/yr
2.0 lbs of carbon monoxide (CO) emissions/hr	8.94 tons CO emissions/yr	
		0.0336 lb of cyanide (CN) emissions/hr
		0.15 ton of CN emissions/yr

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
		Visible PE shall not exceed 20% opacity, as a 6-minute average, from any stack.
		The hourly and annual emissions limitations represent the emissions unit's potentials to emit. Therefore, no additional monitoring, record keeping, or reporting is required to demonstrate compliance with these emission limitations.
		See Section A.2.a below.
	OAC rule 3745-17-07(A)(1)	The visible PE limitation specified by this rule is equivalent to the visible PE limitation established pursuant to OAC rule 3745-31-05 (A)(3).
	OAC rule 3745-17-11(B)(1)	The PE limitation specified by this rule is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05 (A)(3).
	OAC rule 3745-18-06(E)(2)	The SO ₂ limitation specified by this rule is less stringent than the SO ₂ limitation established pursuant to OAC rule 3745-31-05 (A)(3).
	OAC rule 3745-21-08(B)	None, see Section A.2.b below.
	OAC rule 3745-23-06(B)	None, see Section A.1.2.c below.

2. Additional Terms and Conditions

- 2.a** The use of natural gas or propane fuel represents Best Available Technology for this source.
- 2.b** The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 05-08174.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.c** The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 05-08174.

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible PE from the stack 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 semiannual written reports that (a) identify all days during which any visible PE were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible PE. These reports shall be submitted to the Ohio EPA, Southwest District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

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

1.a Emission Limitation: 0.12 lb of PE/hr

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

$$(\text{PEER}) \times (\text{AF}) = 0.12 \text{ lb of PE/hr}$$

where:

PEER = the maximum PE rate (0.10 lb of PE/hr)*; and
AF = adjustment factor of 120%.

* This is based on the 02/19/95 Method 5 emission test of a similar emissions unit (P048)

If required, the permittee shall demonstrate compliance with the hourly PE limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-5, as appropriate. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

1.b Emission Limitation: 0.53 ton of PE/yr

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

$$\text{AAER} = (\text{PEER}) \times (\text{AF}) \times (\text{AOH}) \times (\text{CONV}) = 0.53 \text{ ton of PE/yr}$$

where:

AAER = the maximum annual allowable emission rate (0.53 ton/yr);
PEER = maximum hourly PE rate (0.10 lb of PE/hr);
AF = the adjustment factor of 120%;
AOH = the maximum annual operating hours (8,760 hrs/yr); and
CONV = conversion factor (1 ton/2,000 lbs).

V. Testing Requirements (continued)

1.c Emission Limitation: 0.624 lb of NO_x of emissions/hr

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

$$(\text{PEER}) \times (\text{AF}) = 0.624 \text{ lb of NO}_x \text{ emissions/hr}$$

where:

PEER = the maximum hourly NO_x emission rate (0.52 lb of NO_x emissions/hr)*; and
AF = adjustment factor of 120%;

* This is based on the 02/19/95, Method 7E emission testing of a similar emissions unit (P048).

If required, the permittee shall demonstrate compliance with the hourly NO_x emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 7, as appropriate. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

1.d Emission Limitation: 2.73 tons of NO_x emissions/yr

Applicable Compliance Method: The annual emissions limitation represents the emissions unit potential to emit and was established by the following methodology:

$$\text{AAER} = (\text{PEER}) \times (\text{AF}) \times (\text{AOH}) \times (\text{CONV}) = 2.73 \text{ tons of NO}_x \text{ emissions/yr}$$

where:

AAER = the annual allowable emission rate (2.73 tons of NO_x emissions/yr);
PEER = the maximum hourly NO_x emission rate (0.52 lb/hr);
AF = the adjustment factor of 120%;
AOH = the maximum operating hours (8,760 hrs/yr); and
CONV = conversion factor (1 ton/2,000 lbs).

1.e Emission Limitation: 2.0 lbs of CO emissions/hr

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

$$(\text{PEER}) \times (\text{AF}) = 2.0 \text{ lbs of CO emissions/hr}$$

where:

PEER = the CO emission rate (1.70 lbs CO/hr)*; and
AF = adjustment factor of 120%.

* This is based on the 04/27/95, Method 10 emission testing of a similar emissions unit (P048).

If required, the permittee shall demonstrate compliance with the hourly CO emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 10, as appropriate. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

V. Testing Requirements (continued)

1.f Emission Limitation: 8.94 tons CO emissions/yr

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

$$\text{AAER} = (\text{PEER}) \times (\text{AF}) \times (\text{AOH}) \times (\text{CONV}) = 8.94 \text{ tons of CO emissions/yr}$$

where:

AAER = the annual allowable emission rate (8.94 tons of CO emissions/yr);
PEER = the maximum hourly CO emission rate (1.70 lbs/hr);
AF = the adjustment factor of 120%;
AOH = the maximum annual operating hours (8,760 hrs/yr); and
CONV = conversion factor (1 ton/2,000 lbs).

1.g Emission Limitation: 1.20 lbs of OC emissions/hr

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

$$(\text{PEER}) \times (\text{AF}) = 1.20 \text{ lbs of OC emissions/hr}$$

where:

PEER = the maximum OC emission rate (0.59 lbs OC/hr)*; and
AF = adjustment factor of 200%.

* This is based on the 02/19/95, Method 25A emission testing of a similar emissions unit (P048).

If required, the permittee shall demonstrate compliance with the hourly OC emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, 18 and 25, as appropriate. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

1.h Emission Limitation: 5.26 tons OC emissions/yr

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

$$(\text{PEER}) \times (\text{AF}) \times (\text{AOH}) \times (\text{CONV}) = 5.26 \text{ tons of OC emissions/yr}$$

where:

AAER = maximum annual allowable emission rate (5.26 ton OC/yr);
PEER = maximum hourly OC emission rate (0.59 lbs/hr);
AF = the adjustment factor of 200%;
AOH = maximum annual actual operating hours (8,760 hrs/yr); and
CONV = conversion factor (1 ton/2,000 lbs).

V. Testing Requirements (continued)

1.i Emission Limitation: 0.0336 lb of CN emissions/hr

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

$$(\text{PEER}) \times (\text{AF}) = 0.0336 \text{ lb of CN emissions/hr}$$

where:

PEER = maximum hourly CN emission rate (0.028 lb of CN emissions/hr)*; and
AF= Adjustment factor of 120%.

* This is based on the 02/19/95, California Air Resource Board Method 426 Method, emission testing of a similar emissions unit (P048).

If required, the permittee shall demonstrate compliance with the hourly CN emission limitation through emission tests performed in accordance with the California Air Resource Board, Method 426, emission testing. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

1.j Emission Limitation: 0.15 ton of CN emissions/yr

Applicable Compliance Method: The annual emission limitation is based on the emissions unit's potential to emit and was established by the following methodology:

$$(\text{PEER}) \times (\text{AF}) \times (\text{AOH}) \times (\text{CONV}) = 0.15 \text{ ton of CN emissions/yr}$$

where:

AAER = maximum annual allowable emission rate (0.15 ton CN emissions/yr);
PEER = maximum hourly CN emission rate (0.028 lb/hr);
AF = the adjustment factor of 120%;
AOH = the maximum annual operating hours (8,760 hrs/yr); and
CONV = conversion factor (1 ton/2,000 lbs).

1.k Emission Limitation: 0.0025 lb SO₂ emissions/hr

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

$$(\text{SCP}) \times (\text{CONV1}) \times (\text{PFR}) \times (\text{CONV2}) = 0.0025 \text{ lb of SO}_2 \text{ emissions/hr}$$

where:

SCP = sulfur content of propane (14.3 kg/million cubic meters), based on information provided by the propane supplier;
CONV1 = conversion factor elemental sulfur to sulfur dioxide (2.087);
PFR = propane flow rate (38.1 cubic meters/hr), based on maximum design capacity of the equipment; and
CONV2 = conversion of kilograms to pounds (2.21 lbs/kg).

If required, the permittee shall demonstrate compliance with the hourly SO₂ emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 6, as appropriate. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

V. Testing Requirements (continued)

1.l Emission Limitation: 0.01 ton of SO₂ emissions/yr

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

$$(\text{HER}) \times (\text{AOH}) \times (\text{CONV}) = 0.01 \text{ ton of SO}_2 \text{ emissions/yr}$$

where:

HER = hourly emission rate (0.0025 lb of SO₂ emissions/hr);
AOH = maximum annual operating hours (8,760 hrs/yr); and
CONV = conversion factor (1 ton/2,000 lbs).

1.m Emission Limitation: Visible PE shall not exceed 20% opacity, as a 6-minute average, from any stack.

Applicable Compliance Method: If required, compliance shall be determined through visible emissions observations performed 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>
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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: Rotary test Firing Line 1 (P073)

Activity Description: Rotary test Firing Line 1

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>	
rotary test firing line #1, w/firing units and rotary conveyor (not equipped with any emission controls)	OAC rule 3745-31-05(A)(3) (PTI 05-8010)	1.44 lbs of particulate emission (PE)/hr 6.31 tons of PE/yr	
		1.44 lbs of nitrogen oxides (NOx) emissions/hr 6.31 tons of NOx emissions/yr	
		0.41 lb of volatile organic compound (VOC) emissions/hr 1.80 tons of VOC emissions/year	
		0.02 lb of sulfur dioxide (SO2) emissions/hr 0.09 ton of SO2 emissions/yr	
		0.9 lb of carbon monoxide (CO) emissions/hr 3.94 ton of CO emissions/yr	
		See Section A.II.1 below.	
		Visible PE shall not exceed 20% opacity, as a 6-minute average, from any stack.	
		OAC rule 3745-17-07(A)(1)	The visible PE limitation specified by this rule is equivalent to the visible PE limitation established pursuant to OAC rule 3745-31-05(A)(3).
		OAC rule 3745-17-11(B)(1)	The PE emission limitation specified by this rule is less stringent than the emissions limitation established pursuant to OAC rule 3745-31-05(A)(3).
		OAC rule 3745-21-08(B)	None, see Section A.I.2.a below.

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

**Applicable Rules/
Requirements**

**Applicable Emissions
Limitations/Control
Measures**

OAC rule 3745-23-06(B)

None, see Section A.I.2.b below.

2. Additional Terms and Conditions

- 1.a** The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 05-8010.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 1.b** The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 05-8010.

II. Operational Restrictions

1. The use of any leaded fuel is prohibited in this emissions unit.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain monthly records indicating the type of fuel employed in this emissions unit and whether the fuel contains any lead constituents (i.e., identify whether the fuel employed is a leaded or unleaded fuel).
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible PE from the stack 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 notify the Ohio EPA, Southwest District Office, in writing, of any monthly record showing the use of any leaded fuel employed in this emissions unit. The notification shall include a copy of such record and shall be sent to the Ohio EPA, Southwest District Office within 30 days after the occurrence.
2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible PE were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible PE. These reports shall be submitted to the Ohio EPA, Southwest District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

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

V. Testing Requirements (continued)

1.a Emission Limitation: 1.44 lbs of PE/hr

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

$$\text{HAER} = (\text{PEER}) \times (\text{AF}) = 1.44 \text{ lbs of PE/hr}$$

where:

HAER = the maximum hourly allowable emission rate (1.44 lbs of PE/hr);
PEER = the PE rate (1.2 lbs of PE/hr)*; and
AF = adjustment factor of 120%.

* This is based on the 02/19/95 emissions test data provided by Honda.

If required, the permittee shall demonstrate compliance with the hourly PE limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-5, as appropriate. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

1.b Emission Limitation: 6.31 tons of PE/yr

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

$$\text{AAER} = (\text{PEER}) \times (\text{AF}) \times (\text{MHPY}) \times (\text{CONV}) = 6.31 \text{ tons of PE/yr}$$

where:

AAER = maximum annual allowable emission rate (6.31 tons of PE/yr);
PEER = the hourly PE rate (1.20 lbs of PE/hr);
AF = adjustment factor of 120%;
MHPY = maximum annual operating hours (8,760 hours/yr);
CONV = conversion factor (1 ton/2,000 lbs).

1.c Emission Limitation: 1.44 lbs of NOx emissions/hr

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

$$\text{HAER} = (\text{PEER}) \times (\text{AF}) = 1.44 \text{ lbs of NOx emissions/hr}$$

where:

HAER = maximum hourly allowable emission rate (1.44 lbs of NOx emissions/hr);
PEER = hourly NOx emission rate (1.12 lbs of NOx/hr)*; and
AF = adjustment factor of 120%.

* This is based on the 02/19/95 emissions test data provided by Honda.

If required, the permittee shall demonstrate compliance with the hourly NOx emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 7, as appropriate. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

V. Testing Requirements (continued)

1.d Emission Limitation: 6.31 tons of NO_x emissions/yr

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

$$AAER = (PEER) \times (AF) \times (MHPY) \times (CONV) = 6.31 \text{ tons of NO}_x \text{ emissions/yr}$$

where:

AAER = maximum annual allowable emission rate (6.31 tons of NO_x emissions/yr);

PEER = the hourly NO_x emission rate (1.20 lbs of NO_x emissions/hr);

AF = adjustment factor of 120%;

MHPY = maximum annual operating hours (8,760 hours/yr); and

CONV = conversion factor (1 ton/2,000 lbs).

1.e Emission Limitation: 0.9 lb of CO emissions/hr

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

$$HAER = (PEER) \times (AF) = 0.9 \text{ lb of CO emissions/hr}$$

where:

HAER = maximum hourly allowable emission rate (0.9 lb of CO/hr);

PEER = the CO emission rate (0.75 lb of CO emissions/hr)*;

AF = adjustment factor of 120%.

* This is based on the 02/19/95 test data provided by Honda.

If required, the permittee shall demonstrate compliance with the hourly CO emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 10, as appropriate.

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

1.f Emission Limitation: 3.940 tons of CO emissions/yr

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

$$(PEER) \times (AF) \times (MHPY) \times (CONV) = 3.94 \text{ tons of CO emissions/yr}$$

where:

AAER = maximum annual allowable emission rate (3.94 tons of CO/yr)

PEER = the CO emission rate (0.75 lbs/hr);

AF = adjustment factor of 120%;

MHPY = maximum annual operating hours (8,760 hours/yr); and

CONV = conversion factor (1 ton/2,000 lbs).

V. Testing Requirements (continued)

1.g Emission Limitation: 0.41 lb of VOC emissions/hr

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

$$\text{HAER} = (\text{PEER}) \times (\text{AF}) = 0.41 \text{ lb of VOC emissions/hr}$$

where:

HAER = maximum hourly allowable emission rate (0.34 lb of VOC emissions/hr);
PEER = the VOC emission rate (0.34 lb of VOC emissions/hr)*; and
AF = adjustment factor of 120%.

* This is based on the 02/19/95 emissions test data provided by Honda.

If required, the permittee shall demonstrate compliance with the hourly VOC emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 25, as appropriate. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

1.h Emission Limitation: 1.80 tons of VOC emissions/yr

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

$$\text{HAER} = (\text{PEER}) \times (\text{AF}) \times (\text{MHPY}) \times (\text{CONV}) = 1.80 \text{ tons of VOC emissions/yr}$$

where:

AAER = maximum annual allowable emission rate (1.80 tons of VOC emissions/yr);
PEER = the VOC emission rate (0.34 lbs of VOC emissions/hr);
AF = adjustment factor of 120%;
MHPY = maximum annual operating hours (8,760 hours/yr); and
CONV = conversion factor (1 ton/2,000 lbs).

1.i Emission Limitation: 0.02 lb of SO2 emissions/hr

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

$$\text{HAER} = (\text{SOER}) \times (\text{AF}) = 0.02 \text{ lb of SO}_2 \text{ emissions/hr}$$

where:

HAER = maximum hourly emission rate;
SOER = the SO₂ emission rate (0.01 lb of SO₂/hr)*; and
AF = adjustment factor of 200%.

* Based on emissions testing data provided by Honda.

If required, the permittee shall demonstrate compliance with the hourly SO₂ emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 6, as appropriate. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

V. Testing Requirements (continued)

1.j Emission Limitation: 0.09 ton of SO₂ emissions/yr

Applicable Compliance Method: The annual emission limitation represents the emissions units potential to emit and was established by the following methodology:

$$\text{AAER} = (\text{SOER}) \times (\text{AF}) \times (\text{MHPY}) \times (\text{CONV}) = 0.09 \text{ tons of SO}_2 \text{ emissions/yr}$$

where:

AAER = maximum annual emission rate;
SOER = maximum SO₂ emission rate (0.01 lb/hr);
AF = adjustment factor of 200%;
MHPY = maximum operating hours/ year (8,760); and
CONV = conversion factor (1 ton/2,000 lbs).

1.k Emission Limitation: Visible PE shall not exceed 20% opacity, as a 6-minute average, from any stack.

Applicable Compliance Method: If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

1.l Leaded Fuel Restriction: The use of any leaded fuel is prohibited in this emissions unit.

Applicable Compliance Method: Compliance with the leaded fuel restriction shall be determined by the record keeping requirements specified in Section A.III.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>
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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: Continuous Shotblast System #1 (P075)

Activity Description: Continuous shotblast

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>
continuous shotblast system #1 w/in-line rocker barrel blast machine and scrap gantry elevator, equipped with a baghouse	OAC rule 3745-31-05(A)(3) (PTI 05-08921)	2.05 lbs of particulate emissions (PE)/hr 6.15 tons of PE/yr 0.010 grain of PE/dscf
	OAC rule 3745-17-07(A)(1)	Visible PE shall not exceed 0% opacity, as a 6-minute average, from any stack. The visible PE limitation specified by this rule is less stringent than the visible PE limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-11(B)(1)	The PE limitation specified by this rule is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- 2.a The PE from this emissions unit shall be controlled by venting the emissions to a baghouse with a minimum designed control efficiency of 99%, by weight.

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 1 to 15 inches of water while any emission unit controlled by the baghouse is in operation. The exception is for the first 45 days following a change of at least 50% of the fabric bags. During that time, the pressure drop shall be maintained below 15 inches of water while any emission unit controlled by the baghouse is in operation.
2. The maximum annual operating hours for this emissions unit shall not exceed 6,000 hours/year, based upon a rolling, 12-month summation of the operating hours.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain monthly records of the following information for this emissions unit:
 - a. the total operating hours for each calendar month; and
 - b. the rolling, 12-month summation of the operating hours (the total operating hours for the current month plus the total operating hours for the 11 previous calendar months).
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 and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse once each operating day.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - a. all periods of time in which this emissions unit was in operation and the pressure drop across the baghouse did not comply with the allowable range; and
 - b. all exceedances of the rolling, 12-month summation of the operating hours.
2. The deviation reports shall be submitted in accordance with paragraph A.1.c.ii of the General Terms and Conditions of this permit.

V. Testing Requirements

1. Compliance with the emission limitations and operational restrictions specified in Sections A.I.1 and A.II respectively shall be determined in accordance with the following methods:
 - 1.a Emission Limitations: 2.05 lbs PE/hr; 0.010 grain of PE/dscf

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

$$\text{AHER} = (\text{BFR}) \times (\text{AV}) \times (\text{ST}/\text{BET}) \times (\text{BEF}) \times (\text{TI}) \times (\text{CONV}) = 2.05 \text{ lbs of PE/hr}$$

where:

AHER = maximum hourly emission rate (2.05 lbs PE/hr);
BFR = baghouse flow rate (21,600 acfm);
AV = the air variability factor (120%);
ST = standard temperature (530 degrees Rankine);
BET = baghouse exit temperature (575 degrees Rankine);
BEF = baghouse efficiency (0.010 grain/dscf);
TI = time (60 minutes/hr); and
CONV = conversion factor 1 lb/7,000 grains).

The permittee shall demonstrate compliance with the PE limitations based upon the results of emission testing conducted in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A.

V. Testing Requirements (continued)

1.b Emission Limitation: 6.15 tons of PE/year

Applicable Compliance Method: The annual PE limitation was established by the following methodology:

$$(BFR) \times (AV) \times (ST/BET) \times (BEP/SP) \times (BEF) \times (TI) \times (CONV) \times (AOH) \times (CONV2) = 6.15 \text{ tons of PE/yr}$$

where:

BFR = baghouse flow rate (21,069 acfm);
AV = the air variability factor (120%);
ST = standard temperature (530 degrees Rankine);
BET = baghouse exit temperature (560 degrees Rankine);
BEP = baghouse exit temperature (14.69 lb/in²);
SP = standard pressure (14.69 lb/in²);
BEF = baghouse efficiency (0.010 grains/dscf);
TI = time (60 minutes/hour)
CONV = conversion factor (1 lb/7,000 grains)
AOH = maximum annual operating hours (6,000 hrs/yr); and
CONV2 = conversion factor (1 ton/2,000 lbs).

Compliance with the annual PE limitation is ensured while compliance is maintained with the annual hours of operation restriction.

1.c Emission Limitation: Visible PE shall not exceed 0% opacity, as a 6-minute average, from any stack.

Applicable Compliance Method: If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

1.d Annual Hours of Operation Restriction: The maximum annual operating hours for this emissions unit shall not exceed 6,000 hours/year, based upon a rolling, 12-month summation of the operating hours.

Applicable Compliance Method: Compliance with the annual hours of operation shall be determined by the record keeping requirements specified in Section A.III.1.

V. Testing Requirements (continued)

2. The permittee shall conduct, or have conducted, emission testing for the baghouse to demonstrate compliance with the allowable PE limitations.
 - a. The emission testing shall be conducted within 2.5 years 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 PE limitations.
 - c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission limitations.

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 Ohio EPA, Southwest District Office.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Southwest District Office. 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, Southwest District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA 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 emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Southwest District Office 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 Ohio EPA, Southwest District Office.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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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 Recycling and Preparation System (P076)

Activity Description: Return of Raw/Return Sand Storage Silos, Bucket Elevators, Sand Cooler

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
sand recycling and preparation system w/conveyors, silos, screens, cooling unit, bucket elevators, and muller, with PE vented to a baghouse system	OAC rule 3745-31-05(A)(3) (PTI 05-08921)	5.77 lbs of particulate emissions (PE)/hr 17.31 tons of PE/yr 0.01 grain of PE/dscf Visible PE shall not exceed 0% opacity, as a 6-minute average, from any stack. See Section A.2.a below. The hourly PE limitation represents the emissions unit's potential to emit. Therefore, no additional monitoring, record keeping or reporting is required to demonstrate compliance with this emission limitation.
	OAC rule 3745-17-07(A)(1)	The visible PE limitation specified by this rule is less stringent than the visible PE limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-11(B)(1)	The PE limitation specified by this rule is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- The PE from this emissions unit shall be controlled by venting the emissions to a baghouse with a minimum designed control efficiency of 99%, by weight.

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 1 to 15 inches of water while any emission unit controlled by the baghouse is in operation. The exception is for the first 45 days following a change of at least 50% of the fabric bags. During that time, the pressure drop shall be maintained below 15 inches of water while any emission unit controlled by the baghouse is in operation.
2. The maximum annual operating hours for this emissions unit shall not exceed 6,000 hours/yr, based upon a rolling, 12-month summation of the operating hours.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain monthly records of the following information for this emissions unit:
 - a. the operating hours for each calendar month; and
 - b. the rolling, 12-month summation of the operating hours (the total operating hours for the current month plus the total operating hours for the 11 previous calendar months).
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 and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse once each operating day.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - a. all periods of time in which this emissions unit was in operation and the pressure drop across the baghouse did not comply with the allowable range; and
 - b. all exceedances of the rolling, 12-month summation of the operating hours.
2. The deviation reports shall be submitted in accordance with paragraph A.1.c.ii of the General Terms and Conditions of this permit.

V. Testing Requirements

1. Compliance with the emission limitations specified in Section A.I.1 and the operational restriction specified in Section A.II.2 shall be determined in accordance with the following methods:

V. Testing Requirements (continued)

1.a Emission Limitations: 5.77 lbs of PE/hr; 0.01 grain of PE/dscf

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

$$\text{AHER} = (\text{BFR}) \times (\text{AV}) \times (\text{ST}/\text{BET}) \times (\text{BEF}) \times (\text{TI}) \times (\text{CONV}) = 5.77 \text{ lbs of PE/hr}$$

where:

AHER = maximum hourly emission rate (5.77 lbs of PE/hr);
BFR = baghouse flow rate (59,300 acfm);
AV = the air variability factor (120%);
ST = standard temperature (530 degrees Rankine);
BET = baghouse exit temperature (560 degrees Rankine);
BEF = baghouse efficiency (0.010 grain/dscf);
TI = time (60 minutes/hr); and
CONV = conversion factor 1 lb/7,000 grains).

The permittee shall demonstrate compliance with the PE limitations based upon the results of emission testing conducted in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A.

1.b Emission Limitation: 17.31 tons of PE/yr

Applicable Compliance Method: The annual PE limitation was established by the following methodology:

$$(\text{BFR}) \times (\text{AV}) \times (\text{ST} / \text{BET}) \times (\text{BEP}/\text{SP}) \times (\text{BEF}) \times (\text{TI}) \times (\text{CONV}) \times (\text{AOH}) \times (\text{CONV}2) = 17.31 \text{ tons of PE/year}$$

where:

BFR = baghouse flow rate (59,270 acfm);
AV = the air variability factor (120%);
ST = standard temperature (530 degrees Rankine);
BET = baghouse exit temperature (560 degrees Rankine);
BEP = baghouse exit pressure (14.69 lb/in²);
SP = standard pressure (14.69 lb/in²);
BEF = baghouse efficiency (0.010 grain of PE/dscf);
TI = time (60 minutes/hour);
CONV = conversion factor (1 lb/7,000 grains);
AOH = annual operating hours (6,000 hrs/yr); and
CONV2 = conversion factor (1 ton/2,000 lbs).

Compliance with the annual PE limitation is ensured while compliance is maintained with the annual operating hours restriction.

1.c Emission Limitation: Visible PE shall not exceed 0% opacity, as a 6-minute average, from any stack.

Applicable Compliance Method: If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

1.d Annual Hours of Operation Restriction: The maximum annual operating hours for this emissions unit shall not exceed 6,000 hours/year, based upon a rolling, 12-month summation of the operating hours.

Applicable Compliance Method: Compliance with the annual hours of operation shall be determined by the record keeping requirements specified in Section A.III.1.

V. Testing Requirements (continued)

2. The permittee shall conduct, or have conducted, emission testing for the baghouse to demonstrate compliance with the allowable PE limitations.
 - a. The emission testing shall be conducted within 2.5 years 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 PE limitations.
 - c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission limitations.

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 Ohio EPA, Southwest District Office.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Southwest District Office. 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, Southwest District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA 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 emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Southwest District Office 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 Ohio EPA, Southwest District Office.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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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: FC Line #4 Spincast Machine #1 (P078)

Activity Description: FC Line #4 Spincast Machine #1

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
spincast machine #1, preheat torches with hooding, with all emissions venting to a baghouse system	OAC rule 3745-31-05(A)(3) (PTI 05-11350)	<p>2.22 lb of particulate emissions (PE)/hr, from the ferrous casting line #4 baghouse stack, serving emissions units P078, P079, P080, P081, P082 and P083.</p> <p>0.004 grain of PE/dscf, from the ferrous casting line #4 baghouse stack, serving emissions units P078, P079, P080, P081, P082 and P083.</p> <p>0.00074 lb of PE/hr (fugitive emissions), from emissions unit P078 only</p> <p>Visible PE shall not exceed 0% opacity, as a 6-minute average, from any stack.</p> <p>Visible PE shall not exceed 20% opacity, as a 3-minute average, from any fugitive dust emissions point.</p> <p>Emissions from the use of natural gas combustion shall not exceed the following for this emissions unit:</p>

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
		<p>0.1 lb of nitrogen oxides (NOx) emissions/hr 0.4 ton of NOx emissions/yr</p> <p>0.1 lb of carbon monoxide(CO) emissions/hr 0.4 ton of CO emissions/yr</p> <p>0.0041 lb of organic compound (OC) emissions/hr 0.018 ton of OC emissions/yr 0.00045 lb of sulfur dioxide (SO2) emissions/hr 0.0019 ton of SO2 emissions/yr</p> <p>The hourly and annual PE, NOx, CO, OC, and SO2 emissions limitations specified above represent the emissions unit's potential to emit. Therefore, no additional monitoring, record keeping or reporting is required to demonstrate compliance with these emission limitations.</p>
	OAC Rule 3745-31-05 (C) (PTI 05-11350)	<p>See Section A.I.2 below.</p> <p>9.71 tons of PE/yr, as a rolling, 12-month summation, from the ferrous casting line #4 baghouse stack, serving emissions units P078, P079, P080, P081, P082 and P083.</p>
	OAC 3745-17-07(A)(1)	<p>0.00285 ton of PE/yr, as a rolling, 12-month summation (fugitive emissions) from emissions units P078 and P079, combined.</p> <p>The visible PE limitation specified by this rule is less stringent than the visible PE limitation established pursuant to OAC rule 3745-31-05(A)(3).</p>
	OAC rule 3745-17-11(B)(1)	<p>The PE limitation specified by this rule is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(A)(3).</p>

2. Additional Terms and Conditions

- 2.a** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the use of hoods, fans, and other equipment to adequately enclose, contain, capture, vent and control PE dust by venting to a baghouse.

II. Operational Restrictions

1. This emission unit shall use only detergent based or earthen based mold release agents.
2. The maximum annual iron throughput for emission units P078 and P079 (i.e., spin cast machine #1 and spin cast machine #2), combined, shall not exceed 8,268 tons/year, based on a rolling, 12-month summation.
3. The pressure drop across the baghouse shall be maintained within the range of 1 to 15 inches of water while any emission unit controlled by the baghouse is in operation. The exception is for the first 45 days following a change of at least 50% of the fabric bags. During that time, the pressure drop shall be maintained below 15 inches of water while any emission unit controlled by the baghouse is in operation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain daily records of the type of mold release agent employed (i.e., either detergent based or earthen based) in this emissions unit.
2. The permittee shall maintain monthly records of the following information:
 - a. the total iron throughput for emission units P078 and P079, combined, for the calendar month, in tons; and
 - b. the rolling, 12-month summation of the iron throughput, in tons, for emission units P078 and P079, combined, (summation of the iron throughput for the current month, plus the total iron throughput for the previous 11 calendar months).
3. 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 and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse once each operating day.
4. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive PE from the egress points (i.e., from the building enclosure) serving this emissions unit. The presence or absence of any visible fugitive emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the location and color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to minimize or eliminate the visible emissions.

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

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - a. all periods of time in which this emissions unit was in operation and the pressure drop across the baghouse did not comply with the allowable range; and
 - b. all exceedances of the rolling, 12-month summation, iron throughput restriction.

IV. Reporting Requirements (continued)

2. The deviation reports shall be submitted in accordance with paragraph A.1.c.ii of the General Terms and Conditions of this permit.
3. The permittee shall submit semiannual written reports that (a) identify all days during which any visible fugitive PE were observed from the egress points (i.e., from the building enclosure) serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible fugitive particulate emissions. These reports shall be submitted to the Ohio EPA, Southwest District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.
4. The permittee shall notify the Ohio EPA, Southwest District Office, in writing, identifying each day during which any non-detergent based or non-earthen based mold release agent was employed in this emissions unit. This report shall identify the cause for the use of the non-detergent based or non-earthen based mold release agent. This report shall be submitted to the Ohio EPA, Southwest District Office within 45 days after the occurrence.

V. Testing Requirements

1. Compliance with the emission limitations specified in Section A.I.1 and the operational restrictions specified in Section A.II shall be determined in accordance with the following methods:
 - 1.a Emission Limitations: 2.22 lbs of particulate emissions (PE)/hr and 0.004 grain of PE/dscf, from the ferrous casting line #4 baghouse stack, serving emissions units P078, P079, P080, P081, P082 and P083.

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

$$(BFR) \times (AV) \times (ST/BET) \times (BEP/SP) \times (BEF) \times (TI) \times (CONV) = 2.22 \text{ lbs of PE/hr}$$

where:

BFR = baghouse flow rate (65,000 acfm);
AV = the air variability factor (105%);
ST = standard temperature (530 degrees Rankine);
BET = baghouse exit temperature (560 degrees Rankine);
BEP = baghouse exit pressure (14.69 lb/in²);
SP = standard pressure (14.69 lb/in²);
BEF = baghouse efficiency (0.004 grain of PE/dscf);
TI = time (60 minutes/hr); and
CONV = conversion factor (1 lb/7,000 grains).

The permittee shall demonstrate compliance with the PE limitations based upon the results of emission testing conducted in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A.

- 1.b Emission Limitation: 9.71 tons of PE/yr, as a rolling, 12-month summation, from the ferrous casting line #4 baghouse stack, serving emissions units P078, P079, P080, P081, P082 and P083.

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

$$(MASER) \times (AOH) \times (CONV) = 9.71 \text{ tons of PE/yr}$$

where:

MASER = maximum hourly stack PE rate (2.22 lbs of PE/hr);
AOH = maximum annual operating hours (8,760 hrs/yr); and
CONV = conversion factor (1 ton/2,000 lbs).

V. Testing Requirements (continued)

1.c Emission Limitation: 0.00074 lb of PE/hr (fugitive emissions), from emissions unit P078 only

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

Process Emissions

$$(MMR) \times (PMER) \times (SF) \times (1-CAP) = 0.00073 \text{ lb of PE/hr}$$

where:

PMER = PE rate (0.33 lb of PE/ton of metal)*;

MMR = maximum metal (iron throughput) rate (1.1 tons of iron/hour)**;

SF = safety factor of 2; and

CAP = control device capture efficiency (99.9%).***

and

Natural Gas Combustion

$$(BBTU) \times (1/BCONV) \times (PMEF) \times (1-CAP) = 0.00001 \text{ lb of PE/hr}$$

where:

BBTU = burner Btu/hr (735,000 Btu/hr);

BCONV = Btu to scf conversion factor (1,000 Btu/scf);

PMEF = PE factor (7.6 lb of PE/106 scf)****; and

CAP = control device capture efficiency (99.9%).

* Reference from the Air Emissions from Permanent Mold Castings of Ductile Iron Pipe, Marvin D McKinley, Professor of chemical Engineering, University of Alabama, September 1994).

** The 1.1 ton of iron/hr, throughput rate, represents the emission unit's maximum throughput capacity.

*** 99.9% of the PE from this source are controlled by the baghouse, 0.1% escapes as fugitive PE.

**** Reference from AP-42, 5th Edition, Table 1.4-2, dated 7/98.

V. Testing Requirements (continued)

- 1.d** Emission Limitation: 0.00285 ton of PE/yr, as a rolling, 12-month summation (fugitive emissions) from emissions units P078 and P079 combined

Applicable Compliance Method: The annual PE limitation was established by the following methodology:

Process Emissions

$$(MMR) \times (PMER) \times (CONV) \times (SF) \times (1-CAP) = 0.0028 \text{ ton of PE/yr}$$

where:

MMR = combined maximum metal rate (8,268 tons/yr, based on a rolling, 12-month summation);

PMER = the PE rate (0.33 lb of PE/ton of metal)*;

CONV = conversion factor (1 ton/2,000 lbs);

SF = safety factor of 2; and

CAP = control device capture efficiency (99.9%)**.

and

Natural Gas Combustion

$$(BBTU) \times (1/BCONV) \times (PMEF) \times (1-CAP) \times (CONV) \times (HRS) = 0.00005 \text{ ton of PE/yr}$$

where:

BBTU = burner Btu/hr (735,000 Btu/hr);

BCONV = Btu to scf conversion factor (1000 Btu/scf)

PMEF = PE factor (7.6 lb of PE/106 scf)***;

CAP = control device capture efficiency (99.9%);

CONV = conversion factor (1 ton/2,000 lbs); and

HRS = maximum annual operating hours (8,760 hours/yr).

* Reference from the Air Emissions from Permanent Mold Castings of Ductile Iron Pipe, Marvin D McKinley, Professor of chemical Engineering, University of Alabama, September 1994).

** 99.9% of the PE from this source are controlled by the baghouse, 0.1% escapes as fugitive PE.

*** Reference from AP-42, 5th Edition, Table 1.4-2, dated 7/98.

Compliance with the annual emission limitation is ensured while compliance is maintained with the annual iron throughput restriction.

V. Testing Requirements (continued)

1.e Emission Limitations: 0.1 lb of NOx emissions/hr; 0.4 ton of NOx emissions/yr

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

for hourly NOx emissions:

$$\text{AER} = (\text{BBTU}) \times (1/\text{BCONV}) \times (\text{NOxEF}) = 0.1 \text{ lb of NOx emissions/hr}$$

where:

AER= allowable emission rate;
BBTU = maximum burner Btu/hr (735,000 Btu/hr)*;
BCONV = Btu to scf conversion factor (1000 Btu/scf); and
NOxEF = NOx emission factor (100 lb of NOx/106 scf)**.

* NOx emissions are generated solely by the combustion of natural gas and represent the maximum capacity of the burners.

** Emission factor based on AP-42, 5th Edition, Table 1.4-1, dated July, 1998.

If required, the permittee shall demonstrate compliance with the hourly NOx emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 7, as appropriate. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

for annual NOx emissions:

$$\text{AER} = (\text{HER}) \times (\text{AOH}) \times (\text{CONV}) = 0.4 \text{ ton of NOx emissions/yr}$$

where:

AER = allowable emission rate;
HER = hourly emission rate (0.1 lb of NOx emissions/hr);
AOH = maximum operating hours (8,760hours/yr); and
CONV = conversion factor (1 ton/2000 lbs).

V. Testing Requirements (continued)

1.f Emission Limitations: 0.1 lb of CO emissions/hr; 0.4 ton of CO emissions/yr

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

for hourly CO emissions:

$$\text{AER} = (\text{BBTU}) \times (1/\text{BCONV}) \times (\text{COEF}) = 0.1 \text{ lb of CO emissions/hr}$$

where:

AER= allowable emission rate;
BBTU = maximum burner Btu/hr (735,000 Btu/hr)*;
BCONV = Btu to scf conversion factor (1000 Btu/scf); and
COEF = CO emission factor (84.0 lbs of CO/106 scf)**.

* CO emissions are generated solely by the combustion of natural gas and represent the maximum capacity of the burners.

** Emission factor based on AP-42, 5th Edition, Table 1.4-1, dated July, 1998.

If required, the permittee shall demonstrate compliance with the hourly NOx emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 10, as appropriate. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

for annual CO emissions:

$$\text{AER} = (\text{HER}) \times (\text{AOH}) \times (\text{CONV}) = 0.4 \text{ ton of CO emissions/yr}$$

where:

AER = annual emission rate;
HER = hourly emission rate (0.1 lb of CO emissions/hr);
AOH = maximum annual operating hours (8,760 hours/yr); and
CONV = conversion factor (1 ton/2,000 lbs).

V. Testing Requirements (continued)

1.g Emission Limitations: 0.0041 lb of OC emissions/hr; 0.013 ton of OC emissions/yr

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

for hourly OC emissions:

$$\text{AER} = (\text{BBTU}) \times (1/\text{BCONV}) \times (\text{OCEF}) = 0.0041 \text{ lb of OC emissions/hr}$$

where:

AER = allowable emission rate;
BBTU = maximum burner Btu/hr (735,000 Btu/hr)*;
BCONV = Btu to scf conversion factor (1000 Btu/scf); and
OCEF = OC emission factor (5.5 lb of OC/106 scf)**.

If required, the permittee shall demonstrate compliance with the hourly OC emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, 18 and 25, as appropriate. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

* OC Emissions are generated solely by the combustion of natural gas and represent the maximum capacity of the burners.

** Emission factor based on AP-42, 5th Edition, Table 1.4-1, dated July, 1998.

for annual OC emissions:

$$\text{AER} = (\text{HER}) \times (\text{AOH}) \times (\text{CONV}) = 0.013 \text{ ton of OC emissions/yr}$$

where:

AER = annual emission rate;
HER = hourly emission rate (0.0041 lb of OC emissions/hr);
AOH = maximum annual operating hours (8,760 hours/year); and
CONV = conversion factor (1 ton/2,000 lbs).

V. Testing Requirements (continued)

1.h Emission Limitations: 0.00045 lb of SO₂ emissions/hr; 0.0014 ton of SO₂ emissions/yr

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

for hourly SO₂ emissions:

$$\text{AER} = (\text{BBTU}) \times (1/\text{BCONV}) \times (\text{SO}_2\text{EF}) = 0.00045 \text{ lb of SO}_2 \text{ emissions/hr}$$

where:

AER = allowable emission rate;
BBTU = maximum burner Btu/hr (735,000 Btu/hr)*;
BCONV = Btu to scf conversion factor (1020 Btu/scf); and
SO₂EF = SO₂ emission factor (0.6 lb of SO₂/106 scf)**.

If required, the permittee shall demonstrate compliance with the hourly SO₂ emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 6.

* SO₂ emissions are generated solely by the combustion of natural gas and represent the maximum capacity of the burners.

** Emission factor based on AP-42, 5th Edition, Table 1.4-1, dated July, 1998.

for annual SO₂ emissions:

$$\text{AER} = (\text{HER}) \times (\text{AOH}) \times (\text{CONV}) = 0.0014 \text{ ton of SO}_2 \text{ emissions/yr}$$

where:

AER = allowable emission rate;
HER = hourly emission rate (0.00045 lb of SO₂ emissions/hr);
AOH = maximum annual operating hours (8,760 hours/yr); and
CONV = conversion factor (1 ton/2,000 lbs).

1.i Emission Limitation: Visible PE shall not exceed 0% opacity, as a 6-minute average, from any stack.

Applicable Compliance Method: If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

1.j Emission Limitation: Visible PE shall not exceed 20% opacity, as a 3-minute average, from any fugitive dust emissions point.

Applicable Compliance Method: If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

1.k Iron Throughput Restriction: The maximum annual iron throughput for emission units P078 and P079 (i.e., spin cast machine #1 and spin cast machine #2), combined, shall not exceed 8,268 tons/year, based on a rolling, 12-month summation.

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

V. Testing Requirements (continued)

2. The permittee shall conduct, or have conducted, emission testing for the baghouse to demonstrate compliance with the allowable PE limitations.
 - a. The emission testing shall be conducted within 2.5 years 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 PE limitations.
 - c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission limitations.

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 emissions unit's P078, P079, P080, P081, P082, and P083 are operating at or near their maximum capacities, unless otherwise specified or approved by the Ohio EPA, Southwest District Office.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Southwest District Office. 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, Southwest District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA 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 emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Southwest District Office 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 Ohio EPA, Southwest District Office.

V. Testing Requirements (continued)

2. The permittee shall conduct, or have conducted, emission testing for the baghouse to demonstrate compliance with the allowable PE limitations.
 - a. The emission testing shall be conducted within 2.5 years 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 PE limitations.
 - c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission limitations.

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 emissions unit's P078, P079, P080, P081, P082, and P083 are operating at or near their maximum capacities, unless otherwise specified or approved by the Ohio EPA, Southwest District Office.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Southwest District Office. 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, Southwest District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA 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 emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Southwest District Office 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 Ohio EPA, Southwest District Office.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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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: FC Line #4 Spincast Machine #2 (P079)

Activity Description: FC Line #4 Spincast Machine #2

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
spincast machine #2, preheat torches with hooding, with all emissions vented to a baghouse system	OAC rule 3745-31-05(A)(3) (PTI 05-11350)	<p>2.22 lb of particulate emissions (PE)/hr , from the ferrous casting line #4 baghouse stack, serving emissions units P078, P079, P080, P081, P082 and P083.</p> <p>0.004 grain of PE/dscf, from the ferrous casting line #4 baghouse stack, serving emissions units P078, P079, P080, P081, P082 and P083.</p> <p>0.00074 lb of PE/hr (fugitive emissions), from emissions unit P078 only</p> <p>Visible PE shall not exceed 0% opacity, as a 6-minute average, from any stack.</p> <p>Visible PE shall not exceed 20% opacity, as a 3-minute average, from any fugitive dust emissions point.</p>

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
		<p>Emissions from the use of natural gas combustion shall not exceed the following for this emissions unit:</p> <p>0.1 lb of nitrogen oxides (NOx) emissions/hr 0.4 ton of NOx emissions/yr</p> <p>0.1 lb of carbon monoxide(CO) emissions/hr 0.4 ton of CO emissions/yr</p> <p>0.0041 lb of organic compound (OC) emissions/hr 0.018 ton of OC emissions/yr</p> <p>0.00045 lb of sulfur dioxide (SO2) emissions/hr 0.0019 ton of SO2 emissions/yr</p> <p>The hourly and annual PE, NOx, CO, OC, and SO2 emissions limitations specified above represent the emissions unit's potential to emit. Therefore, no additional monitoring, record keeping or reporting is required to demonstrate compliance with these emission limitations.</p>
	OAC Rule 3745-31-05(C) (PTI 05-11350)	<p>See Section A.I.2 below.</p> <p>9.71 tons of PE/yr, as a rolling, 12-month summation, from the ferrous casting line #4 baghouse stack, serving emissions units P078, P079, P080, P081, P082 and P083.</p>
	OAC 3745-17-07(A)(1)	<p>0.00285 ton of PE/yr, as a rolling, 12-month summation (fugitive emissions) from emissions units P078 and P079, combined.</p> <p>The visible PE limitation specified by this rule is less stringent than the visible PE limitation established pursuant to OAC rule 3745-31-05(A)(3).</p>
	OAC rule 3745-17-11(B)(1)	<p>The PE limitation specified by this rule is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(A)(3).</p>

2. Additional Terms and Conditions

- 2.a Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the use of hoods, fans, and other equipment to adequately enclose, contain, capture, vent and control PE dust by venting to a baghouse.

II. Operational Restrictions

1. This emission unit shall use only detergent based or earthen based mold release agents.
2. The maximum annual iron throughput for emission units P078 and P079 (i.e., spin cast machine #1 and spin cast machine #2), combined, shall not exceed 8,268 tons/year, based on a rolling, 12-month summation.
3. The pressure drop across the baghouse shall be maintained within the range of 1 to 15 inches of water while any emission unit controlled by the baghouse is in operation. The exception is for the first 45 days following a change of at least 50% of the fabric bags. During that time, the pressure drop shall be maintained below 15 inches of water while any emission unit controlled by the baghouse is in operation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain daily records of the type of mold release agent employed (i.e., either detergent based or earthen based) in this emissions unit.
2. The permittee shall maintain monthly records of the following information:
 - a. the total iron throughput for emission units P078 and P079, combined, for the calendar month, in tons; and
 - b. the rolling, 12-month summation of the iron throughput, in tons, for emission units P078 and P079, combined, (summation of the iron throughput for the current month, plus the total iron throughput for the previous 11 calendar months).
3. 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 and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse once each operating day.
4. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive PE from the egress points (i.e., from the building enclosure) serving this emissions unit. The presence or absence of any visible fugitive emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the location and color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to minimize or eliminate the visible emissions.

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

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - a. all periods of time in which this emissions unit was in operation and the pressure drop across the baghouse did not comply with the allowable range; and
 - b. all exceedances of the rolling, 12-month summation, iron throughput restriction.
2. The deviation reports shall be submitted in accordance with paragraph A.1.c.ii of the General Terms and Conditions of this permit.
3. The permittee shall submit semiannual written reports that (a) identify all days during which any visible fugitive PE were observed from the egress points (i.e., from the building enclosure) serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible fugitive particulate emissions. These reports shall be submitted to the Ohio EPA, Southwest District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.
4. The permittee shall notify the Ohio EPA, Southwest District Office, in writing, identifying each day during which any non-detergent based or non-earthen based mold release agent was employed in this emissions unit. This report shall identify the cause for the use of the non-detergent based or non-earthen based mold release agent. This report shall be submitted to the Ohio EPA, Southwest District Office within 45 days after the occurrence.

V. Testing Requirements

1. Compliance with the emission limitations specified in Section A.I.1 and the operational restrictions specified in Section A.II shall be determined in accordance with the following methods:
 - 1.a Emission Limitations: 2.22 lbs of PE/hr and 0.004 grain of PE/dscf, from the ferrous casting line #4 baghouse stack, serving emissions units P078, P079, P080, P081, P082 and P083.

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

$$(BFR) \times (AV) \times (ST/BET) \times (BEP/SP) \times (BEF) \times (TI) \times (CONV) = 2.22 \text{ lbs of PE/hr}$$

where:

BFR = baghouse flow rate (65,000 acfm);
AV = the air variability factor (105%);
ST = standard temperature (530 degrees Rankine);
BET = baghouse exit temperature (560 degrees Rankine);
BEP = baghouse exit pressure (14.69 lb/in²);
SP = standard pressure (14.69 lb/in²);
BEF = baghouse efficiency (0.004 grain of PE/dscf);
TI = time (60 minutes/hr); and
CONV = conversion factor (1 lb/7,000 grains).

The permittee shall demonstrate compliance with the PE limitations based upon the results of emission testing conducted in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A.

V. Testing Requirements (continued)

- 1.b** Emission Limitation: 9.71 tons of PE/yr, as a rolling, 12-month summation, from the ferrous casting line #4 baghouse stack, serving emissions units P078, P079, P080, P081, P082 and P083.

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

$$(\text{MASER}) \times (\text{AOH}) \times (\text{CONV}) = 9.71 \text{ tons of PE/yr}$$

where:

MASER = maximum hourly stack PE rate (2.22 lbs of PE/hr);
AOH = maximum annual operating hours (8,760 hrs/yr); and
CONV = conversion factor (1 ton/2,000 lbs).

- 1.c** Emission Limitation: 0.00074 lb of PE/hr (fugitive emissions), from emissions unit P078 only

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

Process Emissions

$$(\text{MMR}) \times (\text{PMER}) \times (\text{SF}) \times (1-\text{CAP}) = 0.00073 \text{ lb of PE/hr}$$

where:

PMER = PE rate (0.33 lb of PE/ton of metal)*;
MMR = maximum metal (iron throughput) rate (1.1 tons of iron/hour)**;
SF = safety factor of 2; and
CAP = control device capture efficiency (99.9%).***

and

Natural Gas Combustion

$$(\text{BBTU}) \times (1/\text{BCONV}) \times (\text{PMEF}) \times (1-\text{CAP}) = 0.00001 \text{ lb of PE/hr}$$

where:

BBTU = burner Btu/hr (735,000 Btu/hr);
BCONV = Btu to scf conversion factor (1,000 Btu/scf);
PMEF = PE factor (7.6 lb of PE/106 scf)****; and
CAP = control device capture efficiency (99.9%).

* Reference from the Air Emissions from Permanent Mold Castings of Ductile Iron Pipe, Marvin D McKinley, Professor of chemical Engineering, University of Alabama, September 1994).

** The 1.1 ton of iron/hr, throughput rate, represents the emission unit's maximum throughput capacity.

*** 99.9% of the PE from this source are controlled by the baghouse, 0.1% escapes as fugitive PE.

**** Reference from AP-42, 5th Edition, Table 1.4-2, dated 7/98.

V. Testing Requirements (continued)

- 1.d** Emission Limitation: 0.00285 ton of PE/yr, as a rolling, 12-month summation (fugitive emissions) from emissions units P078 and P079 combined

Applicable Compliance Method: The annual PE limitation was established by the following methodology:

Process Emissions

$$(\text{MMR}) \times (\text{PMER}) \times (\text{CONV}) \times (\text{SF}) \times (1-\text{CAP}) = 0.0028 \text{ ton of PE/yr}$$

where:

MMR = combined maximum metal rate (8,268 tons/yr)

PMER = the PE rate (0.33 lb of PE/ton of metal)*;

CONV = conversion factor (1 ton/2,000 lbs);

SF = safety factor of 2; and

CAP = control device capture efficiency (99.9%)**.

and

Natural Gas Combustion

$$(\text{BBTU}) \times (1/\text{BCONV}) \times (\text{PMEF}) \times (1-\text{CAP}) \times (\text{CONV}) \times (\text{HRS}) = 0.00005 \text{ ton of PE/yr}$$

where:

BBTU = burner Btu/hr (735,000 Btu/hr);

BCONV = Btu to scf conversion factor (1000 Btu/scf)

PMEF = PE factor (7.6 lb of PE/106 scf)***;

CAP = control device capture efficiency (99.9%);

CONV = conversion factor (1 ton/2,000 lbs); and

HRS = maximum annual operating hours (8,760 hours/yr).

* Reference from the Air Emissions from Permanent Mold Castings of Ductile Iron Pipe, Marvin D McKinley, Professor of chemical Engineering, University of Alabama, September 1994).

** 99.9% of the PE from this source are controlled by the baghouse, 0.1% escapes as fugitive PE.

*** Reference from AP-42, 5th Edition, Table 1.4-2, dated 7/98.

Compliance with the annual emission limitation is ensured while compliance is maintained with the annual iron throughput restriction.

V. Testing Requirements (continued)

1.e Emission Limitations: 0.1 lb of NOx emissions/hr; 0.4 ton of NOx emissions/yr

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

for hourly NOx emissions:

$$\text{AER} = (\text{BBTU}) \times (1/\text{BCONV}) \times (\text{NOxEF}) = 0.1 \text{ lb of NOx emissions/hr}$$

where:

AER= allowable emission rate;
BBTU = maximum burner Btu/hr (735,000 Btu/hr)*;
BCONV = Btu to scf conversion factor (1000 Btu/scf); and
NOxEF = NOx emission factor (100 lb of NOx/106 scf)**.

* NOx emissions are generated solely by the combustion of natural gas and represent the maximum capacity of the burners.

** Emission factor based on AP-42, 5th Edition, Table 1.4-1, dated July, 1998.

If required, the permittee shall demonstrate compliance with the hourly NOx emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 7, as appropriate. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

for annual NOx emissions:

$$\text{AER} = (\text{HER}) \times (\text{AOH}) \times (\text{CONV}) = 0.4 \text{ ton of NOx emissions/yr}$$

where:

AER = allowable emission rate;
HER = hourly emission rate (0.1 lb of NOx emissions/hr);
AOH = maximum operating hours (8,760hours/yr); and
CONV = conversion factor (1 ton/2000 lbs).

V. Testing Requirements (continued)

1.f Emission Limitations: 0.1 lb of CO emissions/hr; 0.4 ton of CO emissions/yr

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

for hourly CO emissions:

$$\text{AER} = (\text{BBTU}) \times (1/\text{BCONV}) \times (\text{COEF}) = 0.1 \text{ lb of CO emissions/hr}$$

where:

AER= allowable emission rate;
BBTU = maximum burner Btu/hr (735,000 Btu/hr)*;
BCONV = Btu to scf conversion factor (1000 Btu/scf); and
COEF = CO emission factor (84.0 lbs of CO/106 scf)**.

* CO emissions are generated solely by the combustion of natural gas and represent the maximum capacity of the burners.

** Emission factor based on AP-42, 5th Edition, Table 1.4-1, dated July, 1998.

If required, the permittee shall demonstrate compliance with the hourly CO emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 10, as appropriate. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

for annual CO emissions:

$$\text{AER} = (\text{HER}) \times (\text{AOH}) \times (\text{CONV}) = 0.4 \text{ ton of CO emissions/yr}$$

where:

AER = annual emission rate;
HER = hourly emission rate (0.1 lb of CO emissions/hr);
AOH = maximum annual operating hours (8,760 hours/yr); and
CONV = conversion factor (1 ton/2,000 lbs).

V. Testing Requirements (continued)

1.g Emission Limitations: 0.0041 lb of OC emissions/hr; 0.013 ton of OC emissions/yr

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

for hourly OC emissions:

$$\text{AER} = (\text{BBTU}) \times (1/\text{BCONV}) \times (\text{OCEF}) = 0.0041 \text{ lb of OC emissions/hr}$$

where:

AER = allowable emission rate;
BBTU = maximum burner Btu/hr (735,000 Btu/hr)*;
BCONV = Btu to scf conversion factor (1000 Btu/scf); and
OCEF = OC emission factor (5.5 lb of OC/106 scf)**.

If required, the permittee shall demonstrate compliance with the hourly OC emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, 18 and 25, as appropriate. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

* OC Emissions are generated solely by the combustion of natural gas and represent the maximum capacity of the burners.

** Emission factor based on AP-42, 5th Edition, Table 1.4-1, dated July, 1998.

for annual OC emissions:

$$\text{AER} = (\text{HER}) \times (\text{AOH}) \times (\text{CONV}) = 0.013 \text{ ton of OC emissions/yr}$$

where:

AER = annual emission rate;
HER = hourly emission rate (0.0041 lb of OC emissions/hr);
AOH = maximum annual operating hours (8,760 hours/year); and
CONV = conversion factor (1 ton/2,000 lbs).

V. Testing Requirements (continued)

1.h Emission Limitations: 0.00045 lb of SO₂ emissions/hr; 0.0014 ton of SO₂ emissions/yr

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

for hourly SO₂ emissions:

$$\text{AER} = (\text{BBTU}) \times (1/\text{BCONV}) \times (\text{SO}_2\text{EF}) = 0.00045 \text{ lb of SO}_2 \text{ emissions/hr}$$

where:

AER = allowable emission rate;
BBTU = maximum burner Btu/hr (735,000 Btu/hr)*;
BCONV = Btu to scf conversion factor (1020 Btu/scf); and
SO₂EF = SO₂ emission factor (0.6 lb of SO₂/106 scf)**.

If required, the permittee shall demonstrate compliance with the hourly SO₂ emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 6, as appropriate. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

* SO₂ emissions are generated solely by the combustion of natural gas and represent the maximum capacity of the burners.

** Emission factor based on AP-42, 5th Edition, Table 1.4-1, dated July, 1998.

for annual SO₂ emissions:

$$\text{AER} = (\text{HER}) \times (\text{AOH}) \times (\text{CONV}) = 0.0014 \text{ ton of SO}_2 \text{ emissions/yr}$$

where:

AER = allowable emission rate;
HER = hourly emission rate (0.00045 lb of SO₂ emissions/hr);
AOH = maximum annual operating hours (8,760 hours/yr); and
CONV = conversion factor (1 ton/2,000 lbs).

1.i Emission Limitation: Visible PE shall not exceed 0% opacity, as a 6-minute average, from any stack.

Applicable Compliance Method: If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

1.j Emission Limitation: Visible PE of fugitive dust shall not exceed 20% opacity, as a 3-minute average, (from any building exhaust associated with ferrous casting line #4).

Applicable Compliance Method: If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

1.k Iron Throughput Restriction: The maximum annual iron throughput for emission units P078 and P079 (i.e., spin cast machine #1 and spin cast machine #2), combined, shall not exceed 8,268 tons/year, based on a rolling, 12-month summation.

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

Facility Name: **Honda of America Mfg., Inc. Anna Engine Plant**
Facility ID: **05-75-00-0174**
Emissions Unit: **FC Line #4 Spincast Machine #2 (P079)**

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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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: FC Line #4 Shotblast Machine (P080)

Activity Description: FC Line #4 Shotblast Machine

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
shotblast machine & transfer equipment, with PE vented to a baghouse system	OAC rule 3745-31-05(A)(3) (PTI 05-11350)	<p>2.22 lb of particulate emissions (PE)/hr, from the ferrous casting line #4 baghouse stack, serving emissions units P078, P079, P080, P081, P082 and P083.</p> <p>0.004 grain of PE/dscf, from the ferrous casting line #4 baghouse stack, serving emissions units P078, P079, P080, P081, P082 and P083.</p> <p>0.011 lb of PE/hr (fugitive emissions)</p> <p>Visible PE shall not exceed 0% opacity, as a 6-minute average, from any stack.</p> <p>Visible PE shall not exceed 20% opacity, as a 3-minute average, from any fugitive dust emissions point.</p> <p>The hourly emission limitations specified above represent the emission unit's potential to emit. Therefore, no additional monitoring, record keeping or reporting is required to demonstrate compliance with these emission limitations.</p>
		See Section A.I.2 below.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
	OAC Rule 3745-31-05(C) (PTI 05-11350)	9.71 tons of PE/yr, as a rolling, 12-month summation, from the ferrous casting line #4 baghouse stack, serving emissions units P078, P079, P080, P081, P082 and P083.
		0.02 ton of PE/yr, as a rolling, 12-month summation (fugitive emissions)
		The annual PE limitation, for the ferrous casting line #4 baghouse stack, represents the emissions unit's potential to emit. Therefore, no additional monitoring, record keeping or reporting is required to demonstrate compliance with this emission limitation.
	OAC 3745-17-07(A)(1)	The visible PE limitation specified by this rule is less stringent than the visible PE limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-11(B)(1)	The PE limitation specified by this rule is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- 2.a Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the use of hoods, fans, and other equipment to adequately enclose, contain, capture, vent and control PE dust by venting to a baghouse.

II. Operational Restrictions

1. The maximum annual iron throughput shall not exceed 8,268 tons/yr, based on a rolling, 12-month summation.
2. The pressure drop across the baghouse shall be maintained within the range of 1 to 15 inches of water while any emission unit controlled by the baghouse is in operation. The exception is for the first 45 days following a change of at least 50% of the fabric bags. During that time, the pressure drop shall be maintained below 15 inches of water while any emission unit controlled by the baghouse is in operation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain monthly records of the following information:
 - a. the total iron throughput for the calendar month, in tons; and
 - b. the rolling, 12-month summation of the iron throughput, in tons, (summation of the iron throughput for the current month, plus the total iron throughput for the previous 11 calendar months).

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

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 and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse once each operating day.
3. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive PE from the egress points (i.e., from the building enclosure) serving this emissions unit. The presence or absence of any visible fugitive emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the location and color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to minimize or eliminate the visible emissions.

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

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - a. all periods of time in which this emissions unit was in operation and the pressure drop across the baghouse did not comply with the allowable range; and
 - b. all exceedances of the rolling, 12-month summation, iron throughput restriction.
2. The deviation reports shall be submitted in accordance with paragraph A.1.c.ii of the General Terms and Conditions of this permit.
3. The permittee shall submit semiannual written reports that (a) identify all days during which any visible fugitive PE were observed from the egress points (i.e., from the building enclosure) serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible fugitive particulate emissions. These reports shall be submitted to the Ohio EPA, Southwest District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

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

V. Testing Requirements (continued)

- 1.a** Emission Limitations: 2.22 lbs of PE/hr and 0.004 grain of PE/dscf, from the ferrous casting line #4 baghouse stack, serving emissions units P078, P079, P080, P081, P082 and P083.

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

$$(BFR) \times (AV) \times (ST/BET) \times (BEP/SP) \times (BEF) \times (TI) \times (CONV) = 2.22 \text{ lbs of PE/hr}$$

where:

BFR = baghouse flow rate (65,000 acfm);
AV = the air variability factor (105%);
ST = standard temperature (530 degrees Rankine);
BET = baghouse exit temperature (560 degrees Rankine);
BEP = baghouse exit pressure (14.69 lb/in²);
SP = standard pressure (14.69 lb/in²);
BEF = baghouse efficiency (0.004 grain of PE/dscf);
TI = time (60 minutes/hr); and
CONV = conversion factor (1 lb/7,000 grains).

The permittee shall demonstrate compliance with the PE limitations based upon the results of emission testing conducted in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A.

- 1.b** Emission Limitation: 9.71 tons of PE/yr, as a rolling, 12-month summation, from the ferrous casting line #4 baghouse stack, serving emissions units P078, P079, P080, P081, P082 and P083.

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

$$(MASER) \times (AOH) \times (CONV) = 9.71 \text{ tons of PE/yr}$$

where:

MASER = maximum hourly stack PE rate (2.22 lbs of PE/hr);
AOH = maximum annual operating hours (8,760 hrs/yr); and
CONV = conversion factor (1 ton/2,000 lbs).

V. Testing Requirements (continued)

1.c Emission Limitation: 0.011 lb of PE/hr (fugitive emissions)

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

$$(MMR) \times (PMER) \times (1-CAP) \times (1-BCAP) = 0.011 \text{ lb of PE/hr}$$

where:

MMR = maximum metal (iron throughput) rate (2.2 tons of iron/hour)*;

PMER = the PE rate (15.5 lbs of PE/ton of metal)**;

CAP = control device capture efficiency (99.9%)***; and

BCAP = building capture efficiency (70%)****.

* The 2.2 tons of iron/hr, throughput rate, represents the emission unit's maximum throughput capacity.

** Reference obtained from American Foundry Society, Modern Casting, dated January 1972.

*** 99.9% of the PE from this source are controlled by the baghouse, 0.1% escapes as fugitive PE.

**** Building capture efficiency estimation obtained via April 10, 1998 letter to Ironton Iron Inc., from the Director of Portsmouth Local Air Agency.

1.d Emission Limitation: 0.02 ton of PE/yr, as a rolling, 12-month summation (fugitive emissions)

Applicable Compliance Method: The annual PE limitation was established by the following methodology:

$$(MMR) \times (PMER) \times (CONV) \times (1-CAP) \times (1-BCAP) = 0.02 \text{ ton of PE/yr}$$

where:

MMR = the maximum metal rate (8,268 tons of iron/yr, based on a rolling, 12-month summation);

PMER = the PE Emission rate (15.5 lbs of PE/ton of metal)*;

CONV = conversion factor (1 ton/2,000 lbs);

CAP = control device capture efficiency (99.9%)**; and

BCAP = building capture efficiency (70%)***.

* Reference obtained from American Foundry Society, Modern Casting, dated January 1972.

** 99.9% of the PE from this source are controlled by the baghouse, 0.1% escapes as fugitive PE.

*** Building capture efficiency estimation obtained via April 10, 1998 letter to Ironton Iron Inc., from the Director of Portsmouth Local Air Agency.

Compliance with the annual emission limitation is ensured while compliance is maintained with the annual iron throughput restriction.

1.e Emission Limitation: Visible PE shall not exceed 0% opacity, as a 6-minute average, from any stack.

Applicable Compliance Method: If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

1.f Emission Limitation: Visible PE shall not exceed 20% opacity, as a 3-minute average, from any fugitive dust emissions point.

Applicable Compliance Method: If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

V. Testing Requirements (continued)

- 1.g** Iron Throughput Restriction: The maximum annual iron throughput shall not exceed 8,268 tons/yr, based on a rolling, 12-month summation.

Applicable Compliance Method: Compliance with the iron throughput restriction shall be determined by the record keeping requirements specified in Section A.III.1.

- 2.** The permittee shall conduct, or have conducted, emission testing for the baghouse to demonstrate compliance with the allowable PE limitations.
- a. The emission testing shall be conducted within 2.5 years 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 PE limitations.
 - c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission limitations.

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 emissions unit's P078, P079, P080, P081, P082, and P083 are operating at or near their maximum capacities, unless otherwise specified or approved by the Ohio EPA, Southwest District Office.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Southwest District Office. 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, Southwest District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA 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 emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Southwest District Office 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 Ohio EPA, Southwest District Office.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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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: FC Line #4 Tube Cutting Machine #1 (P081)

Activity Description: FC Line #4 Tube Cutting Machine #1

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
tube cutting machine #1, with PE vented to a baghouse system	OAC rule 3745-31-05(A)(3) (PTI 05-11350)	2.22 lb of particulate emissions (PE)/hr, from the ferrous casting line #4 baghouse stack, serving emissions units P078, P079, P080, P081, P082 and P083.
		0.004 grain of PE/dscf, from the ferrous casting line #4 baghouse stack, serving emissions units P078, P079, P080, P081, P082 and P083.
		0.0006 lb of PE/hr (fugitive emissions)
		Visible PE shall not exceed 0% opacity, as a 6-minute average, from any stack.
		Visible PE shall not exceed 20% opacity, as a 3-minute average, from any fugitive dust emissions point.
		The hourly emission limitations specified above represent the emission unit's potential to emit. Therefore, no additional monitoring, record keeping or reporting is required to demonstrate compliance with these emission limitations.
		See Section A.I.2 below.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
	OAC Rule 3745-31-05(C) (PTI 05-11350)	9.71 tons of PE/yr, as a rolling, 12-month summation, from the ferrous casting line #4 baghouse stack, serving emissions units P078, P079, P080, P081, P082 and P083. 0.003 ton of PE/yr, as a rolling, 12-month summation (fugitive emissions), from emissions unit's P081 and P082, combined. The annual PE limitation, for the ferrous casting line #4 baghouse stack, represents the emissions unit's potential to emit. Therefore, no additional monitoring, record keeping or reporting is required to demonstrate compliance with this emission limitation.
	OAC 3745-17-07(A)(1)	The visible PE limitation specified by this rule is less stringent than the visible PE limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-11(B)(1)	The PE limitation specified by this rule is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- 2.a Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the use of hoods, fans, and other equipment to adequately enclose, contain, capture, vent and control PE dust by venting to a baghouse.

II. Operational Restrictions

1. The maximum annual iron throughput for emission units P081 and P082, combined, shall not exceed 8,268 tons/yr, based on a rolling, 12-month summation.
2. The pressure drop across the baghouse shall be maintained within the range of 1 to 15 inches of water while any emission unit controlled by the baghouse is in operation. The exception is for the first 45 days following a change of at least 50% of the fabric bags. During that time, the pressure drop shall be maintained below 15 inches of water while any emission unit controlled by the baghouse is in operation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain monthly records of the following information:
 - a. the total iron throughput for emission units P081 and P082, combined, for the calendar month, in tons; and
 - b. the rolling, 12-month summation of the iron throughput for emission units P081 and P082, combined, in tons, (summation of the iron throughput for the current month, plus the total iron throughput for the previous 11 calendar months).

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

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 and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse once each operating day.
3. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive PE from the egress points (i.e., from the building enclosure) serving this emissions unit. The presence or absence of any visible fugitive emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the location and color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to minimize or eliminate the visible emissions.

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

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - a. all periods of time in which this emissions unit was in operation and the pressure drop across the baghouse did not comply with the allowable range; and
 - b. all exceedances of the rolling, 12-month summation, iron throughput restriction.
2. The deviation reports shall be submitted in accordance with paragraph A.1.c.ii of the General Terms and Conditions of this permit.
3. The permittee shall submit semiannual written reports that (a) identify all days during which any visible fugitive PE were observed from the egress points (i.e., from the building enclosure) serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible fugitive particulate emissions. These reports shall be submitted to the Ohio EPA, Southwest District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

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

V. Testing Requirements (continued)

- 1.a** Emission Limitations: 2.22 lbs of PE/hr and 0.004 grain of PE/dscf, from the ferrous casting line #4 baghouse stack, serving emissions units P078, P079, P080, P081, P082 and P083.

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

$$(BFR) \times (AV) \times (ST/BET) \times (BEP/SP) \times (BEF) \times (TI) \times (CONV) = 2.22 \text{ lbs of PE/hr}$$

where:

BFR = baghouse flow rate (65,000 acfm);
AV = the air variability factor (105%);
ST = standard temperature (530 degrees Rankine);
BET = baghouse exit temperature (560 degrees Rankine);
BEP = baghouse exit pressure (14.69 lb/in²);
SP = standard pressure (14.69 lb/in²);
BEF = baghouse efficiency (0.004 grain of PE/dscf);
TI = time (60 minutes/hr); and
CONV = conversion factor (1 lb/7,000 grains).

The permittee shall demonstrate compliance with the PE limitations based upon the results of emission testing conducted in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A.

- 1.b** Emission Limitation: 9.71 tons of PE/yr, as a rolling, 12-month summation, from the ferrous casting line #4 baghouse stack, serving emissions units P078, P079, P080, P081, P082 and P083.

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

$$(MASER) \times (AOH) \times (CONV) = 9.71 \text{ tons of PE/yr}$$

where:

MASER = maximum hourly stack PE rate (2.22 lbs of PE/hr);
AOH = maximum annual operating hours (8,760 hrs/yr); and
CONV = conversion factor (1 ton/2,000 lbs).

V. Testing Requirements (continued)

1.c Emission Limitation: 0.0006 lb of PE/hr (fugitive emissions)

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

$$(MMR) \times (PMER) \times (1-CAP) \times (1-BCAP) = 0.0006 \text{ lb of PE/hr}$$

where:

MMR = maximum metal (iron throughput) rate (1.1 tons of iron/hour)*;

PMER = the PE rate (1.7 lbs of PE/ton of metal)**;

CAP = control device capture efficiency (99.9%)***; and

BCAP = building capture efficiency (70%)****.

* The 1.1 tons of iron/hr, throughput rate, represents the emission unit's maximum throughput capacity.

** Reference obtained from U.S. EPA Fire database.

*** 99.9% of the PE from this source are controlled by the baghouse, 0.1% escapes as fugitive PE.

**** Building capture efficiency estimation obtained via April 10, 1998 letter to Ironton Iron Inc., from the Director of Portsmouth Local Air Agency.

1.d Emission Limitation: 0.003 ton of PE/yr, as a rolling, 12-month summation (fugitive emissions), for emissions units P081 and P082, combined.

Applicable Compliance Method: The annual PE limitation was established by the following methodology:

$$(MMR) \times (PMER) \times (CONV) \times (1-CAP) \times (1-BCAP) = 0.003 \text{ ton of PE/yr}$$

where:

MMR = the maximum metal rate (8,268 tons of iron/yr, based on a rolling, 12-month summation);

PMER = the PE Emission rate (1.7 lbs of PE/ton of metal)*;

CONV = conversion factor (1 ton/2,000 lbs);

CAP = control device capture efficiency (99.9%)**; and

BCAP = building capture efficiency (70%)***.

* Reference obtained from U.S. EPA Fire database.

** 99.9% of the PE from this source are controlled by the baghouse, 0.1% escapes as fugitive PE.

*** Building capture efficiency estimation obtained via April 10, 1998 letter to Ironton Iron Inc., from the Director of Portsmouth Local Air Agency.

Compliance with the annual emission limitation is ensured while compliance is maintained with the annual iron throughput restriction.

1.e Emission Limitation: Visible PE shall not exceed 0% opacity, as a 6-minute average, from any stack.

Applicable Compliance Method: If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

1.f Emission Limitation: Visible PE shall not exceed 20% opacity, as a 3-minute average, from any fugitive dust emissions point.

Applicable Compliance Method: If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

V. Testing Requirements (continued)

- 1.g** Iron Throughput Restriction: The maximum annual iron throughput shall not exceed 8,268 tons/yr, based on a rolling, 12-month summation.

Applicable Compliance Method: Compliance with the iron throughput restriction shall be determined by the record keeping requirements specified in Section A.III.1.

- 2.** The permittee shall conduct, or have conducted, emission testing for the baghouse to demonstrate compliance with the allowable PE limitations.
- The emission testing shall be conducted within 2.5 years after issuance of the permit and within 6 months prior to permit expiration.
 - The emission testing shall be conducted to demonstrate compliance with the allowable PE limitations.
 - The following test methods shall be employed to demonstrate compliance with the allowable mass emission limitations.

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.

- The test(s) shall be conducted while emissions unit's P078, P079, P080, P081, P082, and P083 are operating at or near their maximum capacities, unless otherwise specified or approved by the Ohio EPA, Southwest District Office.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Southwest District Office. 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, Southwest District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA 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 emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Southwest District Office 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 Ohio EPA, Southwest District Office.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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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: FC Line #4 Tube Cutting Machine #2 (P082)

Activity Description: FC Line #4 Tube Cutting Machine #2

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
tube cutting machine #2, with PE vented to a baghouse system	OAC rule 3745-31-05(A)(3) (PTI 05-11350)	2.22 lb of particulate emissions (PE)/hr, from the ferrous casting line #4 baghouse stack, serving emissions units P078, P079, P080, P081, P082 and P083.
		0.004 grain of PE/dscf, from the ferrous casting line #4 baghouse stack, serving emissions units P078, P079, P080, P081, P082 and P083.
		0.0006 lb of PE/hr (fugitive emissions)
		Visible PE shall not exceed 0% opacity, as a 6-minute average, from any stack.
		Visible PE shall not exceed 20% opacity, as a 3-minute average, from any fugitive dust emissions point.
		The hourly emission limitations specified above represent the emission unit's potential to emit. Therefore, no additional monitoring, record keeping or reporting is required to demonstrate compliance with these emission limitations.
		See Section A.I.2 below.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
	OAC Rule 3745-31-05(C) (PTI 05-11350)	9.71 tons of PE/yr, as a rolling, 12-month summation, from the ferrous casting line #4 baghouse stack, serving emissions units P078, P079, P080, P081, P082 and P083. 0.003 ton of PE/yr, as a rolling, 12-month summation (fugitive emissions), from emissions unit's P081 and P082, combined. The annual PE limitation, for the ferrous casting line #4 baghouse stack, represents the emissions unit's potential to emit. Therefore, no additional monitoring, record keeping or reporting is required to demonstrate compliance with this emission limitation.
	OAC 3745-17-07(A)(1)	The visible PE limitation specified by this rule is less stringent than the visible PE limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-11(B)(1)	The PE limitation specified by this rule is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- 2.a Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the use of hoods, fans, and other equipment to adequately enclose, contain, capture, vent and control PE dust by venting to a baghouse.

II. Operational Restrictions

1. The maximum annual iron throughput for emission units P081 and P082, combined, shall not exceed 8,268 tons/yr, based on a rolling, 12-month summation.
2. The pressure drop across the baghouse shall be maintained within the range of 1 to 15 inches of water while any emission unit controlled by the baghouse is in operation. The exception is for the first 45 days following a change of at least 50% of the fabric bags. During that time, the pressure drop shall be maintained below 15 inches of water while any emission unit controlled by the baghouse is in operation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain monthly records of the following information:
 - a. the total iron throughput for emission units P081 and P082, combined, for the calendar month, in tons; and
 - b. the rolling, 12-month summation of the iron throughput for emission units P081 and P082, combined, in tons, (summation of the iron throughput for the current month, plus the total iron throughput for the previous 11 calendar months).

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

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 and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse once each operating day.
3. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive PE from the egress points (i.e., from the building enclosure) serving this emissions unit. The presence or absence of any visible fugitive emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the location and color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to minimize or eliminate the visible emissions.

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

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - a. all periods of time in which this emissions unit was in operation and the pressure drop across the baghouse did not comply with the allowable range; and
 - b. all exceedances of the rolling, 12-month summation, iron throughput restriction.
2. The deviation reports shall be submitted in accordance with paragraph A.1.c.ii of the General Terms and Conditions of this permit.
3. The deviation reports shall be submitted in accordance with paragraph A.1.e.ii of the General Terms and Conditions of this permit.

The permittee shall submit semiannual written reports that (a) identify all days during which any visible fugitive PE were observed from the egress points (i.e., from the building enclosure) serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible fugitive particulate emissions. These reports shall be submitted to the Ohio EPA, Southwest District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

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

V. Testing Requirements (continued)

- 1.a** Emission Limitations: 2.22 lbs of PE/hr and 0.004 grain of PE/dscf, from the ferrous casting line #4 baghouse stack, serving emissions units P078, P079, P080, P081, P082 and P083.

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

$$(BFR) \times (AV) \times (ST/BET) \times (BEP/SP) \times (BEF) \times (TI) \times (CONV) = 2.22 \text{ lbs of PE/hr}$$

where:

BFR = baghouse flow rate (65,000 acfm);
AV = the air variability factor (105%);
ST = standard temperature (530 degrees Rankine);
BET = baghouse exit temperature (560 degrees Rankine);
BEP = baghouse exit pressure (14.69 lb/in²);
SP = standard pressure (14.69 lb/in²);
BEF = baghouse efficiency (0.004 grain of PE/dscf);
TI = time (60 minutes/hr); and
CONV = conversion factor (1 lb/7,000 grains).

The permittee shall demonstrate compliance with the PE limitations based upon the results of emission testing conducted in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A.

- 1.b** Emission Limitation: 9.71 tons of PE/yr, as a rolling, 12-month summation, from the ferrous casting line #4 baghouse stack, serving emissions units P078, P079, P080, P081, P082 and P083.

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

$$(MASER) \times (AOH) \times (CONV) = 9.71 \text{ tons of PE/yr}$$

where:

MASER = maximum hourly stack PE rate (2.22 lbs of PE/hr);
AOH = maximum annual operating hours (8,760 hrs/yr); and
CONV = conversion factor (1 ton/2,000 lbs).

V. Testing Requirements (continued)

1.c Emission Limitation: 0.0006 lb of PE/hr (fugitive emissions)

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

$$(MMR) \times (PMER) \times (1-CAP) \times (1-BCAP) = 0.0006 \text{ lb of PE/hr}$$

where:

MMR = maximum metal (iron throughput) rate (1.1 tons of iron/hour)*;

PMER = the PE rate (1.7 lbs of PE/ton of metal)**;

CAP = control device capture efficiency (99.9%)***; and

BCAP = building capture efficiency (70%)****.

* The 1.1 tons of iron/hr, throughput rate, represents the emission unit's maximum throughput capacity.

** Reference obtained from U.S. EPA Fire database.

*** 99.9% of the PE from this source are controlled by the baghouse, 0.1% escapes as fugitive PE.

**** Building capture efficiency estimation obtained via April 10, 1998 letter to Ironton Iron Inc., from the Director of Portsmouth Local Air Agency.

1.d Emission Limitation: 0.003 ton of PE/yr, as a rolling, 12-month summation (fugitive emissions), for emissions units P081 and P082, combined.

Applicable Compliance Method: The annual PE limitation was established by the following methodology:

$$(MMR) \times (PMER) \times (CONV) \times (1-CAP) \times (1-BCAP) = 0.003 \text{ ton of PE/yr}$$

where:

MMR = the maximum metal rate (8,268 tons of iron/yr, based on a rolling, 12-month summation);

PMER = the PE Emission rate (1.7 lbs of PE/ton of metal)*;

CONV = conversion factor (1 ton/2,000 lbs);

CAP = control device capture efficiency (99.9%)**; and

BCAP = building capture efficiency (70%)***.

* Reference obtained from U.S. EPA Fire database.

** 99.9% of the PE from this source are controlled by the baghouse, 0.1% escapes as fugitive PE.

*** Building capture efficiency estimation obtained via April 10, 1998 letter to Ironton Iron Inc., from the Director of Portsmouth Local Air Agency.

Compliance with the annual emission limitation is ensured while compliance is maintained with the annual iron throughput restriction.

1.e Emission Limitation: Visible PE shall not exceed 0% opacity, as a 6-minute average, from any stack.

Applicable Compliance Method: If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

1.f Emission Limitation: Visible PE shall not exceed 20% opacity, as a 3-minute average, from any fugitive dust emissions point.

Applicable Compliance Method: If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

V. Testing Requirements (continued)

- 1.g** Iron Throughput Restriction: The maximum annual iron throughput shall not exceed 8,268 tons/yr, based on a rolling, 12-month summation.

Applicable Compliance Method: Compliance with the iron throughput restriction shall be determined by the record keeping requirements specified in Section A.III.1.

- 2.** The permittee shall conduct, or have conducted, emission testing for the baghouse to demonstrate compliance with the allowable PE limitations.
- The emission testing shall be conducted within 2.5 years after issuance of the permit and within 6 months prior to permit expiration.
 - The emission testing shall be conducted to demonstrate compliance with the allowable PE limitations.
 - The following test methods shall be employed to demonstrate compliance with the allowable mass emission limitations.

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.

- The test(s) shall be conducted while emissions unit's P078, P079, P080, P081, P082, and P083 are operating at or near their maximum capacities, unless otherwise specified or approved by the Ohio EPA, Southwest District Office.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Southwest District Office. 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, Southwest District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA 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 emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Southwest District Office 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 Ohio EPA, Southwest District Office.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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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: FC Line #4 Autopour System (P083)

Activity Description: FC Line #4 Autopour System

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
<p>autopour equipment and emissions from transfer into autopour system, with PE vented to a baghouse system</p>	<p>OAC rule 3745-31-05(A)(3) (PTI 05-11350)</p>	<p>2.22 lb of particulate emissions (PE)/hr, from the ferrous casting line #4 baghouse stack, serving emissions units P078, P079, P080, P081, P082 and P083.</p> <p>0.004 grain of PE/dscf, from the ferrous casting line #4 baghouse stack, serving emissions units P078, P079, P080, P081, P082 and P083.</p> <p>0.15 lb of PE/hr (fugitive emissions)</p> <p>Visible PE shall not exceed 0% opacity, as a 6-minute average, from any stack.</p> <p>Visible PE shall not exceed 20% opacity, as a 3-minute average, from any fugitive dust emissions point.</p> <p>The hourly emission limitations specified above represent the emission unit's potential to emit. Therefore, no additional monitoring, record keeping or reporting is required to demonstrate compliance with these emission limitations.</p> <p>See Section A.I.2 below.</p>

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
	OAC Rule 3745-31-05(C) (PTI 05-11350)	9.71 tons of PE/yr, as a rolling, 12-month summation, from the ferrous casting line #4 baghouse stack, serving emissions units P078, P079, P080, P081, P082 and P083. 0.27 ton of PE/yr, as a rolling, 12-month summation (fugitive emissions), from emissions unit's P081 and P082, combined. The annual PE limitation, for the ferrous casting line #4 baghouse stack, represents the emissions unit's potential to emit. Therefore, no additional monitoring, record keeping or reporting is required to demonstrate compliance with this emission limitation.
	OAC 3745-17-07(A)(1)	The visible PE limitation specified by this rule is less stringent than the visible PE limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-11(B)(1)	The PE limitation specified by this rule is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- 2.a Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the use of hoods, fans, and other equipment to adequately enclose, contain, capture, vent and control PE dust by venting to a baghouse.

II. Operational Restrictions

1. The maximum annual iron throughput for emission units P081 and P082, combined, shall not exceed 8,268 tons/yr, based on a rolling, 12-month summation.
2. The pressure drop across the baghouse shall be maintained within the range of 1 to 15 inches of water while any emission unit controlled by the baghouse is in operation. The exception is for the first 45 days following a change of at least 50% of the fabric bags. During that time, the pressure drop shall be maintained below 15 inches of water while any emission unit controlled by the baghouse is in operation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain monthly records of the following information:
 - a. the total iron throughput for emission units P081 and P082, combined, for the calendar month, in tons; and
 - b. the rolling, 12-month summation of the iron throughput for emission units P081 and P082, combined, in tons, (summation of the iron throughput for the current month, plus the total iron throughput for the previous 11 calendar months).

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

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 and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse once each operating day.
3. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive PE from the egress points (i.e., from the building enclosure) serving this emissions unit. The presence or absence of any visible fugitive emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the location and color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to minimize or eliminate the visible emissions.

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

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - a. all periods of time in which this emissions unit was in operation and the pressure drop across the baghouse did not comply with the allowable range; and
 - b. all exceedances of the rolling, 12-month summation, iron throughput restriction.
2. The deviation reports shall be submitted in accordance with paragraph A.1.c.ii of the General Terms and Conditions of this permit.
3. The permittee shall submit semiannual written reports that (a) identify all days during which any visible fugitive PE were observed from the egress points (i.e., from the building enclosure) serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible fugitive particulate emissions. These reports shall be submitted to the Ohio EPA, Southwest District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

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

V. Testing Requirements (continued)

- 1.a** Emission Limitations: 2.22 lbs of PE/hr and 0.004 grain of PE/dscf, from the ferrous casting line #4 baghouse stack, serving emissions units P078, P079, P080, P081, P082 and P083.

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

$$(BFR) \times (AV) \times (ST/BET) \times (BEP/SP) \times (BEF) \times (TI) \times (CONV) = 2.22 \text{ lbs of PE/hr}$$

where:

BFR = baghouse flow rate (65,000 acfm);
AV = the air variability factor (105%);
ST = standard temperature (530 degrees Rankine);
BET = baghouse exit temperature (560 degrees Rankine);
BEP = baghouse exit pressure (14.69 lb/in²);
SP = standard pressure (14.69 lb/in²);
BEF = baghouse efficiency (0.004 grain of PE/dscf);
TI = time (60 minutes/hr); and
CONV = conversion factor (1 lb/7,000 grains).

The permittee shall demonstrate compliance with the PE limitations based upon the results of emission testing conducted in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A.

- 1.b** Emission Limitation: 9.71 tons of PE/yr, as a rolling, 12-month summation, from the ferrous casting line #4 baghouse stack, serving emissions units P078, P079, P080, P081, P082 and P083.

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

$$(MASER) \times (AOH) \times (CONV) = 9.71 \text{ tons of PE/yr}$$

where:

MASER = maximum hourly stack PE rate (2.22 lbs of PE/hr);
AOH = maximum annual operating hours (8,760 hrs/yr); and
CONV = conversion factor (1 ton/2,000 lbs).

V. Testing Requirements (continued)

1.c Emission Limitation: 0.15 lb of PE/hr (fugitive emissions)

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

$$(\text{MMR}) \times (\text{PMER}) \times (1-\text{CAP}) = 0.1 \text{ lb of PE/hr}$$

where:

MMR = maximum metal (iron throughput) rate (2.2 tons of iron/hour)*;

PMER = the PE rate (0.86 lb of PE/ton of metal)**; and

CAP = control device capture efficiency (95%)***.

* The 2.2 tons of iron/hr, throughput rate, represents the emission unit's maximum throughput capacity.

** Emission factor reference obtained from U.S. EPA Fire database.

*** 95% of the PE from this source are controlled by the baghouse, 5% escapes as fugitive PE.

emissions from pouring:

$$(\text{MMR}) \times (\text{PMER}) \times (1-\text{CAP}) = 0.05 \text{ lb of PE/hr}$$

where:

MMR = maximum metal (iron throughput) rate (2.2 tons of iron/hour)*;

PMER = the PE rate (2.06 lbs of PE/ton of metal)**; and

CAP = control device capture efficiency (99%)***.

* The 2.2 tons of iron/hr, throughput rate, represents the emission unit's maximum throughput capacity.

** Emission factor reference provided by Honda.

*** 99% of the PE from this source are controlled by the baghouse, 1% escapes as fugitive PE.

V. Testing Requirements (continued)

- 1.d** Emission Limitation: 0.27 ton of PE/yr, as a rolling, 12-month summation (fugitive emissions), for emissions units P081 and P082, combined.

Applicable Compliance Method: The annual PE limitation was established by the following methodology:

emissions from holding:

$$(\text{MMR}) \times (\text{PMER}) \times (\text{CONV}) \times (1-\text{CAP}) = 0.18 \text{ ton of PE/yr}$$

where:

MMR = maximum metal rate (8,268 tons of iron/yr, based on a rolling, 12-month summation);

PMER = the PE rate (0.86 lb of PE/ton of metal)*;

CONV = conversion factor (1 ton/2,000 lbs); and

CAP = control device capture efficiency (95%)**.

* Emission factor reference obtained from U.S. EPA Fire database.

** 95% of the PE from this source are controlled by the baghouse, 5% escapes as fugitive PE.

emissions from pouring:

$$(\text{MMR}) \times (\text{PMER}) \times (\text{CONV}) \times (1-\text{CAP}) = 0.09 \text{ ton of PE/yr}$$

MMR = maximum metal rate (8,268 tons of iron/yr, based on a rolling, 12-month summation);

PMER = the PE rate (2.06 lbs of PE/ton of metal)*;

CONV = conversion factor (1 ton/2,000 lbs); and

CAP = control device capture efficiency (99%)**.

* Emission factor reference provided by Honda.

** 99% of the PE from this source are controlled by the baghouse, 1% escapes as fugitive PE.

Compliance with the annual emission limitation is ensured while compliance is maintained with the annual iron throughput restriction.

- 1.e** Emission Limitation: Visible PE shall not exceed 0% opacity, as a 6-minute average, from any stack.

Applicable Compliance Method: If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

- 1.f** Emission Limitation: Visible PE shall not exceed 20% opacity, as a 3-minute average, from any fugitive dust emissions point.

Applicable Compliance Method: If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

- 1.g** Iron Throughput Restriction: The maximum annual iron throughput shall not exceed 8,268 tons/yr, based on a rolling, 12-month summation.

Applicable Compliance Method: Compliance with the iron throughput restriction shall be determined by the record keeping requirements specified in Section A.III.1.

V. Testing Requirements (continued)

2. The permittee shall conduct, or have conducted, emission testing for the baghouse to demonstrate compliance with the allowable PE limitations.
 - a. The emission testing shall be conducted within 2.5 years 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 PE limitations.
 - c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission limitations.

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 emissions unit's P078, P079, P080, P081, P082, and P083 are operating at or near their maximum capacities, unless otherwise specified or approved by the Ohio EPA, Southwest District Office.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Southwest District Office. 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, Southwest District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA 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 emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Southwest District Office 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 Ohio EPA, Southwest District Office.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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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: Gas Soft Nitriding Furnace #3 (P084)

Activity Description: FMC Gas Soft Nitriding Furnace #3

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
gas soft nitriding furnace # 3 (no emission controls)	OAC Rule 3745-31-05(A)(3) (PTI 05-12142)	0.13 lb of particulate emissions (PE)/hr 0.57 ton of PE/yr 5.02 lbs of nitrogen oxides (NOx) emissions/hr 21.99 tons of NOx emissions/year 2.15 lbs of carbon monoxide (CO) emissions/hr 9.42 tons of CO emissions/yr 1.45 lbs of organic compound (OC) emissions/hr 6.36 tons of OC emissions/yr 0.07 lb of cyanide(CN) emissions/hr 0.31 ton of CN emissions/yr 5.0 lbs of ammonia emissions/hr 21.9 tons of ammonia emissions/yr 0.0032 lb of sulfur dioxide (SO2) emissions/hr 0.015 ton of SO2 emissions/yr

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
		Visible PE emissions shall not exceed 5% opacity, as a 6-minute average.
		The hourly and annual emissions limitations specified above represent the emissions unit's potentials to emit. Therefore, no additional monitoring, record keeping or reporting is required to demonstrate compliance with these emission limitations.
	OAC 3745-17-07(A)(1)	The visible PE limitation specified by this rule is less stringent than the visible PE limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-11(B)(1)	The PE limitation specified by this rule is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

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

V. Testing Requirements (continued)

1.a Emission Limitation: 0.13 lb of PE/hr

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

$$\text{AHER} = (\text{PEER}) + [(\text{PEER}) \times (\text{CI} + \text{PV})] = 0.13 \text{ lb of PE/hr}$$

where:

AHER = maximum hourly emission rate;

PEER = PE rate (0.1 lb of PE/hr)*; and

CI + PV = [capacity increase (20%)] + [process variability (5%)]**.

* Based on 2/9/95 emission testing on Crankshaft Heat Treatment #1 (P048).

** The GSN #3 (P084) capacities are 20% larger than GSN #1 (P048) and GSN #2 (P071), plus assume a 5% safety factor for process variability.

If required, the permittee shall demonstrate compliance with the hourly PE limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-5, as appropriate. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

1.b Emission Limitation: 0.57 ton of PE/yr

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

$$\text{AAER} = (\text{AHER}) \times (\text{AOH}) \times (\text{CONV}) = 0.57 \text{ ton of PE/yr}$$

where:

AAER = maximum annual emission rate;

AHER = maximum hourly emission rate (0.13 lb of PE/hr);

AOH = maximum annual operating hours of 8,760 hours/yr; and

CONV = conversion factor (1 ton/2,000 lbs).

V. Testing Requirements (continued)

1.c Emission Limitation: 5.02 lbs of NOx emissions/hr

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

$$\text{AHER} = (\text{NOER}) + [(\text{NOER}) \times (\text{CI} + \text{PV})] = 5.02 \text{ lbs of NOx emissions/hr}$$

where:

AHER = maximum hourly emission rate;

NOER = NOx emission rate (4.01 lbs of NOx emissions/hr)*; and

CI + PV = [capacity increase (20%)] + [process variability (5%)]**.

* The hourly OC emission rate was determined by summing the emissions of 4.00 lbs of NOx emissions/hr, based on 1/30/02 emission testing of crankshaft heat treat furnace #2 (P071), plus 0.01 lb of NOx emissions/hr, based on 10/24/01 emission testing on the endo generators (2).

** The GSN #3 (P084) capacities are 20% larger than GSN #1 (P048) and GSN #2 (P071), plus assume a 5% safety factor for process variability.

If required, the permittee shall demonstrate compliance with the hourly NOx emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 7, as appropriate. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

1.d Emission Limitation: 21.99 tons of NOx emissions/yr

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

$$\text{AAER} = (\text{AHER}) \times (\text{AOH}) \times (\text{CONV}) = 21.99 \text{ tons of NOx emissions/yr}$$

where:

AAER = maximum annual emission rate;

AHER = maximum hourly emission rate (5.02 lbs of NOx emissions/hr);

AOH = maximum annual operating hours (8,760 hours/yr); and

CONV = conversion factor (1 ton/2,000 lbs).

V. Testing Requirements (continued)

1.e Emission Limitation: 2.15 lbs of CO emissions/hr

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

$$\text{AHER} = (\text{COER}) + [(\text{COER}) \times (\text{CI} + \text{PV})] = 2.15 \text{ lbs of CO emissions/hr}$$

where:

AHER = maximum hourly emission rate;

COER = CO emission rate (1.72 lb of CO emissions/hr)*; and

CI + PV = [capacity increase (20%)] + [process variability (5%)]**.

* The hourly CO emission rate was determined by summing the emissions of 1.70 lbs of CO emissions/hr, based on 10/31/01 emission testing of Crankshaft Heat Treat Furnace #2 (P071), plus 0.02 lb of CO emissions/hr, based on 10/24/01 emission testing on the endo generators (2).

** The GSN #3 (P084) capacities are 20% larger than GSN #1 (P048) and GSN #2 (P071), plus assume a 5% safety factor for process variability.

If required, the permittee shall demonstrate compliance with the hourly CO emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 10, as appropriate. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

1.f Emission Limitation: 9.42 tons of CO emissions/yr

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

$$\text{AAER} = (\text{AHER}) \times (\text{AOH}) \times (\text{CONV}) = 9.42 \text{ tons of CO emissions/yr}$$

where:

AAER = maximum annual emission rate;

AHER = maximum hourly emission rate (2.15 lbs of CO emissions/hr);

AOH = maximum annual operating hours (8,760 hours/yr); and

CONV = conversion factor (1 ton/2,000 lbs).

V. Testing Requirements (continued)

1.g Emission Limitation: 1.45 lbs of OC emissions/hr

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

$$\text{AHER} = (\text{OCER}) + [(\text{OCER}) \times (\text{CI} + \text{PV})] = 1.45 \text{ lbs of OC emissions/hr}$$

where:

AHER = maximum hourly emission rate;

OCER = OC emission rate (1.16 lb of OC emissions/hr)*; and

CI + PV = [capacity increase (20%)] + [process variability (5%)]**.

* The hourly OC emission rate was determined by summing the emissions of 1.1 lbs of OC emissions/hr, based on 10/31/01 emission testing of Crankshaft Heat Treat Furnace #2 (P071), plus 0.06 lb of OC emissions/hr, based on 10/24/01 emission testing on the endo generators (2).

** The GSN #3 (P084) capacities are 20% larger than GSN #1 (P048) and GSN #2 (P071), plus assume a 5% safety factor for process variability.

If required, the permittee shall demonstrate compliance with the hourly OC emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, 18, and 25, as appropriate. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

1.h Emission Limitation: 6.36 tons of OC emissions/yr

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

$$\text{AAER} = (\text{AHER}) \times (\text{AOH}) \times (\text{CONV}) = 6.36 \text{ tons of OC emissions/yr}$$

where:

AAER = maximum annual emission rate;

AHER = maximum hourly emission rate (1.45 lbs of OC emissions/hr);

AOH = maximum annual operating hours (8,760 hours/yr); and

CONV = conversion factor (1 ton/2,000 lbs).

V. Testing Requirements (continued)

1.i Emission Limitation: 0.07 lb of CN emissions/hr

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

$$\text{AHER} = (\text{CNER}) + [(\text{CNER}) \times (\text{CI} + \text{PV})] = 0.07 \text{ lb of CN emissions/hr}$$

where:

AHER = maximum hourly emission rate;
CNER = CN emission rate (0.05 lb of CN emissions/hr)*; and
CI + PV = [capacity increase (20%)] + [process variability (5%)]**.

* The hourly CN emission rate was established based on the results of emissions testing of a similar type emissions unit [Crankshaft Heat Treat Furnace #2 (P071), conducted on 10/31/01].

** The GSN #3 (P084) capacities are 20% larger than GSN #1 (P048) and GSN #2 (P071), plus assume a 5% safety factor for process variability.

If required, the permittee shall demonstrate compliance with the hourly CN emission limitation through emission tests performed in accordance with the California Air Resource Board, Method 426, emission testing. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

1.j Emission Limitation: 0.31 tons of CN emissions/yr

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

$$\text{AAER} = (\text{AHER}) \times (\text{AOH}) \times (\text{CONV}) = 0.31 \text{ tons of CN emissions/yr}$$

where:

AAER = Maximum annual emission rate;
AHER = maximum hourly emission rate (0.07 lb of CN emissions/hr);
AOH = maximum annual operating hours (8,760 hours/yr); and
CONV = conversion factor (1 ton/2,000 lbs).

1.k Emission Limitation: 5.0 lbs of ammonia emissions/hr

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

$$\text{AHER} = (\text{AMER}) \times (\text{AF}) = 3.15 \text{ lbs of ammonia emissions/hr}$$

where:

AHER = maximum hourly emission rate;
AMER = ammonia emission rate (3.0 lbs of ammonia emissions/hr)*; and
AF = adjustment factor of 105%.

* This is based on the 03/20/03, modified Method CTM-027, emission testing on this emission unit.

If required, the permittee shall demonstrate compliance with the hourly ammonia emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and conditional Test Method 027. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

V. Testing Requirements (continued)

1.l Emission Limitation: 21.9 tons of ammonia/yr

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

$$AAER = (AHER) \times (AOH) \times (CONV) = 21.9 \text{ tons of ammonia/yr}$$

where:

AAER = maximum annual emission rate;
AHER = maximum hourly emission rate (3.0 lbs of ammonia emissions/hr)
AOH = maximum annual operating hours (8,760 hours/yr); and
CONV = conversion factor (1 ton/2,000 lbs).

1.m Emission Limitation: 0.0032 lb SO₂ emissions/hr

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

propane combustion:

$$AHER = (BBTU) \times (1/BCONV) \times (SO_2EF) = 0.0032 \text{ lb of SO}_2 \text{ emissions/hr}$$

where:

AHER = maximum hourly emission rate;
BBTU = burner Btu/hr (5,331,152 Btu/hr);
BCONV = Btu to scf conversion factor (1,000 Btu/scf); and
SO₂EF = SO₂ emission factor (0.6 lb of SO₂/106 scf)*.

* Emission factor reference obtained from AP-42, Fifth Edition, Table 1.4-2, dated 7/98.

If required, the permittee shall demonstrate compliance with the hourly SO₂ emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 6, as appropriate. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

1.n Emission Limitation: 0.015 ton of SO₂ emissions/yr

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

$$AAER = (AHER) \times (AOH) \times (CONV) = 0.015 \text{ tons of SO}_2 \text{ emissions/yr}$$

where:

AAER = maximum annual emission rate;
AHER = maximum hourly emission rate (0.0032 lb/hr);
AOH = maximum annual operating hours (8,760 hours/yr); and
CONV = conversion factor (1 ton/2,000 lbs).

1.o Emission Limitation: Visible PE shall not exceed 5% opacity, as a 6-minute average, from any stack.

Applicable Compliance Method: If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

Facility Name: **Honda of America Mfg., Inc. Anna Engine Plant**

Facility ID: **05-75-00-0174**

Emissions Unit: **Gas Soft Nitriding Furnace #3 (P084)**

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
gas soft nitriding furnace # 3 (no emission controls)		

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

- The permit to install for this emissions unit was evaluated based on the actual materials employed (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. Ohio EPA's "Review of New Sources of Air Toxics Emissions" policy ("Air Toxics Policy") was applied for each toxic pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC).

The following summarizes the results of the modeling for the "worst case" pollutant:

Pollutant: Ammonia
 TLV (ug/m3): 25,000 ug/m3
 Maximum Hourly Emission Rate: 5.0 lbs of ammonia emissions/hour.
 Predicted 1-Hour Maximum Ground Level Concentration: 100.50 ug/m3
 MAGLC: 414.6 ug/m3

Physical changes to or in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxics Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxics Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxics Policy" will not be satisfied, the permittee shall not make the change. Changes that can affect the parameters used in the "Air Toxics Policy" include the following:

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

- a. changes in the composition of the materials used, or the use of new materials that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxics Policy" will be satisfied with the above changes, Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition [other than (VV)(1)(a)(ii)], then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will satisfy the "Air Toxics Policy":

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxics Policy"; and
- c. when the computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxics Policy" for the change.

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: FC Disk Core Machine (P087)

Activity Description: FC Disc Core Machine (Replaces source P015). Initially using TEA & CO2 to cure cores instead of SO2.

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
ferrous casting disc core machine, equipped with a baghouse and wet scrubber	OAC rule 3745-31-05(A)(3) (PTI 05-12593)	0.21 lb of particulate emissions (PE)/hr (stack emissions) 0.756 ton of PE/yr, as a rolling, 12-month summation (stack emissions) 0.005 grain of PE/dscf (stack emissions) 0.001 lb of PE/hr (fugitive emissions) 0.003 ton of PE/yr (fugitive emissions) 1.82 lbs of organic compound (OC) emissions/hr (stack emissions) 6.25 tons of OC emissions/yr (stack emissions) 0.008 lb of OC emissions/hr (fugitive emissions) 0.03 ton of OC emissions/yr (fugitive emissions) 40.0 lbs of OC emissions/day (fugitive and stack emissions combined)

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
		Visible PE shall not exceed 0% opacity, as a 6-minute average, from any stack.
		Visible PE shall not exceed 20% opacity, as a 3-minute average, from any fugitive dust emissions point.
		The hourly PE and OC emission limitations represent the emissions unit's potentials to emit. Therefore, no additional monitoring, record keeping or reporting is required to demonstrate compliance with these emission limitations.
	OAC rule 3745-17-07(A)(1)	The visible PE limitation specified by this rule is less stringent than the visible PE limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-11(B)(1)	The PE emission limitation specified by this rule is less stringent than the PE emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-21-07(G)(2)	The hourly OC emission limitation specified by this rule is less stringent than the OC limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- 2.a Best Available Technology (BAT) has been determined to be the use of a baghouse and wet scrubber for controlling the emissions from this emissions unit.

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 1 to 15 inches of water while any emission unit controlled by the baghouse is in operation except for the first 45 days following a change of a least 50% of the fabric bags, when the pressure drop shall be maintained below 15 inches of water while any emission unit controlled by the bag house is in operation.
2. The permittee shall operate a wet scrubber only when the binder system uses triethylamine (TEA) to complete the reaction. This process is known as TEA cured.
3. The pressure drop across the scrubber shall be maintained at a value of not less than 0.5 inches of water while the emissions unit is in operation.
4. The scrubber water flow rate shall be maintained at a value of not less than 22 gallons/minute while the emissions unit is in operation.

II. Operational Restrictions (continued)

5. The scrubber liquor shall be maintained at or below a maximum pH value of 4.5 while the emissions unit is in operation.
6. The maximum annual sand throughput shall not exceed 5,100 tons/yr, as a rolling, 12-month summation.
7. The maximum annual operating hours for emission unit shall not exceed 7,200 hours/yr, as a rolling, 12-month summation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be calibrated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse once each operating day.
2. The permittee shall properly operate and maintain equipment to continuously monitor the static pressure drop across the wet scrubber, the scrubber water flow, and record the pH of the scrubber liquor while the emissions unit is in operation. The monitoring devices and any recorders shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.
3. The permittee shall collect and record the following information each operating day while the emissions unit is in operation:
 - a. the pressure drop across the scrubber, in inches of water;
 - b. the scrubber water flow rate, in gallons/minute;
 - c. the pH of the scrubber liquor; and
 - d. a log of all downtime periods for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.
4. The permittee shall collect and record the following information each day when any photochemically reactive material, as defined in OAC 3745-21-01(C)(5), is employed in this emissions unit:
 - a. the company identification of each liquid organic material employed;
 - b. the number of gallons of each photochemically reactive material employed;
 - c. the OC content of each photochemically reactive material employed, in lbs/gallon; and
 - d. the daily OC emissions from all photochemically reactive materials employed [the summation of (b x c), for all photochemically reactive materials employed].
5. The permittee shall maintain monthly records of the following information for this emissions unit:
 - a. the total sand throughput, in tons, for each calendar month;
 - b. the total hours of operation for the calendar month;
 - c. the rolling, 12-month summation of the hours of operation (the total hours of operation for the current month, plus the total hours of operation for the 11 previous calendar months); and
 - d. the rolling, 12-month summation of the sand throughput, in tons (the total sand throughput for the current month, plus the total sand throughput for the 11 previous calendar months).

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

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

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

IV. Reporting Requirements

1. The permittee shall notify the Ohio EPA, Southwest District Office, in writing, of any daily record showing an exceedances of the daily OC emission limitation of 40 lbs/day, and what the actual OC emissions were for each such day. The notification shall include a copy of such record and shall be sent to the Ohio EPA, Southwest District Office within 30 days following the end of the calendar month.
2. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the following:
 - a. the static pressure drop across the scrubber;
 - b. the scrubber water flow rate;
 - c. the pH of the scrubber liquor;
 - d. the pressure drop across the baghouse did not comply with the allowable range specified in this permit;
 - e. the rolling, 12-month sand throughput restriction; and
 - f. the rolling, 12-month hours of operation restriction.
3. The quarterly deviation reports shall be submitted in accordance with paragraph A.1.c.ii of the General Terms and Conditions of this permit.
4. The permittee shall submit semiannual written reports that (a) identify all days during which any visible fugitive PE were observed from the egress points (i.e., from the building enclosure) serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible fugitive particulate emissions. These reports shall be submitted to the Ohio EPA, Southwest District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

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

V. Testing Requirements (continued)

- 1.a** Emission Limitation: 0.21 lb of PE/hour and 0.005 grain of PE/dscf (stack emissions)

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

$$\text{AHER} = (\text{BFR}) \times (\text{AV}) \times (\text{BEF}) \times (\text{TI}) \times (\text{CONV}) = 0.21 \text{ lbs of PE/hr}$$

where:

AHER = maximum hourly emission rate (0.21 lb of PE/hr);

BFR = baghouse flow rate (4,000 acfm);

AV = the air variability factor (120%);

BEF = baghouse efficiency (0.005 grain/dscf);

TI = time (60 minutes/hr); and

CONV = conversion factor (1 lb/7,000 grains).

The permittee shall demonstrate compliance with the PE limitations based upon the results of emission testing conducted in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A.

- 1.b** Emission Limitation: 0.756 tons of PE/yr, as a rolling, 12-month summation (stack emissions).

Applicable Compliance Method: The annual PE limitation was established by the following methodology:

$$(\text{MAER}) \times (\text{MAH}) \times (\text{CONV}) = 0.756 \text{ tons of PE/yr, as a rolling, 12-month summation}$$

where:

MAER = maximum hourly PE rate (0.21 lb of PE/hour);

MAH = maximum annual hours of operation (7,200 hours/yr, as a rolling, 12-month summation); and

CONV = conversion factor (1 ton/2,000 lbs).

Compliance with the annual PE limitation is ensured while compliance is maintained with the annual hours of operation restriction.

- 1.c** Emission Limitation: 0.001 lb of PE/hr (fugitive emissions)

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

$$(\text{HPWR}) \times (\text{UEF}) \times (1 - \text{CEF}) \times (1 - \text{BCE}) = 0.001 \text{ lb of PE/hr}$$

where:

HPWR = maximum hourly sand throughput rate (1.33 tons of sand/hr);

UEF = fugitive emission factor (3.6 lbs of PE/ton of sand)*;

CEF = capture efficiency (99.9%)**; and

BCE = building capture efficiency***.

* Reference obtained from U.S. EPA Fire database.

** 99.9% of the PE from this source are controlled by the baghouse, 0.1% escapes as fugitive PE.

*** Building capture efficiency estimation obtained via April 10, 1998 letter to Ironton Iron Inc., from the Director of Portsmouth Local Air Agency.

V. Testing Requirements (continued)

1.d Emission Limitation: 0.003 ton of PE/yr (fugitive emissions)

Applicable Compliance Method: The annual emission limitation was established by the following methodology:

$$(APR) \times (UEF) \times (1 - CEF) \times (1 - BCE) = 0.003 \text{ ton of PE/yr (fugitive emissions)}$$

where:

APR = annual sand throughput rate (5,100 tons of sand/yr, as a rolling, 12-month summation);

UEF= PE factor (3.6 lbs of PE/ton of sand)*;

CEF = capture efficiency (99.9%)**; and

BCE = building capture efficiency (70%)***.

* Reference obtained from U.S. EPA Fire database.

** 99.9% of the PE from this source are controlled by the baghouse, 0.1% escapes as fugitive PE.

*** Building capture efficiency estimation obtained via April 10,1998 letter to Ironton Iron Inc., from the Director of Portsmouth Local Air Agency.

Compliance with the annual PE limitation is ensured while compliance is maintained with the annual sand throughput restriction is maintained.

1.e Emission Limitation: 1.82 lbs of OC emissions/hr (stack emissions)

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

$$CEB + CEC + CEPS = 1.82 \text{ lb of OC emissions/hr}$$

where:

CEB = stack emission rate from the binder (0.17 lb of OC/hr);

CEC = stack emission rate from the TEA catalyst (0.30 lb of OC/hr); and

CEPS = stack emission rate from the parting spray (1.35 lbs of OC/hr).

where:

$CEB = (TSH) \times (BEF) \times (CE) = 0.17 \text{ lb of OC/hr};$

TSH = maximum tons of sand employed (1.33 tons of sand/hr);

BEF= binder emission factor (0.127 lb of OC/ton sand)*; and

CE = capture efficiency (99.9%)**.

where:

$CEC = (PCH) \times (CE) \times (1 - CEF) = 0.30 \text{ lb of OC/hr};$

PCH = maximum pounds of TEA catalyst employed (6.0 lbs/hr);

CE = capture efficiency (99.9%)**; and

CEF = control efficiency of the scrubber (95%).

V. Testing Requirements (continued)

where:

$CEPS = (GPS) \times (OCC) \times (CE) = 1.35 \text{ lbs of OC/hr}$;
GPS = maximum gallons of parting spray employed (0.2 gallon/hr);
OCC = OC content (6.74 lbs/gallon, from MSDS); and
CE = capture efficiency (99.9%)**.

* Emission factor reference from Ohio Cast Metals Association (OCMA), EPA VOC study.

** 99.9% of the OC emissions from this source are captured and vented to the wet scrubber, 0.1% escapes as fugitive OC emissions.

If required, the permittee shall demonstrate compliance with the hourly OC emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, 18 and 25, as appropriate. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

1.f Emission Limitation: 40 lbs/day (stack and fugitive emissions)

Applicable Compliance Method: Compliance with the daily OC emission limitation shall be determined by the record keeping requirements specified in Section A.III.4.

1.g Emission Limitation: 0.008 lb of OC emissions/hr (fugitive emissions)

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

$FEB + FEC + FEPS = 0.008 \text{ lb of OC emissions/hr}$

where:

FEB = fugitive emission rate from the binder (0.0002 lb of OC/hr);
FEC = fugitive emission rate from the TEA catalyst (0.006 lb of OC/hr); and
FEPS = fugitive emission rate from the parting spray (0.001 lb of OC/hr).

where:

$FEB = (TSH) \times (BEF) \times (1 - CE) = 0.0002 \text{ lb of OC/hr}$;
TSH = maximum tons of sand employed (1.33 tons of sand/hr);
BEF = binder emission factor (0.127 lb of OC/ton sand)*; and
CE = capture efficiency (99.9%)**.

where:

$UEC = (PCH) \times (1 - CE) = 0.006 \text{ lb of OC/hr}$;
PCH = maximum pounds of TEA catalyst employed (6.0 lbs/hr); and
CE = capture efficiency (99.9%)**.

V. Testing Requirements (continued)

where:

$UEPS = (GPS) \times (OCC) \times (1 - CE) = 0.001 \text{ lb of OC emissions/hr}$;
GPS = maximum gallons of parting spray employed (0.2 gallon/hr);
OCC = OC content of parting spray (6.74 lbs/gallon, from MSDS); and
CE = capture efficiency (99.9%)**.

* Emission factor reference from Ohio Cast Metals Association (OCMA), EPA VOC study.

** 99.9% of the OC emissions from this source are captured and vented to the wet scrubber, 0.1% escapes as fugitive OC emissions.

1.h Emission Limitation: 6.25 tons of OC/yr (stack emissions)

Applicable Compliance Method: The annual emission limitation was established by the following methodology:

$CAEB + CAEC + CEPS = 6.25 \text{ tons of OC emissions/yr}$

where:

CAEB = stack annual emission rate from the binder (0.32 ton of OC/yr);
CAEC = stack annual emission rate from the TEA catalyst (1.08 tons of OC/yr); and
CAEPS = stack annual emission rate from the parting spray (4.85 tons of OC/yr).

where:

$CAEB = (TSY) \times (BEF) \times (CE) \times (CONV) = 0.32 \text{ tons of OC emissions/yr}$;
TSY = annual tons of sand employed (5,100 tons of sand/yr, based on a rolling, 12-month summation);
BEF = binder emission factor (0.127 lb of OC/ton sand)*; and
CE = capture efficiency (99.9%)**; and
CONV = conversion factor (1 ton/2,000 lbs).

where:

$CAEC = (PCH) \times (CE) \times (1 - CEF) = 1.08 \text{ tons of OC emissions/yr}$;
TCY = maximum tons of TEA catalyst employed (21.6 tons/yr);
CE = capture efficiency (99.9%)**; and
CEF = control efficiency of the scrubber (95%).

where:

$CAEPS = (GPS) \times (OCC) \times (CE) \times (CONV) = 4.85 \text{ tons of OC/yr}$;
GPY = gallons of parting spray/yr (1,440 gal/yr);
OCC = OC content of parting spray (6.74 lbs/gallon, from MSDS);
CE = capture efficiency (99.9%)**; and
CONV = conversion factor (1 ton/2,000 lbs).

* Emission factor reference from Ohio Cast Metals Association (OCMA), EPA VOC study.

** 99.9% of the OC emissions from this source are captured and vented to the wet scrubber, 0.1% escapes as fugitive OC emissions.

V. Testing Requirements (continued)

1.i Emission Limitation: 0.03 ton of OC emissions/yr (fugitive emissions)

Applicable Compliance Method: The annual emission limitation was established by the following methodology:

$$\text{UAEB} + \text{UAEC} + \text{UAEPS} = 0.03 \text{ lb of OC/hr}$$

where:

UAEB = fugitive annual emission rate from the binder (0.0003 ton of OC emissions/yr);

UAEC = fugitive annual emission rate from the triethylamine (TEA) catalyst (0.02 ton of OC emissions/yr); and

UAEPS = uncontrolled annual emission rate from the parting spray (0.005 ton of OC emissions/yr)

where:

$\text{UAEB} = (\text{TSY}) \times (\text{BEF}) \times (1 - \text{CE}) \times (\text{CONV}) = 0.0003 \text{ ton of OC emissions/yr}$;

TSY = tons of sand/year (5,100 tons of sand/yr, as a rolling, 12-month summation);

BEF = binder emission factor (0.127 lb of OC/ton of sand)*;

CE = capture efficiency (99.9%)**; and

CONV = conversion factor (1 ton/2,000 lbs).

where:

$\text{UAEC} = (\text{TCY}) \times (1 - \text{CE}) = 0.02 \text{ ton of OC/yr}$;

TCY = tons of TEA catalyst employed (21.6 tons/yr); and

CE = capture efficiency (99.9%)**.

where:

$\text{UAEPS} = (\text{GPY}) \times (\text{OCC}) \times (1 - \text{CE}) \times (\text{CONV}) = 0.005 \text{ lb of OC/hr}$;

GPY = maximum annual gallons of parting spray employed (1,440 gallons/yr, based on the maximum operating hours);

OCC = OC content (6.74 lbs/gallon, from MSDS);

CE = capture efficiency (99.9%)**; and

CONV = conversion factor (1 ton/2,000 lbs).

* Emission factor reference from Ohio Cast Metals Association (OCMA), EPA VOC study.

** 99.9% of the OC emissions from this source are captured and vented to the wet scrubber, 0.1% escapes as fugitive OC emissions.

1.j Emission Limitation: Visible PE shall not exceed 0% opacity, as a 6-minute average, from any stack.

Applicable Compliance Method: If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

V. Testing Requirements (continued)

1.k Emission Limitation:

1.82 pounds OC/hr when using photochemically reactive materials.
40 pounds per day when using photochemically reactive materials

Applicable Compliance Method

The permittee shall maintain documentation on whether or not each mold release agent used in this emissions unit is photochemically reactive.

Compliance with OAC 3745-21-07(G)(2) shall be determined through daily recordkeeping of the calculated use of mold release agents, the OC content of each material used, and the hours of operation of this emissions unit. Formulation data from the manufacturer may be used to determine the organic compound content of the mold release agents to be used in the calculation of emissions.

Hourly Emissions = See Section IV #5 & #6

Daily Emissions

40 pounds of photochemically reactive materials = GPD x OCC x OH

GPD = Gallons of Parting Spray per Day

OCC = Volatile Organic Compound Content (Current MSDS Indicates 6.74 lbs/gallon)

OH = Operating Hours

Emission Limitation: Visible PE shall not exceed 20% opacity, as a 3-minute average, from any fugitive dust emissions point.

Applicable Compliance Method: If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

2. The permittee shall conduct, or have conducted, emission testing for the baghouse to demonstrate compliance with the allowable PE limitations.
 - a. The emission testing shall be conducted within 2.5 years 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 PE limitations.
 - c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission limitations.

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 Ohio EPA, Southwest District Office.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Southwest District Office. 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, Southwest District Office's refusal to accept the results of the emission test(s).

V. Testing Requirements (continued)

Personnel from the Ohio EPA 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 emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Southwest District Office 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 Ohio EPA, Southwest District Office.

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>
Ferrous Casting Disc Core Machine with baghouse and/or wet scrubber	OAC rule 3745-31-05	Compliance with OEPA's Air Toxics Policy

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

1. 1. The permit to install for this emissions unit (P087) was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: triethylamine

TLV (mg/m3): 1 ppm

Maximum Hourly Emission Rate (lbs/hr): 0.31

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 17.54

MAGLC (ug/m3): 98.54

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

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

2. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"
 - a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
 - c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
- c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Foundry Melting System (P901)
Activity Description: Ferrous Foundry Melting System

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Foundry melting system. [A system where metal and inoculants are transferred to the cupola and where molten metal is produced and transferred to one of two electric induction holding furnaces. PE are vented to a baghouse system and CO emissions are vented to an afterburner.]	OAC rule 3745-31-05(A)(3) (PTI 05-2421)	4.54 lbs of particulate emissions (PE)/hr 13.62 tons of PE/yr
		0.03 grain of PE/dscf
		10.0 lbs of carbon monoxide (CO) emissions/hr 30.0 tons of CO emissions/yr
		5.1 lbs of nitrogen oxides (NOx) emissions/hr 15.3 tons of NOx emissions/yr
		19.2 lbs of sulfur dioxide (SO2) emissions/hr 57.6 tons of SO2 emissions/yr
		Visible PE shall not exceed 20% opacity, as a 6-minute average, from any stack.
	OAC rule 3745-17-07(A)(1)	The visible PE limitation specified by this rule is equivalent to the visible PE limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-11(B)(1)	The PE limitation specified by this rule is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-21-08(B)	None, see Section A.1.2.b below.
	OAC rule 3745-23-06(B)	None, see Section A.1.2.c below.

2. Additional Terms and Conditions

- 2.a** The PE from this emissions unit shall be controlled by venting the emissions to a baghouse and the carbon monoxide emissions shall be controlled by venting the emissions to an afterburner.
- 2.b** The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 05-2421.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.c** The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 05-2421.

II. Operational Restrictions

- 1.** The pressure drop across the baghouse shall be maintained within the range of 1 to 15 inches of water while any emission unit controlled by the baghouse are in operation. There is an exception for the first 45 days following a change of at least 50% of the fabric bags. During that time, the pressure drop shall be maintained below 15 inches of water while any emission unit controlled by the baghouse are in operation.
- 2.** The maximum annual operating hours for this emissions unit shall not exceed 6,000 hours/yr, based on a rolling, 12-month summation of the operating hours.
- 3.** The permittee shall employ a charge door when operating this emissions unit, in order to minimize or eliminate fugitive emissions from the melting system. The charge door shall be open only when charging is occurring.
- 4.** The carbon monoxide gases generated during the operation of the grey iron cupola shall be burned at a minimum temperature of 704.4 degrees Celsius for 0.3 seconds or greater in a direct-flame afterburner.

III. Monitoring and/or Record Keeping Requirements

- 1.** The permittee shall maintain monthly records of the following information for this emissions unit:
 - a. the total hours of operation for the calendar month; and
 - b. the rolling, 12-month summation of the hours of operation (the total hours of operation for the current month, plus the total hours of operation for the 11 previous calendar months); and
 - c. a log of all downtime periods for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.
- 2.** The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouse(s) while the emissions unit(s) is in operation. The monitoring equipment shall be calibrated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse once each operating day.
- 3.** The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the afterburner when the emissions unit is in operation. Units shall be in degrees Celsius. 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.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the following:
 - a. the pressure drop across the baghouse did not comply with the allowable range specified in this permit;
 - b. the rolling, 12-month summation hours of operation restriction; and
 - c. the temperature of the afterburner did not comply with the allowable range specified in this permit.
2. The quarterly deviation reports shall be submitted in accordance with paragraph A.1.c.ii of the General Terms and Conditions of this permit.

V. Testing Requirements

1. Compliance with the emission limitations specified in Section A.I.1 and the operational restrictions specified in Section A.II shall be determined in accordance with the following methods:
 - 1.a Emission Limitations: 4.54 lbs of PE/hr and 0.03 grain of PE/dscf

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

$$\text{AHER} = (\text{BFR}) \times (\text{AV}) \times (\text{ST} / \text{BET}) \times (\text{BEP}/\text{SP}) \times (\text{BER}) \times (\text{TI}) \times (\text{CONV}) = 4.54 \text{ lbs PE/hr}$$

where:

AHER = maximum hourly emission rate (4.54 lbs of PE/hr);
BFR = baghouse flow rate (17,769 acfm);
AV = the air variability factor (105%);
ST = standard temperature (530 degrees Rankine);
BET = baghouse exit temperature (560 degrees Rankine);
BEP = baghouse exit pressure (14.69 lb/in²);
SP = standard pressure (14.69 lb/in²);
BER = baghouse emission rate (0.03 grain of PE/dscf);
TI = time (60 minutes/hr); and
CONV = conversion factor (1 lb/7,000 grains).

If required, the permittee shall demonstrate compliance with the hourly PE limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-5. Alternative test methods may be used with prior approval from the Ohio EPA.

- 1.b Emission Limitation: 13.62 tons of PE/yr

Applicable Compliance Method: The annual emission limitation was established by the following methodology:

$$\text{AAER} = (\text{AHER}) \times (\text{AHPY}) \times (\text{CONV}) = 13.62 \text{ tons of PE/yr}$$

where:

AAER = allowable annual emission rate (13.62 tons of PE/yr);
AHER = maximum hourly emission rate (4.54 lbs of PE/hr);
AHPY = maximum annual hours of operation (6,000 hours/yr); and
CONV = 1 ton/2,000 lbs.

Compliance with the annual PE emission limitation is ensured while compliance is maintained with the annual operating hours restriction.

V. Testing Requirements (continued)

1.c Emission Limitation: 5.1 lbs of NO_x emissions/hr

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

$$\text{AER} = (\text{MPWR}) \times (\text{EF}) = 5.1 \text{ lbs of NO}_x \text{ emissions/hr}$$

where:

AER = maximum hourly emission rate (5.1 lbs of NO_x emissions/hr);
MPWR = maximum process weight rate (22.6 tons of iron melted/hr); and
EF = the emission factor (0.225 lb of NO_x emissions/ton of iron melted)*.

* The NO_x emission factor obtained from emission test data provided by Honda.

The permittee shall demonstrate compliance with the NO_x emission limitation based upon the results of emission testing conducted in accordance with Methods 1-4, and 7 of 40 CFR Part 60, Appendix A.

1.d Emission Limitation: 15.3 tons of NO_x emissions/yr

Applicable Compliance Method: The annual NO_x limitation may be determined by the following methodology:

$$\text{AAER} = (\text{AER}) \times (\text{MHPY}) \times (\text{CONV}) = 15.3 \text{ tons of NO}_x \text{ emissions/yr}$$

where:

AAER = annual allowable emission rate (15.3 tons of NO_x emissions/yr);
AER = maximum hourly emission rate (5.1 lbs of NO_x emissions/hr);
MHPY = maximum annual hours of operation (6,000 hours/yr); and
CONV = the conversion factor (1 ton/ 2,000 lbs).

Compliance with the annual NO_x emission limitation is ensured while compliance is maintained with the annual operating hours restriction.

1.e Emission Limitation: 19.2 lbs of SO₂ emissions/hr

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

$$\text{AER} = (\text{MPWR}) \times (\text{EF}) = 19.2 \text{ lbs of SO}_2 \text{ emissions/hr}$$

where:

AER = maximum hourly emission rate (19.2 lbs of SO₂ emissions/hr);
MPWR = maximum process weight rate (22.6 tons of iron melted/hr); and
EF = the emission factor (0.849 lb of SO₂ emissions/ton of iron melted)*.

* The SO₂ emission factor obtained from emission test data provided by Honda.

The permittee shall demonstrate compliance with the SO₂ emission limitation based upon the results of emission testing conducted in accordance with Methods 1-4, and 6 of 40 CFR Part 60, Appendix A.

V. Testing Requirements (continued)

1.f Emission Limitation: 57.6 tons SO₂ emissions/yr

Applicable Compliance Method: The annual SO₂ limitation may be determined by the following methodology:

$$AAER = (AER) \times (MHPY) \times (CONV) = 57.6 \text{ tons SO}_2 \text{ emissions/yr}$$

where:

AAER = annual allowable emission rate (57.6 tons of SO₂ emissions/yr);
AER = maximum hourly emission rate (19.2 lbs of SO₂ emissions/hr);
MHPY = maximum annual hours of operation (6,000 hours/yr); and
CONV = the conversion factor (1 ton/2,000 lbs).

Compliance with the annual SO₂ emission limitation is ensured while compliance is maintained with the annual operating hours restriction.

1.g Emission Limitation: 10.0 lbs of CO emissions/hr

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

$$AER = (EF) \times (MPWR) = 10.0 \text{ lbs of CO emissions/hr}$$

where:

AER = maximum hourly emission rate (10.0 lbs of CO emissions/hr);
MPWR = maximum process weight rate (22.6 tons of iron melted/hr); and
EF = the emission factor (0.442 lb of CO emissions/ton of iron melted)*.

* The CO emission factor obtained from emission test data provided by Honda.

The permittee shall demonstrate compliance with the CO emission limitation based upon the results of emission testing conducted in accordance with Methods 1-4, and 10 of 40 CFR Part 60, Appendix A.

1.h Emission Limitation: 30.0 tons of CO emissions/yr

Applicable Compliance Method: The annual CO limitation may be determined by the following methodology:

$$AAER = (AER) \times (MHPY) \times (CONV) = 30.0 \text{ tons of CO emissions/yr}$$

where:

AAER = annual allowable emission rate (30.0 tons of CO emissions/yr);
AER = maximum hourly emission rate (10.0 lbs of CO emissions/hr);
MHPY = maximum annual hours of operation (6,000 hours/yr); and
CONV = the conversion factor (1 ton/ 2,000 lbs).

Compliance with the annual CO emission limitation is ensured while compliance is maintained with the annual operating hours restriction.

1.i Emission Limitation: Visible PE shall not exceed 20% opacity, as a 6-minute average, from any stack.

Applicable Compliance Method: If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

V. Testing Requirements (continued)

2. The permittee shall conduct, or have conducted, emission testing for the baghouse to demonstrate compliance with the allowable PE limitations.
 - a. The emission testing shall be conducted within 2.5 years 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 PE limitations.
 - c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission limitations.

SO₂: Methods 1-4 and 6 of 40 CFR Part 60, Appendix A
NO_x: Methods 1-4 and 7 of 40 CFR Part 60, Appendix A
CO: Methods 1-4 and 10 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 Ohio EPA, Southwest District Office.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Southwest District Office. 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, Southwest District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA 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 emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Southwest District Office 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 Ohio EPA, Southwest District Office.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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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: Mold Pouring and Cooling Line 1 (P902)
Activity Description: Ferrous Foundry Mold Pouring and Cooling Line 1

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
mold pouring and cooling line # 1, with automatic pouring unit and electric furnace	OAC rule 3745-31-05(A)(3) (PTI 05-2421)	2.47 lbs particulate emissions (PE)/hr 7.4 tons of PE/yr
		0.01 grain of PE/dscf
		0.36 lb sulfur dioxide(SO ₂) emissions/hr 1.08 tons of SO ₂ emissions/yr
		0.18 lb of nitrogen oxides (NO _x) emissions/hr 0.54 ton of NO _x emissions/yr
		2.53 lbs of volatile organic compounds (OC) emissions/hr 7.59 tons of OC emissions/yr
		Visible PE shall not exceed 0% opacity, as a 6-minute average, from any stack.
		See Sections A.2.a and A..2.b below.
	OAC rule 3745-17-07(A)(1)	The visible PE limitation specified by this rule is less stringent than the visible PE limitation established pursuant to OAC rule 3745-31-05(A)(3).

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
	OAC rule 3745-17-11(B)(1)	The PE limitation specified by this rule is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-18-06(E)(2)	The SO2 emissions limitation specified by this rule is less stringent than the SO2 limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-21-07(G)(2)	The hourly OC limitation specified by this rule is less stringent than the hourly OC limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-23-06(B)	None, see Section A.I.2.c below.

2. Additional Terms and Conditions

- 2.a This emissions unit emits negligible amounts of carbon monoxide emissions.
- 2.b The PE from the mold pouring and cooling line #1 (P902) shall be hooded (95% designed control efficiency), and vented to a baghouse with a designed control efficiency of at least 99%, by weight and an emission rate less than or equal to 0.01 grain of PE/dscf.
- 2.c The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 05-2421.

II. Operational Restrictions

- 1. The pressure drop across the baghouse shall be maintained within the range of 1 to 15 inches of water while any emission unit controlled by the baghouse are in operation. There is an exception for the first 45 days following a change of at least 50% of the fabric bags. During that time, the pressure drop shall be maintained below 15 inches of water while any emission unit controlled by the baghouse are in operation.
- 2. The maximum annual operating hours for this emissions unit shall not exceed 6,000 hours/yr, based on a rolling, 12-month summation of the operating hours.

III. Monitoring and/or Record Keeping Requirements

- 1. The permittee shall maintain monthly records of the following information for this emissions unit:
 - a. the total hours of operation for the calendar month; and
 - b. the rolling, 12-month summation of the hours of operation (the total hours of operation for the current month, plus the total hours of operation for the 11 previous calendar months).

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

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 and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse once each operating day.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the following:
 - a. the pressure drop across the baghouse did not comply with the allowable range specified in this permit; and
 - b. the rolling, 12-month summation hours of operation restriction.
2. The quarterly deviation reports shall be submitted in accordance with paragraph A.1.c.ii of the General Terms and Conditions of this permit.

V. Testing Requirements

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

1.a Emission Limitations: 2.47 lbs of PE/hr and 0.01 grain of PE/dscf

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

$$\text{AHER} = (\text{BFR}) \times (\text{AV}) \times (\text{ST}/\text{BET}) \times (\text{BEF}) \times (\text{TI}) \times (\text{CONV}) = 2.47 \text{ lbs of PE/hr}$$

where:

AHER = maximum hourly emission rate (2.47 lbs of PE/hr);
BFR = baghouse flow rate (25,374 acfm);
AV = the air variability factor (120%);
ST = standard temperature (530 degrees Rankine);
BET = baghouse exit temperature (560 degrees Rankine);
BEF = baghouse efficiency (0.010 grain/dscf);
TI = time (60 minutes/hour); and
CONV = conversion factor (1 lb/7,000 grains).

The permittee shall demonstrate compliance with the PE limitations based upon the results of emission testing conducted in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A.

1.b Emission Limitation: 7.4 tons of PE/yr

Applicable Compliance Method: The annual emission limitation was established by the following methodology:

$$(\text{AHER}) \times (\text{AOH}) \times (\text{CONV}2) = 7.4 \text{ tons of PE/year}$$

where:

AHER = maximum hourly emission rate (2.47 lbs of PE/hr);
AOH = maximum annual hours of operation (6,000 hrs/yr, as a rolling, 12-month summation); and
CONV2 = conversion factor (1 ton/2,000 lbs).

Compliance with the annual PE emission limitation is ensured while compliance is maintained with the annual operating hours restriction.

V. Testing Requirements (continued)

1.c Emission Limitation: 0.18 lb of NO_x emissions/hr

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

$$\text{AHER} = (\text{EF}) \times (\text{MPWR}) \times (\text{CONV}) = 0.18 \text{ lb of NO}_x \text{ emissions/hr}$$

where:

AHER = maximum hourly emission rate (0.18 lb/hr)
EF = the emission factor (0.01 lb of NO_x emissions/ton of grey iron poured)*;
MPWR = the maximum process weight rate (36,000 lbs grey iron poured/hr)
CONV = the conversion factor (1 ton/2,000 lbs)

* Reference obtained from U.S. EPA Fire database.

If required, the permittee shall demonstrate compliance with the hourly NO_x emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 7, as appropriate. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

1.d Emission Limitation: 15.3 tons of NO_x emissions/yr

Applicable Compliance Method: The annual NO_x limitation may be determined by the following methodology:

$$\text{AAER} = (\text{AHER}) \times (\text{MHPY}) \times (\text{CONV}) = 0.54 \text{ ton of NO}_x \text{ emissions/yr}$$

where:

AAER = annual allowable emission rate (0.54 ton of NO_x emissions/yr).
AHER = maximum hourly emission rate (0.18 lb of NO_x emissions /hr).
AHPY = maximum annual hours of operation (6,000 hrs/yr, as a rolling, 12-month summation); and
CONV = the conversion factor (1 ton/ 2,000 lbs).

Compliance with the annual NO_x emission limitation is ensured while compliance is maintained with the annual operating hours restriction.

1.e Emission Limitation: 0.36 lb of SO₂ emissions/hr

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

$$\text{AHER} = (\text{EF}) \times (\text{MPWR}) \times (\text{CONV}) = 0.36 \text{ lb of SO}_2 \text{ emissions/hr}$$

where:

AHER = maximum hourly emission rate (0.36 lb of SO₂ emissions/hr);
EF = emission factor (0.02 lb of SO₂ emissions/ton grey iron poured);
MPWR = maximum process weight rate (36,000 lbs of grey iron poured/hr)*; and
CONV = the conversion factor (1 ton/2,000 lbs).

* Reference obtained from U.S. EPA Fire database.

If required, the permittee shall demonstrate compliance with the hourly SO₂ emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 6, as appropriate. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA .

V. Testing Requirements (continued)

1.f Emission Limitation: 1.08 tons SO₂ emissions/yr

Applicable Compliance Method: The annual emission limitation was established by the following methodology:

$$AAER = (AHER) \times (MHPY) \times (CONV) = 1.08 \text{ tons of SO}_2 \text{ emissions/yr}$$

where:

AAER = annual allowable emission rate (1.08 tons of SO₂ emissions/yr);
AHER = maximum hourly emission rate (0.36 lb of SO₂ emissions /hr);
MHPY = maximum annual hours of operation (6,000 hrs/yr, as a rolling, 12-month summation); and
CONV = conversion factor (1 ton/ 2,000 lbs).

Compliance with the annual SO₂ emission limitation is ensured while compliance is maintained with the annual operating hours restriction.

1.g Emission Limitation: 2.53 lbs of OC emissions/hr

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

$$AHER = (EF) \times (MPWR) \times (CONV) = 2.53 \text{ lbs of OC emissions/hr}$$

where:

AHER = maximum hourly emission rate (2.53 lbs of OC emissions/hr);
EF = emission factor (0.14 lb/ton grey iron poured)*;
MPWR = maximum process weight rate (36,000 lbs of grey iron poured/hr); and
CONV = conversion factor (1 ton/2,000 lbs).

* Reference obtained from U.S. EPA Fire database.

If required, the permittee shall demonstrate compliance with the hourly OC emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4, and 25, as appropriate. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

1.h Emission Limitation: 7.59 tons of OC emissions/yr

Applicable Compliance Method: The annual emission limitation was established by the following methodology:

$$AAER = (AHER) \times (MHPY) \times (CONV) = 7.59 \text{ tons of OC emissions/yr}$$

where:

AAER = annual allowable emission rate (7.59 tons OC/yr);
AHER = maximum hourly emission rate (2.53 lbs of OC emissions/hr);
MHPY = maximum annual hours of operation (6,000 hrs/yr, as a rolling, 12-month summation); and
CONV = conversion factor (1 ton/2,000 lbs).

Compliance with the annual OC emission limitation is ensured while compliance is maintained with the annual operating hours restriction.

V. Testing Requirements (continued)

- 1.i Operating Hours Restriction: 6,000 hrs/yr, based on a rolling, 12-month summation

Applicable Compliance Method: Compliance with the annual operating hours restriction shall be based upon the record keeping requirements specified in Section A.III.1.

- 1.j Emission Limitation: Visible PE shall not exceed 0% opacity, as a 6-minute average, from any stack.

Applicable Compliance Method: If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

2. The permittee shall conduct, or have conducted, emission testing for the baghouse to demonstrate compliance with the allowable PE limitations.

- a. The emission testing shall be conducted within 2.5 years 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 PE limitations.
- c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission limitations.

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 Ohio EPA, Southwest District Office.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Southwest District Office. 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, Southwest District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA 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 emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Southwest District Office 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 Ohio EPA, Southwest District Office.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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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: Mold Pouring and Cooling Line 2 (P904)
Activity Description: Ferrous Foundry Mold Pouring and Cooling Line 2

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
mold pouring and cooling line #2 w/transfer ladle, electric pouring unit, and cooling conveyor, with PE vented to a baghouse system	OAC rule 3745-31-05(A)(3) (PTI 05-6208)	4.54 lbs of particulate emissions (PE)/hr 10.22 tons of PE/yr
		0.01 grain of PE/dscf
		Visible PE shall not exceed 0% opacity, as a 6-minute average, from any stack. The hourly PE limitation represents the emissions unit's potential to emit. Therefore, no additional monitoring, record keeping or reporting is required to demonstrate compliance with this emission limitation.
	OAC rule 3745-17-07(A)(1)	The visible PE limitation specified by this rule is less stringent than the visible PE limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-11(B)(1)	The PE limitation specified by this rule is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- The PE from this emissions unit shall be controlled by venting all the emissions to a baghouse.

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 1 to 15 inches of water while any emission unit controlled by the baghouse are in operation. There is an exception for the first 45 days following a change of at least 50% of the fabric bags. During that time, the pressure drop shall be maintained below 15 inches of water while any emission unit controlled by the baghouse are in operation.
2. The maximum annual operating hours for this emissions unit shall not exceed 4,500 hours/yr, based upon a rolling, 12-month summation of the operating hours.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain monthly records of the following information for this emissions unit:
 - a. the total hours of operation for the calendar month; and
 - b. the rolling, 12-month summation of the hours of operation (the total hours of operation for the current month, plus the total hours of operation for the 11 previous calendar months).
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 and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse once each operating day.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the following:
 - a. the pressure drop across the baghouse did not comply with the allowable range specified in this permit; and
 - b. the rolling, 12-month summation hours of operation restriction.
2. The quarterly deviation reports shall be submitted in accordance with paragraph A.1.c.ii of the General Terms and Conditions of this permit.

V. Testing Requirements

1. Compliance with the emission limitations specified in Section A.I.1 and the operational restriction specified in Section A.II shall be determined in accordance with the following methods:
 - 1.a Emission Limitations: 4.54 lbs of PE/hr and 0.01 grain of PE/dscf

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

$$\text{AHER} = (\text{BFR}) \times (\text{AV}) \times (\text{ST} / \text{BET}) \times (\text{BEF}) \times (\text{TI}) \times (\text{CONV}) = 4.54 \text{ lbs of PE/hr}$$

where:

AHER = maximum hourly emission rate (4.54 lbs PE/hr);
BFR = baghouse flow rate (46,638 acfm);
AV = air variability factor (120%);
ST = standard temperature (530 degrees Rankine);
BET = baghouse exit temperature (560 degrees Rankine);
BEF = baghouse efficiency (0.010 grain/dscf);
TI = time (60 minutes/hour); and
CONV = conversion factor (1 lb/7,000 grains).

The permittee shall demonstrate compliance with the PE limitations based upon the results of emission testing conducted in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A.

V. Testing Requirements (continued)

1.b Emission Limitation: 10.22 tons of PE/yr

Applicable Compliance Method: The annual emission limitation was established by the following methodology:

$$\text{AAER} = (\text{AHER}) \times (\text{AHPY}) \times (\text{CONV}) = 10.22 \text{ tons of PE/yr}$$

where:

AAER = allowable annual emission rate (10.22 tons of PE/yr);

AHER = maximum hourly emission rate (4.54 lbs of PE/hr);

AHPY = maximum annual hours of operation (4,500 hours/yr, as a rolling, 12-month summation); and

CONV = 1 ton/2,000 lbs.

Compliance with the annual emission limitation is ensured while compliance is maintained with the annual operating hours restriction.

1.c Emission Limitation: Visible PE shall not exceed 0% opacity, as a 6-minute average, from any stack.

Applicable Compliance Method: If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

1.d Operating Hours Restriction: 4,500 hrs/yr, based on a rolling, 12-month summation

Applicable Compliance Method: Compliance with the annual operating hours restriction shall be based upon the record keeping requirements specified in Section A.III.1.

2. The permittee shall conduct, or have conducted, emission testing for the baghouse to demonstrate compliance with the allowable PE limitations.

a. The emission testing shall be conducted within 2.5 years 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 PE limitations.

c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission limitations.

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 Ohio EPA, Southwest District Office.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Southwest District Office. 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, Southwest District Office's refusal to accept the results of the emission test(s).

V. Testing Requirements (continued)

Personnel from the Ohio EPA 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 emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Southwest District Office 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 Ohio EPA, Southwest District Office.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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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: Holding Furnace No. 2 and Transit Ladle System (P905)

Activity Description: Ferrous Foundry Holding Furnace No. 2 and Transit Ladle System

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
holding furnace #2 and transit ladle w/transfer ladle, electric pouring unit, and cooling conveyor with hooding, with PE vented to a baghouse system.	OAC 3745-31-05(A)(3) (PTI 05-10137)	2.88 lbs of PE/hr (stack emissions) 0.010 grain of PE/dscf (stack emissions) 0.79 lb of PE/hr (fugitive emissions) Visible PE shall not exceed 0% opacity, as a 6-minute average, from any stack. Visible PE shall not exceed 20% opacity, as a 3-minute average, from any fugitive dust emissions point. The hourly and annual PE limitations specified above represent the emissions unit's potential to emit. Therefore, no additional monitoring, record keeping or reporting is required to demonstrate compliance with these emission limitations.
	OAC 3745-31-05(C) (PTI 05-10137)	See Section A.II.2 below. 8.64 tons of PE/yr, as a rolling 12-month summation (stack emissions) 2.37 tons of PE/yr, as a rolling, 12-month summation (fugitive emissions)

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
	OAC rule 3745-17-07(A)(1)	The visible PE limitation specified by this rule is less stringent than the visible PE limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-11(B)(1)	The PE emission limitation specified by this rule is less stringent than the PE emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- 2.a Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the use of hoods, fans, and other equipment to adequately enclose, contain, capture, vent and control fugitive PE dust by venting to a baghouse.

II. Operational Restrictions

1. The maximum annual operating hours for this emissions unit shall not exceed 6,000 hours/yr, based upon a rolling, 12-month summation of the operating hours.
2. The pressure drop across the baghouse shall be maintained within the range of 1 to 15 inches of water while any emission unit controlled by the baghouse are in operation. There is an exception for the first 45 days following a change of at least 50% of the fabric bags. During that time, the pressure drop shall be maintained below 15 inches of water while any emission unit controlled by the baghouse are in operation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain monthly records of the following information for this emissions unit:
 - a. the total hours of operation for the calendar month; and
 - b. the rolling, 12-month summation of the hours of operation (the total hours of operation for the current month, plus the total hours of operation for the 11 previous calendar months).
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 and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse once each operating day.

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

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

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

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the following:
 - a. the pressure drop across the baghouse did not comply with the allowable range specified in this permit; and
 - b. the rolling, 12-month summation hours of operation restriction.
2. The quarterly deviation reports shall be submitted in accordance with paragraph A.1.c.ii of the General Terms and Conditions of this permit.
3. The permittee shall submit semiannual written reports that (a) identify all days during which any visible fugitive PE were observed from the egress points (i.e., from the building enclosure) serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible fugitive particulate emissions. These reports shall be submitted to the Ohio EPA, Southwest District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

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

V. Testing Requirements (continued)

1.a Emission Limitation: 2.88 lbs of PE/hr and 0.010 grain of PE/dscf (stack emissions)

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

$$\text{AHER} = (\text{BFR}) \times (\text{AV}) \times (\text{ST}/\text{BET}) \times (\text{BEF}) \times (\text{TI}) \times (\text{CONV}) = 2.88 \text{ lbs of PE/hr}$$

where:

AHER = maximum hourly emission rate (2.88 lbs of PE/hr);

BFR = baghouse flow rate (29,585 acfm);

AV = air variability factor (120%);

ST = standard temperature (530 degrees Rankine)

BET = baghouse exit temperature (560 degrees Rankine);

BEF = baghouse efficiency (0.010 grain/dscf);

TI = time (60 minutes/hour); and

CONV = conversion factor (1 lb/7,000 grains).

The permittee shall demonstrate compliance with the PE limitations based upon the results of emission testing conducted in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A.

1.b Emission Limitation: 8.64 tons of PE/yr, as a rolling 12-month summation (stack emissions)

Applicable Compliance Method: The annual emission limitation was established by the following methodology:

$$(\text{MASER}) \times (\text{AOH}) \times (\text{CONV}) = 8.64 \text{ tons of PE/yr}$$

where:

MASER = maximum hourly stack emission rate (2.88 lbs of PE/hr);

AOH = annual operating hours (6,000 hrs/yr, as a rolling 12-month summation); and

CONV = conversion factor (1 ton/2,000 lbs).

Compliance with the annual emission limitation is ensured while compliance is maintained with the annual operating hours restriction.

1.c Emission Limitation: 0.79 lb of PE/hr (fugitive emissions)

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

$$\text{FPER} = (\text{MPWR}) \times (\text{EF}) \times (1 - \text{CAP}) = 0.79 \text{ lb of PE/hr}$$

where:

FPER = fugitive process emission rate (0.79 lb PE/hr);

MPWR = maximum process weight rate (33,000 lbs of metal poured/hr)*;

EF = emission factor (0.48 lb of PE/ton of metal poured)**;

CONV = conversion factor (1 ton/2,000 lbs); and

CAP = control device capture efficiency (1.0 - 0.01).

* This throughput rate represents the maximum design capacity of the equipment.

** Emission factor provided by Honda.

V. Testing Requirements (continued)

- 1.d** Emission Limitation: 2.37 tons of PE/yr, as a rolling, 12-month summation (fugitive emissions)

Applicable Compliance Method: The annual emission limitation was established by the following methodology:

$$(\text{MAFER}) \times (\text{AOH}) \times (\text{CONV}) = 2.37 \text{ tons of PE/yr}$$

where:

MAFER = maximum hourly fugitive emission rate (0.79 lb of PE/hr);

AOH = annual operating hours (6,000 hours/yr, as a rolling, 12-month summation); and

CONV = conversion factor (1 ton/2,000 lbs).

Compliance with the annual PE limitation is ensured while compliance is maintained with the annual hours of operation restriction.

- 1.e** Emission Limitation: Visible PE shall not exceed 0% opacity, as a 6-minute average, from any stack.

Applicable Compliance Method: If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

- 1.f** Emission Limitation: Visible PE shall not exceed 20% opacity, as a 3-minute average, from any fugitive dust emissions point.

Applicable Compliance Method: If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

- 1.g** Operating Hours Restriction: 6,000 hrs/yr, based on a rolling, 12-month summation

Applicable Compliance Method: Compliance with the annual operating hours restriction shall be based upon the record keeping requirements specified in Section A.III.1.

- 2.** The permittee shall conduct, or have conducted, emission testing for the baghouse to demonstrate compliance with the allowable PE limitations.

a. The emission testing shall be conducted within 2.5 years 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 PE limitations.

c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission limitations.

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 Ohio EPA, Southwest District Office.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Southwest District Office. 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, Southwest District Office's refusal to accept the results of the emission test(s).

V. Testing Requirements (continued)

Personnel from the Ohio EPA 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 emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Southwest District Office 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 Ohio EPA, Southwest District Office.

VI. Miscellaneous Requirements

1. None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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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: FC Line 3 Melting System (P906)
Activity Description: Ferrous Foundry Line 3 Melting System

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
ferrous castings line 3 melting system, equipped with a baghouse	OAC 3745-31-05(A)(3) (PTI 05-7140)	0.088 lb particulate emissions (PE)/hr 0.385 ton of PE/yr
		0.001 grain of PE/dscf
		0.00036 lb lead (Pb) emissions/hr 0.00158 ton of Pb emissions/yr
		Visible PE shall not exceed 0% opacity, as a 6-minute average, from any stack.
		The hourly and annual emission limitations specified above represent the emissions unit's potentials to emit. Therefore, no additional monitoring, record keeping or reporting is required to demonstrate compliance with these emission limitations.
		See Section A.II.2 below.
	OAC rule 3745-17-07(A)(1)	The visible PE limitation specified by this rule is less stringent than the visible PE limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-11(B)(1)	The PE emission limitation specified by this rule is less stringent than the PE emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- 2.a The PE from this emissions unit shall be controlled by hooding and venting the PE to a baghouse.

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 1 to 15 inches of water while any emission unit controlled by the baghouse are in operation. There is an exception for the first 45 days following a change of at least 50% of the fabric bags. During that time, the pressure drop shall be maintained below 15 inches of water while any emission unit controlled by the baghouse are 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 and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse once each operating day.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time that the pressure drop across the baghouse did not comply with the allowable range specified in this permit.
2. The quarterly deviation reports shall be submitted in accordance with paragraph A.1.c.ii of the General Terms and Conditions of this permit.

V. Testing Requirements

1. Compliance with the emission limitations specified in Section A.I.1 shall be determined in accordance with the following methods:
 - 1.a Emission Limitations: 0.088 lb of PE/hr and 0.001 grain of PE/dscf

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

$$\text{AHER} = (\text{BFR}) \times (\text{BEF}) \times (\text{TI}) \times (\text{CONV}) = 0.088 \text{ lb of PE/hr}$$

where:

AHER = maximum hourly emission rate (0.088 lb of PE/hr);
BFR = baghouse flow rate (10,200 acfm);
BEF = baghouse efficiency (0.001 grain/dscf);
TI = time (60 minutes/hour); and
CONV = conversion factor (1 lb/7,000 grains).

The permittee shall demonstrate compliance with the PE limitations based upon the results of emission testing conducted in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A.

V. Testing Requirements (continued)

1.b Emission Limitation: 0.385 ton of PE/yr

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

$$\text{AAER} = (\text{AHER}) \times (\text{MHPY}) \times (\text{CONV}) = 0.385 \text{ ton of PE/yr}$$

where:

AAER = annual allowable emission rate (0.385 ton of PE/yr);
AHER = maximum hourly PE rate (0.088 lb of PE/hr);
MHPY = maximum annual operating hours (8,760 hours/yr); and
CONV = conversion factor (1 ton/2,000 lbs).

1.c Emission Limitation: 0.00036 lb of Pb emissions/hr

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

The permittee shall demonstrate compliance with the PE limitations based upon the results of emission testing conducted in accordance with Methods 1-4, and 12 of 40 CFR Part 60, Appendix A.

1.d Emission Limitation: 0.00158 ton Pb emissions/yr

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

$$\text{AAER} = (\text{AHER}) \times (\text{MHPY}) \times (\text{CONV}) = 0.00158 \text{ ton of Pb emissions/yr}$$

where:

AAER = annual allowable emission rate (0.00158 ton of Pb emissions/yr);
AHER = maximum hourly Pb emission rate (0.00036 lb of Pb emissions/hr);
MHPY = maximum annual operating hours (8,760 hours/yr); and
CONV = conversion factor (1 ton/2,000 lbs).

1.e Emission Limitation: Visible PE shall not exceed 0% opacity, as a 6-minute average, from any stack.

Applicable Compliance Method: If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

V. Testing Requirements (continued)

2. The permittee shall conduct, or have conducted, emission testing for the baghouse to demonstrate compliance with the allowable PE limitations.
 - a. The emission testing shall be conducted within 2.5 years 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 PE and lead emission limitations.
 - c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission limitations.

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

Pb: Methods 1-4, and 12 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 Ohio EPA, Southwest District Office.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Southwest District Office. 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, Southwest District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA 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 emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Southwest District Office 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 Ohio EPA, Southwest District Office.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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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: FC Line 3 Casting System (P907)
Activity Description: Ferrous Foundry Line 3 Casting System

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
ferrous castings line 3 casting system, equipped with a baghouse	OAC 3745-31-05(A)(3) (PTI 05-7140)	0.155 lb particulate emissions (PE)/hr 0.679 ton of PE/yr 0.001 grain of PE/dscf Visible PE shall not exceed 0% opacity, as a 6-minute average, from any stack. The hourly and annual PE limitations specified above represent the emissions unit's potential to emit. Therefore, no additional monitoring, record keeping or reporting is required to demonstrate compliance with these emission limitations.
	OAC rule 3745-17-07(A)(1)	See Section A.II.2 below. The visible PE limitation specified by this rule is less stringent than the visible PE limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-11(B)(1)	The PE emission limitation specified by this rule is less stringent than the PE emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- The PE from this emissions unit shall be controlled by hooding and venting all the emissions to a baghouse.

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 1 to 15 inches of water while any emission unit controlled by the baghouse are in operation. There is an exception for the first 45 days following a change of at least 50% of the fabric bags. During that time, the pressure drop shall be maintained below 15 inches of water while any emission unit controlled by the baghouse are 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 and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse once each operating day.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time that the pressure drop across the baghouse did not comply with the allowable range specified in this permit.
2. The quarterly deviation reports shall be submitted in accordance with paragraph A.1.c.ii of the General Terms and Conditions of this permit.

V. Testing Requirements

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

1.a Emission Limitations: 0.155 lb of PE/hr and 0.001 grain of PE/dscf

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

$$\text{AHER} = (\text{BFR}) \times (\text{BEF}) \times (\text{TI}) \times (\text{CONV}) = 0.155 \text{ lb of PE/hr}$$

where:

AHER = maximum hourly emission rate (0.155 lb of PE/hr);
BFR = baghouse flow rate (18,000 acfm);
BEF = baghouse efficiency (0.001 grain/dscf);
TI = time (60 minutes/hour); and
CONV = conversion factor (1 lb/7,000 grains).

The permittee shall demonstrate compliance with the PE limitations based upon the results of emission testing conducted in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A.

1.b Emission Limitation: 0.679 ton of PE/yr

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

$$\text{AAER} = (\text{AHER}) \times (\text{MHPY}) \times (\text{CONV}) = 0.679 \text{ ton of PE/yr}$$

where:

AAER = annual allowable emission rate (0.385 ton of PE/yr);
AHER = maximum hourly PE rate (0.155 lb of PE/hr);
MHPY = maximum annual operating hours (8,760 hours/yr); and
CONV = conversion factor (1 ton/2,000 lbs).

V. Testing Requirements (continued)

- 1.c** Emission Limitation: Visible PE shall not exceed 0% opacity, as a 6-minute average, from any stack.

Applicable Compliance Method: If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

- 2.** The permittee shall conduct, or have conducted, emission testing for the baghouse to demonstrate compliance with the allowable PE limitations.
- a. The emission testing shall be conducted within 2.5 years 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 PE limitations.
 - c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission limitations.

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 Ohio EPA, Southwest District Office.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Southwest District Office. 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, Southwest District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA 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 emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Southwest District Office 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 Ohio EPA, Southwest District Office.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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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: Dust Storage and Conditioning System (P908)
Activity Description: Ferrous Foundry Dust Storage and Conditioning System

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
dust storage and conditioning system, equipped with a baghouse	OAC 3745-31-05(A)(3) (PTI 05-8004)	0.24 lb particulate emissions (PE)/hr 1.05 tons of PE/yr 0.001 grain of PE/dscf Visible PE shall not exceed 20% opacity, as a 6-minute average, from any stack. The hourly and annual PE limitations specified above represent the emissions unit's potential to emit. Therefore, no additional monitoring, record keeping or reporting is required to demonstrate compliance with these emission limitations.
	OAC rule 3745-17-07(A)(1)	See Section A.II.2 below. The visible PE limitation specified by this rule is equivalent to the visible PE limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-11(B)(1)	The PE emission limitation specified by this rule is less stringent than the PE emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- The PE from this emissions unit shall be controlled by hooding and venting all the emissions to a baghouse.

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 1 to 15 inches of water while any emission unit controlled by the baghouse are in operation. There is an exception for the first 45 days following a change of at least 50% of the fabric bags. During that time, the pressure drop shall be maintained below 15 inches of water while any emission unit controlled by the baghouse are 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 and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse once each operating day.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time that the pressure drop across the baghouse did not comply with the allowable range specified in this permit.
2. The quarterly deviation reports shall be submitted in accordance with paragraph A.1.c.ii of the General Terms and Conditions of this permit.

V. Testing Requirements

1. Compliance with the emission limitations specified in Section A.I.1 shall be determined in accordance with the following methods:
 - 1.a Emission Limitations: 0.24 lb of PE/hr and 0.01 grain of PE/dscf

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

The permittee shall demonstrate compliance with the PE limitations based upon the results of emission testing conducted in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A.

- 1.b Emission Limitation: 1.05 ton of PE/yr

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

$$AAER = (AHER) \times (MHPY) \times (CONV) = 1.05 \text{ ton of PE/yr}$$

where:

AAER = annual allowable emission rate (1.05 ton of PE/yr);
AHER = maximum hourly PE rate (0.24 lb of PE/hr);
MHPY = maximum annual operating hours (8,760 hours/yr); and
CONV = conversion factor (1 ton/2,000 lbs).

- 1.c Emission Limitation: Visible PE shall not exceed 20% opacity, as a 6-minute average, from any stack.

Applicable Compliance Method: If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

V. Testing Requirements (continued)

2. The permittee shall conduct, or have conducted, emission testing for the baghouse to demonstrate compliance with the allowable PE limitations.
 - a. The emission testing shall be conducted within 2.5 years 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 PE limitations.
 - c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission limitations.

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 Ohio EPA, Southwest District Office.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Southwest District Office. 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, Southwest District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA 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 emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Southwest District Office 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 Ohio EPA, Southwest District Office.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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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: Holding Furnace, Line 1, and Transit Ladle System (Z002)

Activity Description: Holding Furnace No. 1 and Transit Ladle System

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
holding furnace and transit ladle system line #1, equipped with a baghouse	OAC rule 3745-31-05(A)(3) (PTI 05-10472)	3.18 lbs of particulate emissions (PE)/hr (stack emissions) 9.54 tons of PE/yr (stack emissions)
		0.010 grain of PE/dscf (stack emissions)
		0.792 lb of PE/hr (fugitive emissions) 2.376 tons of PE/yr (fugitive emissions)
		Visible PE shall not exceed 0% opacity, as a 6-minute average, from any stack.
	OAC rule 3745-31-05(C) (PTI 05-10472)	Visible PE shall not exceed 20% opacity, as a 3-minute average, from any fugitive dust emissions point. 11.92 tons of PE/yr, as a rolling, 12-month summation (stack and fugitive emissions combined)
	OAC rule 3745-17-07(A)(1)	See Section A.II.1 below. The visible PE limitation specified by this rule is less stringent than the visible PE limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-11(B)(1)	The PE emission limitation specified by this rule is less stringent than the PE emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
	OAC rule 3745-17-07(B)(1)	This emissions unit is exempt from the visible particulate limitation specified in OAC rule 3745-17-07(B)(1), pursuant to OAC rule 3745-17-07(B)(11)(e), because the emissions unit is not a fugitive dust emissions unit located within the geographical area specified in Appendix A of OAC rule 3745-17-08.

2. Additional Terms and Conditions

- 2.a** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the use of hooding and venting all emissions to a baghouse.

II. Operational Restrictions

1. The maximum annual operating hours for this emissions unit shall not exceed 6,000 hours/yr, as a rolling, 12-month summation.
2. The pressure drop across the baghouse shall be maintained within the range of 1 to 15 inches of water while any emission unit controlled by the baghouse is in operation except for the first 45 days following a change of at least 50% of the fabric bags, when the pressure drop shall be maintained below 15 inches of water while any emission unit controlled by the bag house 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 and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse once each operating day.
2. The permittee shall maintain monthly records of the following information:
 - a. The operating hours for each calendar month.
 - b. The rolling, 12-month summation of the operating hours (the total operating hours for the current month, plus the total operating hours for the previous 11 calendar months).

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

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

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

IV. Reporting Requirements

1. The permittee shall quarterly deviation (excursion) reports that specify the following information:
 - a. all exceedances of the rolling, 12-month summation operating hours restriction; and
 - b. all periods of time during which the emission unit was in operation and the pressure drop across the baghouse did not comply with the allowable operational range.
2. The quarterly deviation reports shall be submitted in accordance with paragraph A.1.c.ii of the General Terms and Conditions of this permit.
3. The permittee shall submit semiannual written reports that (a) identify all days during which any visible fugitive PE were observed from the egress points (i.e., from the building enclosure) serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible fugitive particulate emissions. These reports shall be submitted to the Ohio EPA, Southwest District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitations specified in Section A.I.1 and the operational restriction specified in Section A.II shall be determined in accordance with the following methods:
 - 1.a Emission Limitations: 3.18 lbs of PE/hr and 0.010 grain of PE/dscf (stack emissions)

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

The permittee shall demonstrate compliance with the PE limitations based upon the results of emission testing conducted in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A.

V. Testing Requirements (continued)

1.b Emission Limitation: 9.54 tons of PE/yr (stack emissions)

Applicable Compliance Method: The annual PE limitation was established by the following methodology:

Compliance with the annual PE limitation is ensured while compliance is maintained with the annual hours of operation restriction.

1.c Emission Limitation: 0.792 lb of PE/hr (fugitive emissions)

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

$$(\text{MPWR}) \times (\text{CONV}) \times (\text{EF}) \times (1 - \text{CEF}) = 0.792 \text{ lbs of PE/hr}$$

where:

MPWR = maximum process weight rate (33,000 lbs/hr);
CONV = conversion factor (1 ton/2,000 lbs);
EF = emission factor (0.48 lbs of PE/ton); and
CEF = capture efficiency (90%).

1.d Emission Limitation: 2.376 tons of PE/yr, as a rolling, 12-month summation (fugitive emissions)

Applicable Compliance Method: The annual emission limitation was established by the following methodology:

$$(\text{MAER}) \times (\text{MAH}) \times (\text{CONV}) = 2.376 \text{ tons of PE/yr}$$

where:

MAER = maximum hourly emission rate (0.792 lb of PE/hr);
MAH = maximum annual hours of operation (6,000 hrs/yr); and
CONV= conversion factor (1 ton/2,000 lbs).

Compliance with the annual PE limitation is ensured while compliance is maintained with the annual operating hours restriction.

V. Testing Requirements (continued)

- 1.e** Emission Limitation: 11.92 tons of PE/yr, as a rolling, 12-month summation (stack and fugitive emissions combined)

Applicable Compliance Method: The annual emission limitation was established by the following methodology:

$$(\text{MASER}) \times (\text{AOH}) \times (\text{CONV}) + (\text{MAFER}) \times (\text{AOH}) \times (\text{CONV}) = 11.92 \text{ tons of PE per year}$$

where:

MASER = maximum allowable stack emission rate (3.18 lbs of PE/hr);
MAFER = maximum allowable fugitive emission rate (0.792 lbs of PE/hr);
AOH = maximum annual operating hours (6,000 hours/yr, as a rolling, 12-month summation); and
CONV = conversion factor (1 ton/2,000 lbs).

Compliance with the annual PE limitation is ensured while compliance is maintained with the annual operating hours restriction.

- 1.f** Emission Limitation: Visible PE shall not exceed 0% opacity, as a 6-minute average, from any stack.

Applicable Compliance Method: If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

- 1.g** Emission Limitation: Visible PE shall not exceed 20% opacity, as a 3-minute average, from any fugitive dust emissions point.

Applicable Compliance Method: If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

- 2.** The permittee shall conduct, or have conducted, emission testing for the baghouse to demonstrate compliance with the allowable PE limitations.
- The emission testing shall be conducted within 2.5 years after issuance of the permit and within 6 months prior to permit expiration.
 - The emission testing shall be conducted to demonstrate compliance with the allowable PE limitations.
 - The following test methods shall be employed to demonstrate compliance with the allowable mass emission limitations.

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.

- 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 Ohio EPA, Southwest District Office.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Southwest District Office. 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, Southwest District Office's refusal to accept the results of the emission test(s).

V. Testing Requirements (continued)

Personnel from the Ohio EPA 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 emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Southwest District Office 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 Ohio EPA, Southwest District Office.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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