



State of Ohio Environmental Protection Agency

Street Address:

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

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

Mailing Address:

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

08/18/03

CERTIFIED MAIL

RE: Draft Title V Chapter 3745-77 permit

05-75-00-0174
Honda of America Mfg., Inc. Anna Engine Plant
Mark Tufts
12500 Meranda Road
Anna, OH 45302-9699

Dear Mark Tufts:

You are hereby notified that the Ohio Environmental Protection Agency has prepared the enclosed draft of the Title V permit for the facility referenced above. The purpose of this draft is to solicit public comments. A public notice concerning the draft will appear in the Ohio EPA Weekly Review and the major newspaper in the county where the facility is located. Comments and/or a request for a public hearing from the public and any affected parties will be accepted by Southwest District Office within 30 days of the date of publication in the newspaper. You will be notified in writing if a public hearing is scheduled. **In order to facilitate our review of all the comments or concerns you may have with the enclosed draft permit, please provide a hand marked-up copy of the draft permit showing the changes you think are necessary, along with any additional summary comments, by the end of the draft public comment period. The hard marked-up copy and any additional summary comments should be submitted to the Ohio EPA District Office or local air agency identified below and to this office at the following address:**

**Ohio EPA, Division of Air Pollution Control
Permit Issuance and Data Management Section
Draft Title V Permit Correspondence
122 South Front Street
Columbus, Ohio 43215**

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

If you have any questions concerning this draft Title V permit, please contact Southwest District Office.

Sincerely,

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

cc: USEPA (electronically submitted)
File, DAPC PMU
Southwest District Office
Indiana



State of Ohio Environmental Protection Agency

DRAFT TITLE V PERMIT

Issue Date: 08/18/03

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 F001, P001, P006, P015, P017, P018, P020, P021, P024, P025, P039, P041, P043, P048, P056, P057, P058, P059, P060, P061, P071, P073, P074, P075, P076, P078, P079, P080, P081, P082, P083, P901, P902, P904, P905, P906, P907, P908, Z001, 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.

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, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:

- i. The date, place (as defined in the permit), and time of sampling or measurements.
- ii. The date(s) analyses were performed.
- iii. The company or entity that performed the analyses.
- iv. The analytical techniques or methods used.
- v. The results of such analyses.
- vi. The operating conditions existing at the time of sampling or measurement.

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

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

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

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

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

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

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

- (a) Written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations ; (ii) the probable cause of such deviations; and (iii) any corrective actions or preventive measures taken, shall be promptly made to the appropriate Ohio EPA District Office or local air agency. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, i.e., in Part III of this Title V permit, the written reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year, and shall cover the previous calendar quarters. In identifying each deviation, the permittee shall specify the applicable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. These written reports shall satisfy the requirements (in part) of OAC rule 3745-77-07(A)(3)(c)(i) and (ii) pertaining to the submission of monitoring reports every six months and the requirements (in part) of OAC rule 3745-77-07(A)(3)(c)(iii)

pertaining to the prompt reporting of all deviations. See B.6 below if no deviations occurred during the quarter.

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

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

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

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

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

iii. **For monitoring, record keeping, and reporting requirements:**

Written reports that identify any deviations from the federally enforceable monitoring, record keeping, and reporting requirements contained in this permit shall be submitted to the appropriate Ohio EPA District Office or local air agency every six months, i.e., by January 31 and July 31 of each year, for the previous six calendar months. In identifying each deviation, the permittee shall specify the applicable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. These semi-annual written reports shall satisfy the requirements of OAC rule 3745-77-07(A)(3)(c)(i) and (ii) pertaining to the reporting of any deviations related to the monitoring, record keeping, and reporting requirements. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report which states that no deviations occurred during that period.

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

- iv. Each written report shall be signed by a responsible official certifying that, "based on information and belief formed after reasonable inquiry, the statements and information in

the report (including any written malfunction reports required by OAC rule 3745-15-06 that are referenced in the deviation reports) are true, accurate, and complete."
(Authority for term: OAC rule 3745-77-07(A)(3)(c)(iv))

2. Scheduled Maintenance/Malfunction Reporting

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

3. Risk Management Plans

If 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, except that no such notice shall be required for changes that qualify as insignificant emission levels or activities as defined in OAC rule 3745-77-01(U). Such written notice shall describe each such change, the date of such change, any change in emissions or pollutants emitted, and any federally applicable requirement that would apply as a result of the change.
- c. The change shall not qualify for the permit shield under OAC rule 3745-77-07(F).
- d. The permittee shall keep a record describing all changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes.
- e. The change is not subject to any applicable requirement under Title IV of the Act or is not a modification under any provision of Title I of the Act.

Paragraph (I) of rule 3745-77-07 of the Administrative Code applies only to modification or amendment of the permittee's Title V permit. The change made may require a permit to install under Chapter 3745-31 of the Administrative Code if the change constitutes a modification as defined in that

Chapter. Nothing in paragraph (I) of rule 3745-77-07 of the Administrative Code shall affect any applicable obligation under Chapter 3745-31 of the Administrative Code.

(For purposes of clarification, the permittee can refer to Engineering Guide #63 that is available in the STARSHIP software package.)

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

17. Compliance Method Requirements

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

(This term is provided for informational purposes only.)

18. Insignificant Activities

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

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

19. Permit to Install Requirement

Prior to the “installation” or “modification” of any “air contaminant source,” as those terms are defined in OAC rule 3745-31-01, a permit to install must be obtained from the Ohio EPA pursuant to OAC Chapter 3745-31.

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

20. Air Pollution Nuisance

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

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

B. *State Only Enforceable Section*

1. Reporting Requirements Related to Monitoring and Record Keeping Requirements

The permittee shall submit required reports in the following manner:

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

2. Records Retention Requirements

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

3. Inspections and Information Requests

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

4. Scheduled Maintenance/Malfunction Reporting

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

scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s).

5. Permit Transfers

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

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

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

Part II - Specific Facility Terms and Conditions

A. State and Federally Enforcable Section

1. The particulate emissions (PE) and/or particulate matter less than 10 microns in diameter (PM10 emissions) from fabric filter BH-50 serving emissions units P018, P056, P058, and P904 shall not exceed 0.010 grain per actual cubic foot of the total exhaust gases.

The PE and/or PM10 emissions from fabric filter BH-60 serving emissions units P018, P056, P057, and P061 shall not exceed 0.010 grain per actual cubic foot of the total exhaust gases.

The PE and/or PM10 emissions from fabric filter BH-260 serving emissions units P905, P076, P908, and P901 shall not exceed 0.010 grain per actual cubic foot of the total exhaust gases.

The permittee reserves the right to direct the PE and/or PM10 emissions from any other existing or new emissions units (once permitted and thereby considered existing) to these fabric filters with the understanding that emissions will not exceed 0.010 grain per actual cubic foot 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 thirty 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.

2. The PE from baghouse BH-2 (old BH-50) serving Ferrous Casting Line #4 (emissions units P078, P079, P080, P081, P082 and P083) shall not exceed 0.004 grain per actual cubic foot of the total exhaust gases.

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

Uncontrolled limits for Ferrous Casting Line #4 are based on iron throughput of 2.2 tons per hour and 8268 tons per year.

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.

3. 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 Enforcable Section (continued)

4. 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.

5. 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.

B. State Only Enforceable Section

1. 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
- 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

- B. State Only Enforceable Section**
- 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/Sicomert
- 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
- 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)
- Z163 0.29 MMBTU/hr Diesel Generator (WWTP)

B. State Only Enforceable Section (continued)

The following insignificant emissions units are located at this facility:

B002 Old North Mechanical 7.3 mmBTU steam boiler
B004 South 7.3 mmBTU steam boiler
B005 AH12, 4.44 MMBTU/Hour Heater
B006 AH13, 8.55 MMBTU/Hour Heater
B007 AH14, 8.55 MMBTU/Hour Heater
B008 AH15, 4.44 MMBTU/Hour Heater
B009 AH16, 8.55 MMBTU/Hour Heater
B010 AH17, 8.55 MMBTU/Hour Heater
B011 AH18, 3.55 MMBTU/Hour Heater
B012 AH19, 3.56 MMBTU/Hour Heater
B013 HV15, 5.50 MMBTU/Hour Heater
B014 HV16, 5.50 MMBTU/Hour Heater
B015 HV17, 5.50 MMBTU/Hour Heater
B016 HV18, 5.50 MMBTU/Hour Heater
B017 HV19, 5.50 MMBTU/Hour Heater
B018 HV20, 5.50 MMBTU/Hour Heater
B019 HV21, 5.50 MMBTU/Hour Heater
B020 HV22, 5.50 MMBTU/Hour Heater
B021 HV23, 5.50 MMBTU/Hour Heater
B022 HV101, 7.88 MMBTU/Hour Heater
B023 HV102, 7.88 MMBTU/Hour Heater
B024 HV103, 6.36 MMBTU/Hour Heater
B025 HV104, 6.36 MMBTU/Hour Heater
B027 HV106, 7.95 MMBTU/Hour Heater
B028 HV106, 7.95 MMBTU/Hour Heater
B029 HV107, 7.95 MMBTU/Hour Heater
B030 AH101, 5.83 MMBTU/Hour Heater
B031 AH102, 5.63 MMBTU/Hour Heater
B032 AH103, 6.00 MMBTU/Hour Heater
B033 AH104, 6.00 MMBTU/Hour Heater
B034 AH103, 6.00 MMBTU/Hour Heater
F002 Foundry Storage Piles
F003 Ingot Casting Machine
G002 Diesel/Gasoline Dispensing
G003 Gasoline Dispensing Operation
K003 Wax Booth Line 0
K004 Powder Paint
K005 Disk Coating Line No. 1
K006 Wax Booth Line 1
K010 Disk Coating Line No. 2
K011 Wax Booth Line 2
P002 Aluminum Die Casting Operation No. 1
P005 Line Zero Firing
P013 Casting Shotblast System No. 1
P016 Core Making Machine No. 1
P019 Final Finishing System
P022 Aluminum LPDC Operation
P025 Aluminum LPDC Core Making Operations
P030 Forging Bonderizer
P031 Forging Annealing
P032 Forging Shotblast
P033 630-Ton Forging Press
P034 2500-Ton Forging Press
P035 Outboard Blast Machine
P036 Ingot Blast Machine

P036 Inner Blast Machine
B. State Only Enforceable Section (continued)

P037 Sandblast
P040 Aluminum HPDC Operation No. 5 (EA-210)
P042 Aluminum HPDC Operation No. 6 (EA-230)
P044 Aluminum HPDC Operation No. 7
P045 Journal Lathes
P046 Pin Lathes
P047 Hole Drilling
P055 Electronic Fuel Injector Test Stand
P062 Bulk Chemical Handling System
P063 Quick Cast Shotblast
P064 Zero Line Machining (Aluminum)
P065 Line No. 1 Machining (Aluminum)
P066 Head Machining Line No. 1 (Aluminum)
P067 ATM Machining Line (Aluminum)
T003 Waste Oil Tank
T004 ATF Return Oil Tank
T005 Ethylene Glycol Tank
T006 WWTP Waste Oil Tank
T007 Engine Oil Storage Tank
T008 Engine Oil Storage Tank
T009 ATF Storage Tank
T010 MTF Storage Tank
T011 Diesel Oil Tank (South)
T012 Engine Oil Tank (Motorcycle)
T013 Methanol Storage Tank
T014 Leaded Gasoline Storage Tank
T015 Gasoline Storage Tank
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

B. State Only Enforceable Section (continued)

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

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: 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 particulate emissions (PE)/yr from paved roadways and parking areas combined</p> <p>No visible particulate emissions (PE) from any paved roadway or parking area except for a period of time not to exceed six 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 See Section A.1.2 below.</p>

2. Additional Terms and Conditions

- 2.a Since this emissions unit is not located in an Appendix A area, pursuant to paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08 (B)(4) do not apply to this emissions unit.
- 2.b Pursuant to paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) do not apply to this emissions unit.
- 2.c 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. Additional Terms and Conditions (continued)

- 2.d** 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.e** 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.f** 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.g** A maximum speed limit of twenty-five miles per hour shall be posted on the property.

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 monthly 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:
 - i.** 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;
 - ii.** the date of each inspection where it was determined by the permittee that it was necessary to implement the control measures;
 - iii.** the dates the control measures were implemented; and
 - iv.** 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 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.
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 Sections A.1 and A.2 shall be determined as follows:

1.a Emissions Limitation:

No visible PE except for 1 minute during any 60-minute 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 appropriate emission factor equation 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:

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

k = 38g of PE/vehicle mile traveled

sL = 0.06g of PE/square mile

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>
plant roadways and parking areas		

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 Melting Operation # 1 (P001)

Activity Description: Operations Include Melting, Drossing and Fluxing. Three Holding Furnaces are Included.

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 melting operation #1 w/melting furnace, wet scrubber, transfer trough, three electric holding furnaces and transfer pump. process includes dross skimming rake and funnel.	OAC rule 3745-31-05(A)(3) PTI #05-08011	0.50 lb of particulate emissions (PE)/hr 2.19 tons per year (TPY) of PE 1.90 lbs of nitrogen oxides (NOx) emissions/hr 8.32 TPY of NOx emissions 0.5 lb organic compounds (OC) emissions/hr 2.19 TPY of OC emissions 2.25 lbs of sulfur dioxide (SO2) emissions/hr 9.86 TPY of SO2 emissions 0.11 lb carbon monoxide (CO) emissions/hr 0.48 TPY of CO emissions Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average. The requirements established pursuant to this rule are equivalent to the requirements of OAC rule 3745-17-07(A)(1). See Section A.I.2.a below.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
	OAC rule 3745-18-06(E)(2)	The SO2 emission 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)	See Section A.I.2.b below.
	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.I.2.c below.

2. Additional Terms and Conditions

- 2.a** The permittee shall employ a wet scrubber with a minimum designed control efficiency of 97%, by weight, for the control of PE.
- 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 05-08011.

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 Permit to Install 05-08011.

II. Operational Restrictions

- 1. The pressure drop across the wet scrubber shall be continuously maintained at a value of not less than 2 inches of water at all times while this emission unit is in operation.
- 2. The water flow rate for the wet scrubber shall be continuously maintained at a value of not less than 20 gallons per minute at all times while the emission unit is in operation.

III. Monitoring and/or Record Keeping Requirements

- 1. The permittee shall properly install, operate and maintain equipment to monitor the static pressure drop across the scrubbers and the scrubber water flow rate while the emission unit (s) are in operation. The monitoring devices shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

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

- A. the pressure drop across the scrubber (s) , in inches of water;
- B. the scrubber water flow rate, in gallons per minute.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the following scrubber parameters were not maintained at or above the required levels:
 - a. the static pressure drop across the scrubber; and
 - b. the scrubber water flow rate.

V. Testing Requirements

1. Compliance with the emission limitations in Sections A.I.1, A.I.2 and A.II of these terms and conditions shall be determined in accordance with the following methods:

- 1.a Emission Limitation: 0.50 lb of PE/hr; 2.19 TPY of PE

Applicable Compliance Method: Compliance shall be assumed based on the following calculation:

$$\text{AER} = (\text{AHER}) + (\text{FER}) = 0.101 \text{ lb PE/hr}$$

Where:

AHER = Actual Hourly Emission Rate = 0.10 lb PE / hr (based upon stack testing conducted this emissions unit on 3/20/99)

$$\text{FER} = \text{fugitive emission rate} = (\text{AHER}) (1 - \text{CE}) = 0.001 \text{ lb PE / hr}$$

Where:

CE = capture efficiency = 99% which is an estimate of Honda's

- 1.b Emission Limitation:

2.19 tons particulate emissions (PE)/yr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$\text{AAER} = (\text{AER}) \times (\text{MHPY}) \times (\text{CONV}) = 2.19 \text{ tons PE/yr}$$

where

AAER= the annual allowable emission rate (2.19 tons PE/yr)

AER= the allowable emission rate (0.50 lb PE/hr)

MHPY= the maximum hours per year (8, 760 hrs/yr)

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

V. Testing Requirements (continued)

1.c Emission Limitation:

2.25 lbs SO₂/hr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$\text{AER} = (\text{EF}) \times (\text{MPWR}) \times (\text{CONV}) = 2.25 \text{ lbs SO}_2/\text{hr}$$

where

AER= the allowable emission rate (2.25 lbs SO₂/hr)

EF= the emission factor (0.9 lb SO₂/ton aluminum melted)

MPWR= the maximum process weight rate (5000 lbs aluminum melted/hr)

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

1.d Emission Limitation:

9.86 tons sulfur dioxide (SO₂)/yr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$\text{AAER} = (\text{AER}) \times (\text{MHPY}) \times (\text{CONV}) = 9.86 \text{ tons SO}_2/\text{yr}$$

where

AAER= the annual allowable emission rate (9.86 tons SO₂/yr)

AER= the allowable emission rate (2.25 lbs SO₂ /hr)

MHPY= the maximum hours per year (8, 760 hrs/yr)

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

1.e Emission Limitation:

0.11 lbs. CO/hr.

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation for natural gas combustion:

$$\text{AER} = (\text{BBTU}) \times (\text{BCONV}) \times (\text{COEF}) \times (1-\text{CAP}) \times (\text{HRS}) = 0.11 \text{ lb CO}/\text{yr}$$

where:

AER= the allowable emission rate (0.11 lb CO/hr)

BCOMB = the maximum burner combustion rate(5,122 cubic feet/hr)

BCONV = the conversion factor (1 mm cf/ 1,000,000 cf/lb)

COEF = CO Emission Factor (21.0 lbs/mmcf, from (AP-42 5th. Edition, Table 1.4-2)

CAP = Control Device Capture Efficiency (99.9%)

V. Testing Requirements (continued)

1.f Emission Limitation:

0.48 tons carbon monoxide (CO)/yr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$AAER = (AER) \times (MHPY) \times (CONV) = 0.48 \text{ tons CO/yr}$$

where

AAER= the annual allowable emission rate (0.48 tons CO/yr)

AER= the allowable emission rate (0.11 CO /hr)

MHPY= the maximum hours per year (8, 760 hrs/yr)

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

1.g Emission Limitation:

1.90 lbs nitrous oxides (NOx)/hr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$AER = (EF) \times (MPWR) \times (CONV) = 1.90 \text{ lbs NOx/hr}$$

where

AER= the allowable emission rate (1.90 lbs/hr)

EF= the emission factor (0.76 lb NOx/ton aluminum melted , SCC 3-04-001-03

MPWR= the maximum process weight rate (5,000 lbs aluminum melted/hr)

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

1.h Emission Limitation:

8.32 tons NOx/yr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$AAER = (AER) \times (MHPY) \times (CONV) = 8.32 \text{ tons NOx/yr}$$

where

AAER= the annual allowable emission rate (8.32 tons NOx/yr)

AER= the allowable emission rate (1.90 lbs NOx /hr)

MHPY= the maximum hours per year (8, 760 hrs/yr)

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

V. Testing Requirements (continued)

1.i Emission Limitation:

0.50 lb organic compounds (OC)/hr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$\text{AER} = (\text{EF}) \times (\text{MPWR}) \times (\text{CONV}) = 0.50 \text{ lb OC/hr}$$

where

AER= the allowable emission rate (0.50 lb OC/hr)

EF= the emission factor (0.20 lb OC/ton aluminum melted, SCC 3-04-001-03)

MPWR= the maximum process weight rate (5,000 lbs aluminum melted/hr)

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

1.j Emission Limitation:

2.19 tons organic compounds (OC)/yr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$\text{AAER} = (\text{AER}) \times (\text{MHPY}) \times (\text{CONV}) = 2.19 \text{ tons OC/yr}$$

where

AAER= the annual allowable emission rate (2.19 tons OC/yr)

AER= the allowable emission rate (0.50 lb OC /hr)

MHPY= the maximum hours per year (8, 760 hrs/yr)

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

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

Applicable Compliance Method: If required, compliance with this emission limitation 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: 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>
nine dynamometer engine test cells with thermal incinerator	OAC rule 3745-31-05(A)(3) (PTI 05-7193)	0.155 lb of lead (Pb)/ hr 0.0245 ton of Pb/yr 11.38 lbs of nitrogen oxides (NOx)/hr 20.15 tons of NOx/yr 2.48 lbs of organic compounds (OC)/hr 4.39 tons of OC/year 48.1 lbs of carbon monoxide (CO)/hr 85.31 tons CO/yr Direct venting to a thermal incinerator with a designed control efficiency of 95%. see section A.1.2 below The CO requirements established pursuant to this rule are equivalent to the requirements of OAC rule 3745-21-08(B) See Section A.1.2 below.

2. Additional Terms and Conditions

- 2.a The emissions unit shall be controlled with a thermal incinerator designed to destroy at least 95% of the expected concentrations of CO and NOx.
- 2.b The permittee shall employ leaded, unleaded, premium or compressed gas, or gasohol fuel when operating this emissions unit.

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.

II. Operational Restrictions (continued)

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 on leaded gasoline per year.
3. The nine (9) engine dynamometer test cells aggregately will be limited a combined total of 27,000 hours per 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 the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.
2. The facility shall maintain hourly records of the number of gallons of leaded gasoline burned per day by this emissions unit.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify 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 permittee shall submit deviation (excursion) reports that identify any exceedance of the hourly leaded gasoline restriction (124 gallons per hour).
3. The permittee shall submit deviation (excursion) reports that identify any exceedance for the amount of leaded gasoline used for the calendar year.

V. Testing Requirements

1. 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.

Compliance with the emission limitation(s) specified in section A.I.1 shall be determined in accordance with the following method(s):

V. Testing Requirements (continued)

- 1.a** The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
- a. The emission testing shall be conducted within 3 months after issuance of the permit and within 6 months prior to permit expiration.
 - b. The emission testing shall be conducted to demonstrate compliance for allowable mass emissions rate limitations for PE, SO_x, CO, OC, Pb, and NO_x.
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s) and control efficiency:

Pollutant	Test Method	Location
CO:	Methods 1-4 and 10 of	40 CFR Part 60, Appendix A
NO _x :	Methods 1-4 and 7 or 7A of	40 CFR Part 60, Appendix A
Pb	Methods 1-4 and 12 of	40 CFR Part 60, Appendix A
OC	Method 25 or 25A of	40 CFR Part 60, Appendix A
PE	Methods 1-4 and 5	40 CFR Part 60, Appendix A
SO _x	Methods 1-4 and 6	40 CFR Part 60, Appendix A

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

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

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 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 compounds (OC)/hour - (stack emissions)
		1.926 tons of OC/year - (stack emissions)
		0.061 lb of OC/hour - (fugitive emissions)
		0.267 ton of OC/year - (fugitive emissions)
		1.15 lbs of sulfur oxides SOx/hr. - (stack emissions)
5.05 tons of SOx/yr. - (stack emissions)		
	OAC 3745-17-07 (A)(1)	1.16 lbs of SOx/hr. - (fugitive emissions)
	OAC rule 3745-17-11(B)(1)	5.08 tons of SOx/yr. - (fugitive emissions)
		0% opacity, as a six minute average, from the stack
		20 % opacity, as a three minute

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

**Applicable Rules/
Requirements**

average from the fugitive dust source

Applicable Emissions

Limitations/Control

Measures

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 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 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 sulfur dioxide (SO₂) curing is employed.
4. The scrubber water flow rate shall be continuously maintained at a value of not less than 32 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 install, operate, and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, 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 install, 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 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:
 - 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. The operating times for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month operating hours limitation excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.
2. The permittee shall submit pressure drop deviation (excursion) reports that identify 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 range specified in the permit.
3. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the emission unit was in operation and the following scrubber parameters were not maintained at or above the required levels:
 - a. the static pressure drop across the scrubber;
 - b. the scrubber water flow rate; and
 - c. the pH of the scrubber liquor.
4. The deviation reports shall be submitted in accordance with paragraph A.I.e.ii of the General Terms and Conditions of this permit.

V. Testing Requirements

1. Compliance with the emission limitation(s) specified in section A.I.1 shall be determined in accordance with the following method(s):

V. Testing Requirements (continued)

1.a Emission Limitation:

0.010 grains of PE/dscf

Applicable Compliance Method:

Compliance with the 0.010 grains of PE/dscf shall be determined by emission testing performed pursuant to section

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

- a. The emission testing shall be conducted within 3 months after issuance of the permit and within 6 months prior to permit expiration.
- b. The emissions testing shall be conducted to demonstrate compliance with the allowable mass emission rate for PE.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s).

Pollutant	Test Method	Location
PE	Methods 1-4 & 5	40 CFR Part 60, Appendix A
SOx	Method 6	40 CFR Part 60, Appendix A

- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA, 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 appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit(s) operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA, Southwest District Office 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(s) and the testing procedures provide a valid characterization of the emissions from the emissions unit(s) 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 the completion of the test(s).

V. Testing Requirements (continued)

1.b Emission Limitation:

5.21 tons of PE/yr, from the stack

Applicable Compliance Method:

The annual PE limitation may be determined by the following methodology:

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

where:

MAER= the maximum allowable emission rate (1.19 lbs PE/hr)

MAH= the maximum annual hours of operation (8,760 hrs./yr)

CONV= conversion factor (1 ton/2000 lbs)

In addition, compliance with the annual PE limitation is ensured if compliance is maintained with the hourly PE limitation.

1.c Emission Limitation:

0.007 lb PE/hr of fugitive emissions

Applicable Compliance Method:

The hourly fugitive PE limitation 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 (2162 lbs of sand/hr)

CONV = conversion factor (1 ton/2000 pounds)

EF = emission factor (0.65 lb of PE/ton of sand)

CEF = capture efficiency (0.99)

1.d Emission Limitation:

0.031 ton of PE/yr of fugitive emissions

Applicable Compliance Method:

The annual fugitive PE limitation may be determined by the following methodology:

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

where:

MAER= the maximum allowable emission rate (0.007 lb of PE/hr.-fugitive)

MAH= the maximum annual hours of operation (8,760 hrs./yr.)

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

V. Testing Requirements (continued)

1.e Emission Limitation:

0.441 lb of OC/hr, from the stack

Applicable Compliance Method:

The hourly OC limitation was established by the following methodology:

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

$[UEB + CEC + UEPS] \times [CEF] = 0.441 \text{ lb OC/hr. from the stack.}$

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/hr.)
UEPS= the uncontrolled emission rate from the parting spray (0.005 lb of OC/hr.)
CEF = capture efficiency (0.99)

where:

$UEB = (PSH)(CONV)(EF) = 0.14 \text{ lb of OC/hr.}$
PSH = pounds of sand per hour (2,162 lbs of sand/hr)
CONV = conversion factor (1 ton/2000 lbs)
EF = emission factor (0.127 lb of OC/ton sand, OCMA/ Ohio EPA OC study)

where:

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

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

where:

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

V. Testing Requirements (continued)

1.f Emission Limitation:

1.926 tons of OC/yr, from the stack

Applicable Compliance Method:

The annual OC limitation may be determined by the following methodology:

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

where:

MAER= the maximum allowable emission rate (0.441 lb of OC/hr.)

MAH= the maximum annual hours of operation (8,760 hrs./yr.)

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

1.g Emission Limitation:

0.061 lb of OC/hr. of fugitive emissions

Applicable Compliance Method:

The hourly fugitive OC limitation was established by the following methodology:

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

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.)

UEPS= the uncontrolled emission rate from the parting spray (0.005 lb of OC/hr.)

CEF = capture efficiency (0.99)

where:

$UEB = (PSH) \times (CONV) \times (EF) = 0.14 \text{ lb of OC/hr.}$

PSH = pounds of sand per hour (2,162 lbs of sand/hr)

CONV = conversion factor (1 ton/2000 lbs)

EF = emission factor (0.127 lb of OC/ton sand, OCMA/ Ohio EPA OC study)

where:

$UEC = (PCH) = 6.0 \text{ lbs of OC/hr.}$

PCH = pounds of triethylamine (TEA) catalyst per hour (6.0 lbs/hr.)

where:

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

GPS = gallons of parting spray per hour (0.5 gallon of parting spray/hr.)

OCC = Organic compound content (0.01 pound of OC/gallon)

V. Testing Requirements (continued)

1.h Emission Limitation:

0.267 ton of OC/yr of fugitive emissions

Applicable Compliance Method:

The annual fugitive OC limitation may be determined by the following methodology:

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

where:

MAER= the maximum allowable emission rate (0.061 lb of OC/hr.)

MAH= the maximum annual hours of operation (8,760 hrs./yr.)

CONV= conversion factor (1 ton/2000 lbs)

1.i Emission Limitation:

1.15 lbs of SO_x/hr, from the stack

Applicable Compliance Method:

The hourly SO_x limitation was established by the following methodology:

$(PCH) \times (1 - CEF) \times (CE) = 1.15$ lbs of SO_x/hr, from the stack

where:

PCH = pounds of SO_x catalyst per hour (116 lbs catalyst/hr.)

CEF = control efficiency of scrubber $[(100\% - 99\%) / 100\%]$

CE = capture efficiency (99%)

1.j Emission Limitation:

5.05 tons of SO_x/yr, from the stack

Applicable Compliance Method:

The annual SO_x limitation may be determined by the following methodology:

$(MAER) \times (MAH) \times (CONV) = 5.05$ tons of SO_x/yr, from the stack

where:

MAER= the maximum allowable emission rate (1.15 lbs of SO_x/hr)

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

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

V. Testing Requirements (continued)

1.k Emission Limitation:

1.16 lbs SO_x/hr of fugitive emissions

Applicable Compliance Method:

The hourly fugitive SO_x limitation was established by the following methodology:

$(PCH) \times (1 - CE) = 1.16$ lbs of SO_x/hr of fugitive emissions.

where:

PCH = pounds of SO_x catalyst per hour (116 lbs of catalyst/hr)

CE = capture efficiency (99%)

1.l Emission Limitation:

Visible particulate emissions from the stack shall not exceed 0% opacity, as a six-minute average.

Applicable Compliance Method:

Compliance shall be determined according to test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR Part 60.

1.m Emission Limitation:

20% opacity, as a three-minute average, from the fugitive dust source

Applicable Compliance Method:

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

1.n Emission Limitation:

5.08 tons of SO_x/yr of fugitive emissions

Applicable Compliance Method:

The annual fugitive SO_x limitation may be determined by the following methodology:

$(MAER) \times (MAH) \times (CONV) = 5.08$ tons of SO_x/yr of fugitive emissions.

where:

MAER= the maximum allowable emission rate (1.16 lbs of SO_x/hr.)

MAH= the maximum annual hours of operation (8,760 hrs./yr.)

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

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

1. Emission Limitation for Air Toxics:

The permit to install for this emissions unit (P015) 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. 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): 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 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, 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

VI. Miscellaneous Requirements (continued)

- 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 Toxic Policy" for the change.

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

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>
mold making line no. 1	OAC rule 3745-31-05(A)(3) PTI #05-08921	0.53 lb particulate emissions (PE)/hr and 1.59 tons PE/yr 0.015 lb organic compounds (OC)/hr and 0.045 ton OC/yr Visible emissions from the stack shall not exceed 0% opacity 0.01 gr/dscf from the stack
	OAC rule 3745-17-07(A)(1)	The emissions limitations specified by these rules are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05 (A)(3)
	OAC rule 3745-17-11(B)(1)	The emissions limitations specified by these rules are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05 (A)(3)

2. Additional Terms and Conditions

- 2.a The particulate emissions from this emissions unit shall be controlled by venting the emissions to a baghouse(s) with a designed control efficiency of 99+% and an emission rate less than or equal to 0.01 gr/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 per 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 month.
 - b. The rolling , 12-month summation of the operating hours.
2. The permittee shall properly install, 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 installed, 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 emission unit was in operation and the pressure drop across the baghouse did not comply with the allowable range specified in term A. II. 1.

V. Testing Requirements

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

V. Testing Requirements (continued)

- 1.a** Emission Limitation:
 0.53 lbs PE/hr
 Applicable Compliance Method:

Compliance shall be assumed as long the both the 0.010 gr./dscf PE limit from the baghouse stack and 0% Opacity, as a six minute average, from the baghouse stack is met. This is based both on the operating requirements in term A.II. and the following calculation:

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

where:

- AHER = allowable hourly emission rate (0.53 lbs PE/hr)
- BFR = Baghouse Flow Rate (5422 acfm)
- AV = the air variability factor (120%)
- ST = Standard Temperature (530 Rankine)
- BET = Baghouse Exit Temperature (560 Rankine)
- BEP = Baghouse Exit Pressure (14.69b/in2)
- SP = Standard Pressure (14.69b/in2)
- BEF = Baghouse Efficiency (0.010 grains/dscf)
- TI = Time (60 minutes per hour)
- CONV = conversion factor (1 lb = 7000 grains)
- AOH = allowable operating hours (6000 hours/yr)

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

- a. The emission testing shall be conducted within 3 months after issuance of the permit and within 6 months prior to permit renewal.
- b. The emissions testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulate.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Pollutant	Test Method	Location
Particulate	Method 5	40 CFR Part 60, Appendix A

V. Testing Requirements (continued)

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

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

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s).

Compliance with the annual PE emission limitation shall be assumed as long as compliance with the hourly gr/dscf limitation (0.010 gr/dscf) is maintained.

- 1.b** Emission Limitation:
1.59 tons PE/yr
Applicable Compliance Method:

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

AHER = allowable hourly emission rate (0.53 lbs PE/hr)
BFR = Baghouse Flow Rate (5422 acfm)
AV = the air variability factor (120%)
ST = Standard Temperature (530 Rankine)
BET = Baghouse Exit Temperature (560 Rankine)
BEP = Baghouse Exit Pressure (14.69b/in²)
SP = Standard Pressure (14.69b/in²)
BEF = Baghouse Efficiency (0.010 grains/dscf)
TI = Time (60 minutes per hour)
CONV = conversion factor (1 lb = 7000 grains)
AOH = annual operating hours (6000 hours/yr)

- 1.c** Emission Limitation:
0% opacity, as a six-minute average, from the baghouse stack.

Applicable Compliance Method:

Compliance shall be determined according to test method 9 as set forth in "Appendix on Test Methods" in 40 CFR Part 60.

V. Testing Requirements (continued)

1.d Emission Limitation:

0.015 lb OC/hr

Applicable Compliance Method:

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

where:

AHER = allowable hourly emission rate (0.015 lbs OC/hr)

UR = usage rate (15 gallons per hour)

EF = emission factor (0.1/100% lbs OC/gallon, manufacturer information - MSDS)

1.e Emission Limitation:

0.045 Ton OC/yr

Applicable Compliance Method:

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

where:

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

UR = usage rate (15 gallons per hour)

EF = emission factor (0.1/100% lbs OC/gallon, manufacturer information - MSDS)

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

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: 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 baghouse	OAC rule 3745-31-05(A)(3) (PTI #05-08921)	1.73 lbs of particulate emissions (PE)/hr and 7.58 tons of PE/yr Visible PE emissions from any stack source shall not exceed 0% opacity 0.01 gr of PE/dscf from the stack
	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 particulate emissions from this emissions unit shall be controlled by venting the emissions to a baghouse(s) with a designed control efficiency of 99+% an emission rate of less than or equal to 0.01 gr/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 install, 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 installed, 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 emission unit was in operation and the pressure drop across the baghouse did not comply with the allowable range specified in term A. II. 1.

V. Testing Requirements

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

1.a Emission Limitation:

1.73 lbs PE/hr

Applicable Compliance Method:

Compliance shall be assumed as long the both the 0.010 gr./dscf PE limit from the baghouse stack and 0% Opacity, as a six minute average, from the baghouse stack is met. This is based both on the operating requirements in term A.II. and the following calculation:

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

where:

- AHER = allowable 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 Rankine)
- BET = Baghouse Exit Temperature (560 Rankine)
- BEP = Baghouse Exit Pressure (14.69b/in2)
- SP = Standard Pressure (14.69b/in2)
- BEF = Baghouse Efficiency (0.010 grains/dscf)
- TI = Time (60 minutes per hour)
- CONV = conversion factor (1 lb = 7000 grains)

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

- a. The emission testing shall be conducted within 3 months after issuance of the permit and within 6 months prior to permit renewal.
- b. The emissions testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulate.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Pollutant	Test Method	Location
Particulate	Method 5	40 CFR Part 60, Appendix A

V. Testing Requirements (continued)

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

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

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s).

Compliance with the annual PE emission limitation shall be assumed as long as compliance with the hourly gr/dscf limitation (0.010 gr/dscf) is maintained.

- 1.b** Emission Limitation:
7.58 tons PE/yr
Applicable Compliance Method:

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

where:

AHER = allowable 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 Rankine)
BET = Baghouse Exit Temperature (560 Rankine)
BEP = Baghouse Exit Pressure (14.69b/in²)
SP = Standard Pressure (14.69b/in²)
BEF = Baghouse Efficiency (0.010 grains/dscf)
TI = Time (60 minutes per hour)
CONV = conversion factor (1 lb = 7000 grains)
AOH = annual operating hours (8760 hours / yr)

- 1.c** Emission Limitation:
0% opacity, as a six-minute average, from the baghouse stack.

Applicable Compliance Method:

Compliance shall be determined through visible emission observations performed in accordance with 40CFR, 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: 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

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>
extraction/shakeout/sand sep. and cooling line #1 w/conveyors, sand and metal separation drum, sorting/degating conveyors, and casting cooling conveyors	OAC rule 3745-31-05(A)(3) PTI #05-08921	7.37 lbs particulate emissions (PE)/hr and 22.11 tons PE/yr
		4.37 lbs volatile organic compounds (VOC)/hr. and 12.99 tons VOC/yr
	OAC rule 3745-17-07(A)(1)	Visible emissions from the stack shall not exceed 0% opacity
		0.010 gr/dscf from the stack
	OAC rule 3745-17-11(B)(1)	The emissions limitations specified by these rules are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05 (A)(3)
		The emissions limitations specified by these rules are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05 (A)(3)

2. Additional Terms and Conditions

- 2.a The particulate emissions from this emissions unit shall be controlled by venting the emissions to a baghouse(s) with a designed control efficiency of 99+% or an emission rate less than or equal to 0.01 gr/dscf.

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.

II. Operational Restrictions (continued)

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 month.
 - b. The rolling , 12-month summation of the operating hours.
2. The permittee shall properly install, 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 installed, 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 emission unit was in operation and the pressure drop across the baghouse did not comply with the allowable range specified in term A. II. 1.

V. Testing Requirements

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

V. Testing Requirements (continued)

1.a Emission Limitation:
 7.37 lbs PE/hr and 22.11 tons PE/year

Applicable Compliance Method:

Compliance shall be assumed as long the both the 0.010 gr./dscf PE limit from the baghouse stack and 0% Opacity, as a six minute average, from the baghouse stack is met. This is based both on the operating requirements in term A.II. and the following calculation:

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

where

- BFR = Baghouse Flow Rate (75,700 acfm)
- AV = the air variability factor (120%)
- ST = Standard Temperature (530 Rankine)
- BET = Baghouse Exit Temperature (560 Rankine)
- BEP = Baghouse Exit Temperature (14.69b/in2)
- SP = Standard Pressure (14.69b/in2)
- BEF = Baghouse Efficiency (0.010 grains/dscf)
- TI = Time (60 minutes per hour)
- CONV = conversion factor (1 lb = 7000 grains)

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

- a. Emission testing shall be conducted within 3 months after the issuance of the permit and within 6 months prior to permit renewal.
- b. The emissions testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulate.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Pollutant	Test Method	Location	
40 CFR Part 60, Appendix A	Particulate	Method 5	40 CFR Part 60, Appendix A
	Method 25 or 25a		VOC

V. Testing Requirements (continued)

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

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

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s).

Compliance with the annual PE emission limitation shall be assumed as long as compliance with the hourly gr/dscf limitation (0.010 gr/dscf) is maintained.

- 1.b** Emission Limitation:
22.11 tons PE/yr
Applicable Compliance Method:

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

where:

AHER = allowable hourly emission rate (7.37 lbs PE/hr)
BFR = Baghouse Flow Rate (75,700 acfm)
AV = the air variability factor (120%)
ST = Standard Temperature (530 Rankine)
BET = Baghouse Exit Temperature (560 Rankine)
BEP = Baghouse Exit Pressure (14.69b/in²)
SP = Standard Pressure (14.69b/in²)
BEF = Baghouse Efficiency (0.010 grains/dscf)
TI = Time (60 minutes per hour)
CONV = conversion factor (1 lb = 7000 grains)
AOH = annual operating hours (6000 hours / yr)

- 1.c** Emission Limitation:
0% opacity, as a six-minute average, from the baghouse stack.

Applicable Compliance Method:

Compliance shall be determined through visible emission observations performed in accordance with 40CFR, Part 60, Appendix A, Method 9.

V. Testing Requirements (continued)

1.d Emission Limitation:

4.37 lbs VOC/hr

Applicable Compliance Method:

HAER = (MPWR) x (EF) x (CONV) = 4.37 lbs of VOC per hour

where

HAER = the hourly allowable emission rate (4.37 lbs VOC/hr)

MPWR = the maximum process weight rate (38,016 lbs Fe/hr).

EF = emission factor (0.23 lbs VOC/ ton Fe) This is based on the 02/19/95, Method 25A emission testing of a Honda emissions unit at this facility.

CONV = 1 ton / 2000 lbs

Since this limit reflects the potential emissions of this source, no additional compliance determination is required.

Emission Limitation:

12.99 tons VOC/yr

Applicable Compliance Method:

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: LPDC Aluminum Melting Operation (P021)
Activity Description: LPDC aluminum melting and refining furnaces

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 aluminum melting operation w/melting furnace, refining furnace, transfer trough, power ladle, dross skimming rake and funnel.	OAC rule 3745-31-05(A)(3) PTI #05-11476	0.56 lb particulate emissions (PE)/ hr 2.5 tons PE/yr 0.89 lb nitrous oxides (NOx)/hr 3.9 tons NOx/yr 0.05 lb organic compounds (OC)/hr 0.22 ton OC/year 0.0054 lb sulfur oxides (SOx)/hr 0.024 ton SOx/yr 0.75 lb carbon monoxide (CO)/hr 3.3 tons CO/yr 0.011 lb hydrogen fluoride (HF)/hr 0.049 ton HF/yr 10% opacity, as a six minute average, from the stack The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05 (A)(3)
	OAC rule 3745-17-07 (A)(1)	The emissions limitations specified by these rules are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05 (A)(3)
	OAC rule 3745-17-11 (B)(1)	The emissions limitations specified by these rules are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05 (A)(3)

2. Additional Terms and Conditions

- 2.a BAT will be demonstrated by using natural gas to melt aluminum and using good work practices to minimize releases to the environment.

II. Operational Restrictions

1. The maximum throughput for (P021) LPDC Aluminum Melting Operations shall not exceed 2.8 tons of aluminum per hour.
2. The permittee shall melt no materials other than clean charge and materials generated within the facility (or internal runaround)."

III. Monitoring and/or Record Keeping Requirements

1. No recordkeeping required. 2.8 tons of aluminum per hour represents the maximum designed capacity of the equipment.
2. No recordkeeping required. It is Honda's practice to melt only aluminum ingot and in house scrap for aluminum melting operations.

IV. Reporting Requirements

1. None

V. Testing Requirements

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

- 1.a Emission Limitation:

0.56 lb PE/ hour

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$(PEER) \times (MMR) = 0.56 \text{ lb of PE per hour}$$

where

PEER=the PE Emission rate (0.198 lb PE/ton of aluminum melted is based on 03/20/99 Emission Test of AEP source P001).

MMR = Maximum Melt Rate (2.8 tons of aluminum per hour based on the maximum designed capacity of the equipment)

Since these limits reflect the potential emissions of this source, no additional compliance determination is required.

V. Testing Requirements (continued)

1.b Emission Limitation:

2.5 tons of PE per year

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$(PEER) \times (MMR) \times (AOH) \times (CONV) = 2.5 \text{ tons of PE per year}$$

where

PEER = the PE Emission rate (0.198 lb PE/ton of aluminum melted) (Based on 03/20/99 Emission Test of AEP source P001).

MMR = Maximum Melt Rate (2.8 tons of aluminum per hour based on the maximum designed capacity of the equipment)

AOH = the actual operating hours**

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

**Based on 8760 operating hours per year.

Since these limits reflect the potential emissions of this source, no additional compliance determination is required (Combustion emissions included in PE emission factor).

1.c Emission Limitation:

0.0114 lb HF/ hour

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$(HFEF) \times (MMR) \times (1 + SF) = 0.011 \text{ lb HF/hour}$$

where

HFEF = HF Emission Factor (0.003 lb HF/ton aluminum melted is found in Fire Database: Version 6.22, under SCC ID 3-04-001-09.)

MMR = Maximum Melt Rate (2.8 tons of aluminum per hour based on the maximum designed capacity of the equipment)

SF = Safety Factor of 25%

Since these limits reflect the potential emissions of this source, no additional compliance determination is required (Combustion emissions included in PE emission factor).

V. Testing Requirements (continued)

1.d Emission Limitation

0.049 ton HF/ yr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$(HFEF) \times (MMR) \times (1 + SF) \times (AOH) \times (CONV) = 0.049 \text{ tons of HF per year}$$

where

HFEF = HF Emission Factor (0.003 lb HF/ton aluminum melted is found in Fire Database: Version 6.22, under SCC ID 3-04-001-09.)

MMR = Maximum Melt Rate (2.8 tons of aluminum per hour is based on the maximum designed capacity of the equipment)

SF = Safety Factor of 25%

AOH = the actual operating hours**

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

**Based on 8760 operating hours per year.

Since these limits reflect the potential emissions of this source, no additional compliance determination is required

1.e Emission Limitation:

NO_x Emissions from (P021) LPDC aluminum Melting Operations shall not exceed 0.89 lb/hr and 3.9 tons/year, CO Emissions from (P021) LPDC aluminum Melting Operations shall not exceed 0.75 lbs/hr and 3.3 tons/year, OC emissions from (P021) LPDC aluminum Melting Operations shall not exceed 0.05 lb/hr and 0.22 ton/year, and SO_x emissions from (P021) LPDC aluminum Melting Operations shall not exceed 0.0054 lb/hr and 0.024 ton/year.

NO_x, CO, OC and SO_x Emissions are generated solely by the combustion of natural gas.

Applicable Compliance Method:

These limits represent the maximum capacity of the burners. These emission limitations were determined by multiplying the maximum natural gas usage from the burners by the emission factors for each pollutant (AP-42 Version 5, Table 1.4-2). Since these limits reflect the potential emissions of the burners, no additional compliance determination is required.

Note:

a. NO_x and CO emission factors were obtained from Table 1.4.1 of the 7/98 AP-42.

b. OC and SO_x emission factors were obtained from Table 1.4.2 of the 7/98 AP-42.

1.f Emission Limitation

10% Opacity, as a six minute average, from the stack.

Applicable Compliance Method:

If required, compliance with the visible emissions limitation above shall be determined in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

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: 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 treat operation w/solution furnace, quench tank and aging oven	OAC rule 3745-31-05(A)(3) PTI #05-2943	0.25 tons particulate emissions (PE)/yr.
		Visible emissions from the stack shall not exceed 20% opacity, as a 6 minute average except as provided by rule
		The requirements established pursuant to this rule are equivalent to the requirements of OAC rule 3745-17-07(A)(1)
	OAC rule 3745-17-11(B)(1)	The emissions limitations specified by these rules are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05 (A)(3)

2. Additional Terms and Conditions

None

II. Operational Restrictions

- 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.

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

Facility Name: **Honda of America Mfg., Inc. Anna Engine Plant**

Facility ID: **05-75-00-0174**

Emissions Unit: **LPDC Heat Treat Operation (P024)**

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

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>
aluminum LPDC core making operation	OAC Rule 3745-31-05(A)(3) (PTI 05-11476)	1.3 lbs of particulate emissions(PE)/hr and 5.6 tons of PE/yr 3.4 lbs of ammonia/hr and 14.9 tons of ammonia/yr 0.005 lb of organic compounds(OC)/hr and 0.022 ton of OC/yr 10% Opacity, as a six minute average, from the stack.
	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)	Use of only non-photochemically reactive materials or materials exempt under 3745-21-07(G)(9)

2. Additional Terms and Conditions

- 2.a The hourly PE, Ammonia and OC limits were established at maximum designed usage and production, and was used to establish compliance with the Toxics Policy. Therefore no recordkeeping is necessary to determine compliance with this limit.
- 2.b 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. Additional Terms and Conditions (continued)

- 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.
- 2.d** BAT will be demonstrated by using only non-photochemically reactive materials or materials exempt under 3745-21-07 (G)(9), low VOC parting sprays, and good work practices to minimize releases to the environment.

II. Operational Restrictions

- 1. The LPDC Core Making Machine's resin coated sand throughput shall not exceed 2,528 pounds of resin coated sand per hour. Compliance with this limit 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. Permittee shall maintain monthly records of the following information:
 - a. The total resin coated sand throughput for each month.
 - b. The annual, 12-month summation of the resin coated sand throughput.
 - c. The Maximum calculated process rate of sand per hour. (No hourly recordkeeping required. Calculated process rate limits hourly mass of sand used.)

IV. Reporting Requirements

- 1. The permittee shall submit deviation (excursion) reports which identify all exceedances of the hourly throughput limitation.
- 2. The permittee shall submit deviation (excursion) reports which identify any use of a photochemically reactive material not exempted in 3745-21-07 (G)(9), including an identification of the material used, it's composition, and the amount of the material used.
- 3. The deviation reports shall be submitted in accordance with paragraph A.1.e.ii of the General Terms and Conditions of this permit.

V. Testing Requirements

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

V. Testing Requirements (continued)

1.a Emission Limitation:

1.3 lbs of PE/hr

Applicable Compliance Method:

The hourly PE limitation 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 (2528 pounds of sand per hour) based on the maximum calculated process rate of sand per hour.

Conv = Conversion Factor (1 ton / 2000 pounds)

Compliance shall be assumed as long as the maximum sand throughput does not exceed 2528 lbs of sand per hour based on both the maximum calculated process rate of sand per hour and the recordkeeping requirements in section III. c. above.

Since these limits reflect the maximum calculated process rate of sand per hour, no additional compliance determination is required.

1.b Emission Limitation:

5.6 tons of PE/yr

Applicable Compliance Method:

The annual PE limitation may be determined 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).

CONV = Conversion factor (1 ton / 2000 lbs)

MSUR = Maximum Melt Usage Rate (2528 pounds of sand per hr) based on the maximum calculated process rate of sand per hour.

MOH = Maximum Operating Hours (8760 Hours per Year)

Conv = Conversion factor (1 ton / 2000 lbs)

Compliance shall be assumed as long as the maximum sand throughput does not exceed 2528 lbs of sand per hour based on both the maximum calculated process rate of sand per hour and the recordkeeping requirements in section III. c. above.

Since these limits reflect the maximum calculated process rate of sand per hour, no additional compliance determination is required.

V. Testing Requirements (continued)

1.c Emission Limitation:

14.9 tons of ammonia/yr

Applicable Compliance Method:

The annual ammonia limitation may be determined by the following methodology:

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

where:

AER = the Ammonia Emission rate (2.69 lbs of ammonia/ton of sand). Based on information provided by the resin coated sand supplier x safety factor).

CONV = Conversion factor (1 ton / 2000 lbs)

MSUR = Maximum Sand Usage Rate (2528 pounds of sand per hour) based on the maximum calculated process rate of sand per hour.

MOH = Maximum Operating Hours (8760 Hours per Year)

Conv = Conversion factor (1 ton / 2000 lbs)

Compliance shall be assumed as long as the maximum sand throughput does not exceed 2528 lbs of sand per hour based on both the maximum calculated process rate of sand per hour and the recordkeeping requirements in section III. 1. c. above.

Since these limits reflect the maximum calculated process rate of sand per hour, no additional compliance determination is required.

1.d Emission Limitation:

0.022 ton of OC/yr

Applicable Compliance Method:

The annual OC limitation may be determined by the following methodology:

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

where:

PSU = 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 Operating Hours (8760 Hours per Year)

CONV = Conversion factor (1 ton / 2000 lbs)

Since these limits reflect the maximum designed usage per hour, no additional compliance determination is required.

V. Testing Requirements (continued)

1.e Emission Limitation

3.4 lbs of ammonia emissions/hr

Applicable Compliance Method:

The hourly ammonia limitation was established by the following methodology:

$$(AER) \times (Conv) \times (MSUR) = 3.4 \text{ lbs of ammonia/hr}$$

where:

AER = the Ammonia Emission rate (2.69 lbs of ammonia/ton of sand). Based on information provided by the resin coated sand supplier x safety factor).

CONV = Conversion factor (1 ton / 2000 lbs)

MSUR = Maximum Sand Usage Rate (2,528 pounds of sand per hour) based on the maximum calculated process rate of sand per hour.

Compliance shall be assumed as long as the maximum sand throughput does not exceed 2,528 lbs of sand per hour based on both the maximum calculated process rate of sand per hour and the recordkeeping requirements in section III. c. above.

Since these limits reflect the maximum calculated process rate of sand per hour, no additional compliance determination is required.

1.g Emission Limitation:

10% Opacity, as a six minute average, from the stack.

Applicable Compliance Method:

If requested, 40 CFR Part 60, Method 9, with opacity readings taken from the stack.

1.h Emission Limitation:

0.005 lb of OC/ hr

Applicable Compliance Method:

The hourly OC limitation was established by the following methodology:

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

where:

PSU = Parting Spray Usage (0.02 gallons per hour)

PSOC = Parting Spray Organic Content (0.03 lb of VOC/gallon)

Density = Density of Parting Spray (8.26 lbs/gallon)

Since these limits reflect the maximum designed usage per hour, no additional compliance determination is required.

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: Aluminum Melting Operation #2 (P039)

Activity Description: HPDC melting furnace #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>
Aluminum Melting Operation #2 w/Melting Furnace, Three Holding Furnaces, Transfer Trough, Pump, Dross Skimming Rake and Funnel	OAC rule 3745-31-05(A)(3) PTI #05-08011	0.13 lbs particulate emissions (PE)/hr 0.57 tons PE/yr 1.90 lbs nitrous oxides (NOx)/hr 8.32 tons NOx/yr 0.5 lbs organic compounds (OC)/hr 2.19 tons OC/year 2.25 lbs sulfur dioxide (SO2)/hr 9.86 tons SO2/yr 0.11 lbs carbon monoxide (CO)/hr 0.48 tons CO/yr Use of a scrubber with a designed control efficiency of 97% 20% opacity, as a six minute average, from the stack The requirements established pursuant to this rule are equivalent to the requirements of OAC rule 3745-17-07(A)(1)
	OAC rule 3745-18-06(D)(2)	The emissions limitations specified by these rules are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05 (A)(3)
	OAC rule 3745-21-08(B)	The emissions limitations specified by these rules are less stringent than the emissions limitations 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 emissions limitations specified by these rules are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05 (A)(3)

2. Additional Terms and Conditions

2.a Best Available Technology consists of a scrubber with a designed control efficiency of 97%.

II. Operational Restrictions

1. The pressure drop across the scrubber shall be continuously maintained at a value of not less than 5 inches of water at all times while this emission unit is in operation.
2. The water flow rate for the scrubber shall be continuously maintained at a value of not less than 44 gallons per minute at all times while the emission unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly install, operate and maintain equipment to monitor the static pressure drop across the scrubbers and the scrubber water flow rate while the emission unit (s) are in operation. The monitoring devices shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

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

- A. the pressure drop across the scrubber (s) , in inches of water;
- B. the scrubber water flow rate, in gallons per minute.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify all periods of time during which the following scrubber parameters were not maintained at or above the required levels:
 - (a) The static pressure drop across the scrubber.
 - (b) The scrubber water flow rate.

V. Testing Requirements

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

V. Testing Requirements (continued)

1.a Emission Limitation:

0.13 lb particulate emissions (PE)/hr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$\text{AER} = (\text{AHER}) + (\text{FER}) = 0.101 \text{ lb PE / hr}$$

Where:

AHER = Actual Hourly Emission Rate = 0.10 lb PE / hr (based upon stack testing conducted on P001 on 3/20/99)

$$\text{FER} = \text{fugitive emission rate} = (\text{AHER}) (1 - \text{CE}) = 0.001 \text{ lb PE / hr}$$

Where:

CE = capture efficiency = 99% which is an estimate of Honda's

1.b Emission Limitation:

0.57 tons particulate emissions (PE)/yr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$\text{AAER} = (\text{AER}) \times (\text{MHPY}) \times (\text{CONV}) = 0.57 \text{ tons PE/yr}$$

where

AAER= the annual allowable emission rate (0.57 tons PE/yr)

AER= the allowable emission rate (0.13 lb PE/hr)

MHPY= the maximum hours per year (8, 760 hrs/yr)

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

V. Testing Requirements (continued)

1.c Emission Limitation:

2.25 lbs SO₂/hr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$\text{AER} = (\text{EF}) \times (\text{MPWR}) \times (\text{CONV}) = 2.25 \text{ lbs SO}_2/\text{hr}$$

where

AER= the allowable emission rate (2.25 lbs SO₂/hr)

EF= the emission factor (0.9 lb SO₂/ton aluminum melted)

MPWR= the maximum process weight rate (5000 lbs aluminum melted/hr)

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

1.d Emission Limitation:

9.86 tons sulfur dioxide (SO₂)/yr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$\text{AAER} = (\text{AER}) \times (\text{MHPY}) \times (\text{CONV}) = 9.86 \text{ tons SO}_2/\text{yr}$$

where

AAER= the annual allowable emission rate (9.86 tons SO₂/yr)

AER= the allowable emission rate (2.25 lbs SO₂ /hr)

MHPY= the maximum hours per year (8, 760 hrs/yr)

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

1.e Emission Limitation:

0.11 lbs. CO/hr.

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation for natural gas combustion:

$$\text{AER} = (\text{BBTU}) \times (\text{BCONV}) \times (\text{COEF}) \times (1-\text{CAP}) \times (\text{HRS}) = 0.11 \text{ lb CO/hr}$$

where:

AER= the allowable emission rate (0.11 lb CO/hr)

BCOMB = the maximum burner combustion rate(5,122 cubic feet/hr)

BCONV = the conversion factor (1 mm cf/ 1,000,000 cf/lb)

COEF = CO Emission Factor (21.0 lbs/mmcf, from (AP-42 5th. Edition, Table 1.4-2)

CAP = Control Device Capture Efficiency (99.9%)

V. Testing Requirements (continued)

1.f Emission Limitation:

0.48 tons carbon monoxide (CO)/yr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$AAER = (AER) \times (MHPY) \times (CONV) = 0.48 \text{ tons CO/yr}$$

where

AAER= the annual allowable emission rate (0.48 tons CO/yr)

AER= the allowable emission rate (0.11 CO /hr)

MHPY= the maximum hours per year (8, 760 hrs/yr)

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

1.g Emission Limitation:

1.90 lbs nitrous oxides (NOx)/hr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$AER = (EF) \times (MPWR) \times (CONV) = 1.90 \text{ lbs NOx/hr}$$

where

AER= the allowable emission rate (1.90 lbs/hr)

EF= the emission factor (0.76 lb NOx/ton aluminum melted , SCC 3-04-001-03

MPWR= the maximum process weight rate (5,000 lbs aluminum melted/hr)

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

1.h Emission Limitation:

8.32 tons NOx/yr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$AAER = (AER) \times (MHPY) \times (CONV) = 8.32 \text{ tons NOx/yr}$$

where

AAER= the annual allowable emission rate (8.32 tons SO2/yr)

AER= the allowable emission rate (1.90 lbs NOx /hr)

MHPY= the maximum hours per year (8, 760 hrs/yr)

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

V. Testing Requirements (continued)

1.i Emission Limitation:

0.50 lb organic compounds (OC)/hr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$\text{AER} = (\text{EF}) \times (\text{MPWR}) \times (\text{CONV}) = 0.50 \text{ lb OC/hr}$$

where

AER= the allowable emission rate (0.50 lb OC/hr)

EF= the emission factor (0.20 lb OC/ton aluminum melted, SCC 3-04-001-03)

MPWR= the maximum process weight rate (5,000 lbs aluminum melted/hr)

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

1.j Emission Limitation:

2.19 tons organic compounds (OC)/yr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$\text{AAER} = (\text{AER}) \times (\text{MHPY}) \times (\text{CONV}) = 2.19 \text{ tons OC/yr}$$

where

AAER= the annual allowable emission rate (2.19 tons OC/yr)

AER= the allowable emission rate (0.50 lb OC /hr)

MHPY= the maximum hours per year (8, 760 hrs/yr)

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

1.k Emission Limitation:

20% opacity, as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

Compliance shall be determined according to test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR Part 60.

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 Melting Operation #3 (P041)

Activity Description: HPDC melting 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>
aluminum melting operation #3 w/melting furnace, three holding furnaces, transfer trough, pump, dross skimming rake and funnel	OAC rule 3745-31-05(A)(3) PTI #05-08011	0.13 lbs particulate emissions (PE)/ hr 0.57 tons PE/yr 1.90 lbs nitrous oxides (NOx)/hr 8.32 tons NOx/yr 0.5 lbs organic compounds (OC)/hr 2.19 tons OC/year 2.25 lbs sulfur dioxide (SO2)/hr 9.86 tons SO2/yr 0.11 lbs carbon monoxide (CO)/hr 0.48 tons CO/yr Use of a scrubber with a designed control efficiency of 97% Visible particulate emissions from the stack shall not exceed 20% opacity as a 6 minute average, except as provided by rule The requirements established pursuant to this rule are equivalent to the requirements of OAC rule 3745-17-07(A)(1)
	OAC rule 3745-18-06(D)(2)	The emissions limitations specified by these rules are less stringent than the emissions limitations 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 3745-21-08(B)	The emissions limitations specified by these rules are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05 (A)(3)
	OAC rule 3745-17-11(B)(1)	The emissions limitations specified by these rules are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05 (A)(3)

2. Additional Terms and Conditions

2.a Best Available Technology consists of a scrubber with a designed control efficiency of 97%.

II. Operational Restrictions

1. The pressure drop across the scrubber shall be continuously maintained at a value of not less than 5 inches of water at all times while this emission unit is in operation.
2. The water flow rate for the scrubber shall be continuously maintained at a value of not less than 44 gallons per minute at all times while the emission unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly install, operate and maintain equipment to monitor the static pressure drop across the scrubbers and the scrubber water flow rate while the emission unit (s) are in operation. The monitoring devices shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

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

- A. the pressure drop across the scrubber (s) , in inches of water;
- B. the scrubber water flow rate, in gallons per minute.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify all periods of time during which the following scrubber parameters were not maintained at or above the required levels:
 - (a) The static pressure drop across the scrubber.
 - (b) The scrubber water flow rate.

V. Testing Requirements

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

V. Testing Requirements (continued)

1.a Emission Limitation:

0.13 lb particulate emissions (PE)/hr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$\text{AER} = (\text{AHER}) + (\text{FER}) = 0.101 \text{ lb PE / hr}$$

Where:

AHER = Actual Hourly Emission Rate = 0.10 lb PE / hr (based upon stack testing conducted on P001 on 3/20/99)

$$\text{FER} = \text{fugitive emission rate} = (\text{AHER}) (1 - \text{CE}) = 0.001 \text{ lb PE / hr}$$

Where:

CE = capture efficiency = 99% which is an estimate of Honda's

1.b Emission Limitation:

0.57 tons particulate emissions (PE)/yr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$\text{AAER} = (\text{AER}) \times (\text{MHPY}) \times (\text{CONV}) = 0.57 \text{ tons PE/yr}$$

where

AAER= the annual allowable emission rate (0.57 tons PE/yr)

AER= the allowable emission rate (0.13 lb PE/hr)

MHPY= the maximum hours per year (8, 760 hrs/yr)

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

V. Testing Requirements (continued)

1.c Emission Limitation:

2.25 lbs SO₂/hr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$\text{AER} = (\text{EF}) \times (\text{MPWR}) \times (\text{CONV}) = 2.25 \text{ lbs SO}_2/\text{hr}$$

where

AER= the allowable emission rate (2.25 lbs SO₂/hr)

EF= the emission factor (0.9 lb SO₂/ton aluminum melted)

MPWR= the maximum process weight rate (5000 lbs aluminum melted/hr)

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

1.d Emission Limitation:

9.86 tons sulfur dioxide (SO₂)/yr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$\text{AAER} = (\text{AER}) \times (\text{MHPY}) \times (\text{CONV}) = 9.86 \text{ tons SO}_2/\text{yr}$$

where

AAER= the annual allowable emission rate (9.86 tons SO₂/yr)

AER= the allowable emission rate (2.25 lbs SO₂ /hr)

MHPY= the maximum hours per year (8, 760 hrs/yr)

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

1.e Emission Limitation:

0.11 lbs. CO/hr.

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation for natural gas combustion:

$$\text{AER} = (\text{BCOMB}) \times (\text{BCONV}) \times (\text{COEF}) = 0.11 \text{ lb CO/hr}$$

where:

AER= the allowable emission rate (0.11 lb CO/hr)

BCOMB = the maximum burner combustion rate(5,122 cubic feet/hr)

BCONV = the conversion factor (1 mm cf/ 1,000,000 cf/lb)

COEF = CO Emission Factor (21.0 lbs/mmcf, from (AP-42 5th. Edition, Table 1.4-2)

V. Testing Requirements (continued)

1.f Emission Limitation:

0.48 tons carbon monoxide (CO)/yr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$AAER = (AER) \times (MHPY) \times (CONV) = 0.48 \text{ tons CO/yr}$$

where

AAER= the annual allowable emission rate (0.48 tons CO/yr)

AER= the allowable emission rate (0.11 CO /hr)

MHPY= the maximum hours per year (8, 760 hrs/yr)

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

1.g Emission Limitation:

1.90 lbs nitrous oxides (NOx)/hr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$AER = (EF) \times (MPWR) \times (CONV) = 1.90 \text{ lbs NOx/hr}$$

where

AER= the allowable emission rate (1.90 lbs/hr)

EF= the emission factor (0.76 lb NOx/ton aluminum melted , SCC 3-04-001-03

MPWR= the maximum process weight rate (5,000 lbs aluminum melted/hr)

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

1.h Emission Limitation:

8.32 tons NOx/yr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$AAER = (AER) \times (MHPY) \times (CONV) = 8.32 \text{ tons NOx/yr}$$

where

AAER= the annual allowable emission rate (8.32 tons SO2/yr)

AER= the allowable emission rate (1.90 lbs NOx /hr)

MHPY= the maximum hours per year (8, 760 hrs/yr)

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

V. Testing Requirements (continued)

1.i Emission Limitation:

0.50 lb organic compounds (OC)/hr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$\text{AER} = (\text{EF}) \times (\text{MPWR}) \times (\text{CONV}) = 0.50 \text{ lb OC/hr}$$

where

AER= the allowable emission rate (0.50 lb OC/hr)

EF= the emission factor (0.20 lb OC/ton aluminum melted, SCC 3-04-001-03)

MPWR= the maximum process weight rate (5,000 lbs aluminum melted/hr)

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

1.j Emission Limitation:

2.19 tons organic compounds (OC)/yr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$\text{AAER} = (\text{AER}) \times (\text{MHPY}) \times (\text{CONV}) = 2.19 \text{ tons OC/yr}$$

where

AAER= the annual allowable emission rate (2.19 tons OC/yr)

AER= the allowable emission rate (0.50 lb OC /hr)

MHPY= the maximum hours per year (8, 760 hrs/yr)

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

1.k Emission Limitation:

20% opacity, as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

Compliance shall be determined according to test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR Part 60.

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: Aluminum Melting Operation #4 (P043)

Activity Description: HPDC melting furnace #4

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 melting operation #4 w/melting furnace, three holding furnaces, transfer trough, pump, dross skimming rake and funnel	OAC rule 3745-31-05(A)(3) PTI #05-08011	0.13 lb particulate emissions (PE)/ hr 0.57 ton PE/yr 1.90 lbs nitrous oxides (NOx)/hr 8.32 tons NOx/yr 0.5 lbs organic compounds (OC)/hr 2.19 tons OC/year 2.25 lbs sulfur dioxide (SO2)/hr 9.86 tons SO2/yr 0.11 lb carbon monoxide (CO)/hr 0.48 ton CO/yr Use of a scrubber with a designed control efficiency of 97% 20% opacity, as a six minute average, from the stack The requirements established pursuant to this rule are equivalent to the requirements of OAC rule 3745-17-07(A)(1)
	OAC rule 3745-18-06(D)(2)	The emissions limitations specified by these rules are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05 (A)(3)
	OAC rule 3745-21-08(B)	The emissions limitations specified by these rules are less stringent than the emissions limitations 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 emissions limitations specified by these rules are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05 (A)(3)

2. Additional Terms and Conditions

- 2.a Best Available Technology consists of a scrubber with a designed control efficiency of 97%.

II. Operational Restrictions

1. The pressure drop across the scrubber shall be continuously maintained at a value of not less than 5 inches of water at all times while this emission unit is in operation.
2. The water flow rate for the scrubber shall be continuously maintained at a value of not less than 44 gallons per minute at all times while the emission unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly install, operate and maintain equipment to monitor the static pressure drop across the scrubbers and the scrubber water flow rate while the emission unit (s) are in operation. The monitoring devices shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

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

- A. the pressure drop across the scrubber (s) , in inches of water;
- B. the scrubber water flow rate, in gallons per minute.

IV. Reporting Requirements

1. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from emissions limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by February 1, May 1, August 1, and November 1 of each year and cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

V. Testing Requirements

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

V. Testing Requirements (continued)

1.a Emission Limitation:

0.13 lb particulate emissions (PE)/hr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$\text{AER} = (\text{AHER}) + (\text{FER}) = 0.101 \text{ lb PE / hr}$$

Where:

AHER = Actual Hourly Emission Rate = 0.10 lb PE / hr (based upon stack testing conducted on P001 on 3/20/99)

$$\text{FER} = \text{fugitive emission rate} = (\text{AHER}) (1 - \text{CE}) = 0.001 \text{ lb PE / hr}$$

Where:

CE = capture efficiency = 99% which is an estimate of Honda's

1.b Emission Limitation:

0.57 tons particulate emissions (PE)/yr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$\text{AAER} = (\text{AER}) \times (\text{MHPY}) \times (\text{CONV}) = 0.57 \text{ tons PE/yr}$$

where

AAER= the annual allowable emission rate (0.57 tons PE/yr)

AER= the allowable emission rate (0.13 lb PE/hr)

MHPY= the maximum hours per year (8, 760 hrs/yr)

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

V. Testing Requirements (continued)

1.c Emission Limitation:

2.25 lbs SO₂/hr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$\text{AER} = (\text{EF}) \times (\text{MPWR}) \times (\text{CONV}) = 2.25 \text{ lbs SO}_2/\text{hr}$$

where

AER= the allowable emission rate (2.25 lbs SO₂/hr)

EF= the emission factor (0.9 lb SO₂/ton aluminum melted)

MPWR= the maximum process weight rate (5000 lbs aluminum melted/hr)

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

1.d Emission Limitation:

9.86 tons sulfur dioxide (SO₂)/yr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$\text{AAER} = (\text{AER}) \times (\text{MHPY}) \times (\text{CONV}) = 9.86 \text{ tons SO}_2/\text{yr}$$

where

AAER= the annual allowable emission rate (9.86 tons SO₂/yr)

AER= the allowable emission rate (2.25 lbs SO₂ /hr)

MHPY= the maximum hours per year (8, 760 hrs/yr)

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

1.e Emission Limitation:

0.11 lbs. CO/hr.

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation for natural gas combustion:

$$\text{AER} = (\text{BBTU}) \times (\text{BCONV}) \times (\text{COEF}) \times (\text{HRS}) = 0.11 \text{ lb CO}/\text{yr}$$

where:

AER= the allowable emission rate (0.11 lb CO/hr)

BCOMB = the maximum burner combustion rate(5,122 cubic feet/hr)

BCONV = the conversion factor (1 mm cf/ 1,000,000 cf/lb)

COEF = CO Emission Factor (21.0 lbs/mmcf, from (AP-42 5th. Edition, Table 1.4-2)

V. Testing Requirements (continued)

1.f Emission Limitation:

0.48 tons carbon monoxide (CO)/yr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$AAER = (AER) \times (MHPY) \times (CONV) = 0.48 \text{ tons CO/yr}$$

where

AAER= the annual allowable emission rate (0.48 tons CO/yr)

AER= the allowable emission rate (0.11 CO /hr)

MHPY= the maximum hours per year (8, 760 hrs/yr)

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

1.g Emission Limitation:

1.90 lbs nitrous oxides (NOx)/hr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$AER = (EF) \times (MPWR) \times (CONV) = 1.90 \text{ lbs NOx/hr}$$

where

AER= the allowable emission rate (1.90 lbs/hr)

EF= the emission factor (0.76 lb NOx/ton aluminum melted , SCC 3-04-001-03

MPWR= the maximum process weight rate (5,000 lbs aluminum melted/hr)

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

1.h Emission Limitation:

8.32 tons NOx/yr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$AAER = (AER) \times (MHPY) \times (CONV) = 8.32 \text{ tons NOx/yr}$$

where

AAER= the annual allowable emission rate (8.32 tons SO2/yr)

AER= the allowable emission rate (1.90 lbs NOx /hr)

MHPY= the maximum hours per year (8, 760 hrs/yr)

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

V. Testing Requirements (continued)

1.i Emission Limitation:

0.50 lb organic compounds (OC)/hr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$\text{AER} = (\text{EF}) \times (\text{MPWR}) \times (\text{CONV}) = 0.50 \text{ lb OC/hr}$$

where

AER= the allowable emission rate (0.50 lb OC/hr)

EF= the emission factor (0.20 lb OC/ton aluminum melted, SCC 3-04-001-03)

MPWR= the maximum process weight rate (5,000 lbs aluminum melted/hr)

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

1.j Emission Limitation:

2.19 tons organic compounds (OC)/yr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$\text{AAER} = (\text{AER}) \times (\text{MHPY}) \times (\text{CONV}) = 2.19 \text{ tons OC/yr}$$

where

AAER= the annual allowable emission rate (2.19 tons OC/yr)

AER= the allowable emission rate (0.50 lb OC /hr)

MHPY= the maximum hours per year (8, 760 hrs/yr)

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

1.k Emission Limitation:

20% opacity, as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

Compliance shall be determined according to test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR Part 60.

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: 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 particulate emissions (PE)/hr 0.53 tons PE/yr 0.624 lb nitrous oxides (NOx)/hr 2.73 tons NOx/yr 1.2 lbs organic compounds (OC)/hr 5.26 tons OC/year 0.0025 lb sulfur dioxide (SO2)/hr 0.01 ton SO2/yr 2.04 lbs carbon monoxide (CO)/hr 8.94 tons CO/yr 0.0336 lb cyanide (CN)/hr 0.15 ton CN/yr 20% opacity, as a six minute average, from the stack The requirements established pursuant to this rule are equivalent to the requirements of OAC rule 3745-17-07(A)(1)
	OAC rule 3745-18-06(D)(2)	The emissions limitations specified by these rules are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05 (A)(3)
	OAC rule 3745-21-08(B)	The emissions limitations specified by these rules are less stringent than the emissions limitations 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 emissions limitations specified by these rules are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05 (A)(3)

2. Additional Terms and Conditions

2.a The use of natural gas or propane fuel represents Best Available Technology for this source.

II. Operational Restrictions

1. None

III. Monitoring and/or Record Keeping Requirements

1. None

IV. Reporting Requirements

1. None

V. Testing Requirements

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

1.a Emission Limitation:

0.12 lb particulate emissions (PE)/hr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

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

where

HAER = the hourly allowable emission rate (0.12 lb PE/hr)

PEER = the PE Emission rate (0.10 lb PE/hr). This is based on the 02/19/95 Method 5 emission test of this emissions unit.

AF= Adjustment factor of 120%

Since this limit reflects the potential emissions of this source, no additional compliance determination is required.

V. Testing Requirements (continued)

1.b Emission Limitation:

0.53 ton of PE per year

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

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

where

AAER = the annual allowable emission rate (0.53 ton PE/yr)

PEER = the PE Emission rate (0.10 lb/hr). This is based on the 02/19/95, Method 5 emission testing of this unit

AF= the adjustment factor of 120%

AOH = the actual operating hours**

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

**Based on 8760 operating hours per year.

Since these limits reflect the potential emissions of this source, no additional compliance determination is required.

1.c Emission Limitation:

0.624 lb NOx/hr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

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

where

HAER = the hourly allowable emission rate (0.624 lb NOx/hr)

PEER = the NOx emission rate (0.52 lb NOx/hr). This is based on the 02/19/95, Method 7E emission testing of this emissions unit

AF= Adjustment factor of 120%

Since this limit reflects the potential emissions of this source, no additional compliance determination is required.

V. Testing Requirements (continued)

1.d Emission Limitation:

2.73 tons NO_x per year

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$AAER = (PEER) \times (AF) \times (AOH) \times (CONV) = 2.73 \text{ tons of NO}_x \text{ per year}$$

where

AAER = the annual allowable emission rate (2.73 tons NO_x/yr)

PEER = the NO_x emission rate (0.52 lb/hr). This is based on the 02/19/95, Method 7E emission testing of this unit

AF = the adjustment factor of 120%

AOH = the actual operating hours**

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

**Based on 8760 operating hours per year.

Since these limits reflect the potential emissions of this source, no additional compliance determination is required.

1.e Emission Limitation:

2.04 lbs CO/hr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

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

where

HAER = the hourly allowable emission rate (2.04 lbs CO/hr)

PEER = the CO emission rate (1.70 lbs CO/hr). This is based on the 04/27/95, Method 10 emission testing of this emissions unit

AF = Adjustment factor of 120%

Since this limit reflects the potential emissions of this source, no additional compliance determination is required.

V. Testing Requirements (continued)

1.f Emission Limitation:

8.94 tons CO per year

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$AAER = (PEER) \times (AF) \times (AOH) \times (CONV) = 8.94 \text{ tons of CO per year}$$

where

AAER = the annual allowable emission rate (8.94 tons CO/yr)

PEER = the CO emission rate (1.70 lbs/hr). This is based on the 04/27/95, Method 10 emission testing of this unit

AF= the adjustment factor of 120%

AOH = the actual operating hours**

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

**Based on 8760 operating hours per year.

Since these limits reflect the potential emissions of this source, no additional compliance determination is required.

1.g Emission Limitation:

1.20 lbs VOC/hr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$HAER = (PEER) \times (AF) = 1.20 \text{ lbs of VOC per hour}$$

where

HAER = the hourly allowable emission rate (1.20 lbs VOC/hr)

PEER = the VOC emission rate (0.59 lbs VOC/hr). This is based on the 02/19/95, Method 25A emission testing of this emissions unit

AF= Adjustment factor of 120%

Since this limit reflects the potential emissions of this source, no additional compliance determination is required.

V. Testing Requirements (continued)

1.h Emission Limitation:

5.26 tons VOC per year

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$AAER = (PEER) \times (AF) \times (AOH) \times (CONV) = 5.26 \text{ tons of VOC per year}$$

where

AAER = the annual allowable emission rate (5.26 tons VOC/yr)

PEER = the VOC emission rate (0.59 lbs/hr). This is based on the 02/19/95, Method 25A emission testing of this unit

AF = the adjustment factor of 120%

AOH = the actual operating hours**

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

**Based on 8760 operating hours per year.

Since these limits reflect the potential emissions of this source, no additional compliance determination is required.

1.i Emission Limitation:

0.0336 lb CN/hr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$HAER = (PEER) \times (AF) = 0.0336 \text{ lb of CN per hour}$$

where

HAER = the hourly allowable emission rate (0.0336 lb CN/hr)

PEER = the VOC emission rate (0.028 lb CN/hr). This is based on the 02/19/95, California Air Resource Board Method 426 Method, emission testing of this emissions unit

AF = Adjustment factor of 120%

Since this limit reflects the potential emissions of this source, no additional compliance determination is required.

V. Testing Requirements (continued)

1.j Emission Limitation:

0.15 ton CN per year

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$AAER = (PEER) \times (AF) \times (AOH) \times (CONV) = 0.15 \text{ ton of CN per year}$$

where

AAER = the annual allowable emission rate (0.15 ton CN/yr)

PEER = the CN emission rate (0.028 lb/hr). This is based on the 02/19/95, California Air Resource Board Method 426, emission testing of this unit

AF = the adjustment factor of 120%

AOH = the actual operating hours**

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

**Based on 8760 operating hours per year.

Since these limits reflect the potential emissions of this source, no additional compliance determination is required.

1.k Emission Limitation

20% Opacity, as a six 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: 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 w/cooling, degating, feed, transfer and sorting oscillation conveyors	OAC Rule 3745-31-05(D) PTI #05-10137	7.17 tons PM/yr., as a rolling, 12-month summation from the stack;
	OAC rule 3745-17-07(A)(1)	The emissions limitations specified by these rules are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05 (A)(3)
	OAC rule 3745-17-11(B)(1)	The emissions limitations specified by these rules are less stringent than the emissions limitations 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 3745-31-05(A)(3)	2.39 lbs. particulate emissions (PE)/hour* from the stack 0.004 lbs. PE/hour* from the fugitive dust source 0.12 tpy of fugitive particulate emissions 0.010 gr./dscf 0% opacity, as a six minute average, from the stack 20% opacity, as a three minute average, from the fugitive dust source *PE emissions are assumed to be all PM-10 emissions

2. Additional Terms and Conditions

- 2.a Compliance with OAC rule 3745-31-05 shall be demonstrated by the use of a baghouse(s) and compliance with the limits in term A.I.1.

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.

This is an existing source and the applicant has historical data demonstrating compliance with the rolling 12-month summation of 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:
- a. The operating hours for each month.
 - b. The rolling , 12-month summation of the operating hours.
2. The permittee shall properly install, 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 installed, 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 which identify all exceedances of the rolling, 12-month operating hours limitation excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.
2. The permittee shall submit pressure drop deviation (excursion) reports that identify 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 range specified in the permit.
3. These reports, as denoted in terms A.IV.1. and 2., are due by the date described in Part 1- General Terms and Conditions of the permit under section (A) (1).

V. Testing Requirements

1. Emission Limitation:

7.17 tons of PM per year, as a rolling 12-month summation from the stack.

Applicable Compliance Method:

Compliance with the 7.17 tons of PM per rolling limitation shall be assumed as long as the 6,000 hours per rolling 12-month summation is met. This is based both on the recordkeeping requirements in term A.III. and the following calculation:

$$(\text{MASER})(\text{AOH})(\text{CONV}) = 7.17 \text{ tons of PM per year}$$

where

MASER = the maximum allowable stack emission rate (2.39 lbs PM/hr.)

AOH = the actual operating hours**

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

**As long as the 12-month hours of operation limitation in term A.II. is met, compliance with this limitation is demonstrated.

V. Testing Requirements (continued)

2. The permittee shall conduct, or have conducted, emission testing for the baghouse in accordance with the following requirements:
- a. The emission testing shall be conducted within 3 months after issuance of the permit and within 6 months prior to permit renewal.
 - b. The emissions testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulate.
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Pollutant	Test Method	Location
Particulate	Method 5	40 CFR Part 60, Appendix A

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

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

Note: compliance with the 2.39 lbs PR/hr shall be assumed as long as 0.01 gr/dscf is met.

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s).

3. Emission Limitation:

0% opacity, as a six- 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.

4. Emission Limitation:

20% opacity, as a three-minute average, from the fugitive dust source

Applicable Compliance Method:

40 CFR Part 60, Method 9, with opacity readings taken from any exit of the building.

V. Testing Requirements (continued)

5. Emission Limitation:

0.004 lb PM/hr from the fugitive dust source.

Applicable Compliance Method:

Based upon the following calculation supplied by the permittee:

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

where

FPER= the Fugitive Process Emission Rate (0.004 lb 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 PE/ton of metal poured, SCC ID 3-04-003-25)

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

CAP = Control Device Capture Efficiency (1.0-0.999)

6. Emission Limitation:

0.12 ton of PE per year, as a rolling 12-month summation from the fugitive dust source.

Applicable Compliance Method:

Compliance with the 0.12 ton of PE per rolling limitation shall be assumed as long as the 6,000 hours per rolling 12-month summation is met. This is based both on the recordkeeping requirements in term A.III. and the following calculation:

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

where

MAFER=the maximum allowable fugitive emission rate (0.004 lbs PE/hr.)

AOH = the actual operating hours** (6,000 hours/ year)

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

** As long as the 12-month hours of operation limitation in term A.II. is met, compliance with this limitation is demonstrated.

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: 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	OAC rule 3745-31-05 (D) PTI #05-10137	5.67 tons particulate emissions less than 10 microns (PM-10)*/yr., as a rolling 12-month summation; see term A.II.1.
	OAC rule 3745-17-07(A)(1)	The emissions limitations specified by these rules are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05 (A)(3)
	OAC rule 3745-17-11(B)(1)	The emissions limitations specified by these rules are less stringent than the emissions limitations 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 3745-31-05(A)(3)	1.89 lbs PE//hour from the stack 0.010 gr/dscf from the stack 0% opacity, as a six minute average, from the stack 0.57 ton PE*/yr., as a rolling 12-month summation from the fugitive dust source 0.19 lb. PE/hour from the fugitive dust source 20% opacity, as a three minute average, from the fugitive dust source. *PM emissions are assumed to be all PM-10 emissions

2. Additional Terms and Conditions

- 2.a Compliance with OAC rule 3745-31-05 shall be demonstrated by the use of a baghouse(s) and compliance with the limits in term A.I.1.

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.

 This is an existing source and the applicant has historical data demonstrating compliance with the rolling 12-month summation of 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:
 - a. The operating hours for each month.
 - b. The rolling , 12-month summation of the operating hours.
- 2. The permittee shall properly install, 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 installed, 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 which identify all exceedances of the rolling, 12-month operating hours limitation excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.
2. The permittee shall submit pressure drop deviation (excursion) reports that identify 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 range specified in the permit.
3. These reports, as denoted in terms A.IV.1. and 2., are due by the date described in Part 1- General Terms and Conditions of the permit under section (A) (1).

V. Testing Requirements

1.a Emission Limitation:

5.67 tons of PE per year, as a rolling 12-month summation from the stack.

Applicable Compliance Method:

Compliance with the 5.67 tons of PE per rolling limitation shall be assumed as long as the 6,000 hours per rolling 12-month summation is met. This is based both on the recordkeeping requirements in term A.III. and the following calculation:

$$(\text{MASER})(\text{AOH})(\text{CONV}) + (\text{MAFER})(\text{AOH})(\text{CONV}) = 5.67\text{tons of PE per year}$$

where:

MASER = the maximum allowable stack emission rate (1.89 lbs. PE*/hr.)

MAFER=the maximum allowable fugitive emission rate (0.19 lbs PM*/hr.)

AOH = the actual operating hours **

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

**As long as the 12-month hours of operation limitation in term A.II. is met, compliance with this limitation is demonstrated.

V. Testing Requirements (continued)

- 1.b** The permittee shall conduct, or have conducted, emission testing for the baghouse in accordance with the following requirements:
- a. The emission testing shall be conducted within 3 months after issuance of the permit and within 6 months prior to permit renewal.
 - b. The emissions testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulate.
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Pollutant	Test Method	Location
Particulate	Method 5	40 CFR Part 60, Appendix A

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

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

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

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s).

Note: Compliance with the 1.89 lbs PE/hr limit shall be assumed as long as 0.01 gr/dscf is met.

1.c Emission Limitation:

0% opacity, as a six-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)

1.d Emission Limitation:

20% opacity, as a three-minute average, from the fugitive dust source.

Applicable Compliance Method:

40 CFR Part 60, Method 9, with opacity readings taken from any exit of the building.

1.e Emission Limitation:

0.19 lb PE/hr from the fugitive dust source.

Applicable Compliance Method:

Based upon the following calculation supplied by the permittee:

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

where

FPER= the Fugitive Process Emission Rate (0.19 lb 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 (15.5 lb PE/ton of metal poured, Modern Casting, January, 1972)

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

CAP = Control Device Capture Efficiency (1.0-0.999)

1.f Emission Limitation:

0.57 ton of PE per year, as a rolling 12-month summation from the fugitive dust source.

Applicable Compliance Method:

Compliance with the 0.57 ton of PE per rolling limitation shall be assumed as long as the 6,000 hours per rolling 12-month summation is met. This is based both on the recordkeeping requirements in term A.III. and the following calculation:

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

where

MAFER=the maximum allowable fugitive emission rate (0.19 lb PE/hr.)

AOH = the actual operating hours** (6,000 hours/ year)

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

** As long as the 12-month hours of operation limitation in term A.II. is met, compliance with this limitation is demonstrated.

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: 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	OAC rule 3745-31-05(D) PTI # 05-10137	1.44 tons PM-10*/yr., as a rolling, 12-month summation; see term A.II.1.
	OAC rule 3745-17-07(A)(1)	The emissions limitations specified by these rules are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05 (A)(3)
	OAC rule 3745-17-11(B)(1)	
	OAC rule 3745-21-07 (G)	The emissions limitations specified by these rules are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05 (A)(3)
	OAC rule 3745-31-05(A)(3)	
		0.00147 ton PM/yr-fugitive
		Less stringent than OAC rule 3745-31-05
		A parting spray using water-based non photochemically reactive materials
	0.48 lb. PM*/PM10/hour from the stack	
	0.00049 lbs. PM/hour from the fugitive dust source	
	0.010 gr./dscf	
	0% opacity, as a six minute average, from the stack	

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

**Applicable Rules/
Requirements**

**Applicable Emissions
Limitations/Control
Measures**
*PM emissions are assumed to be
all PM-10 emissions.

20% opacity, as a three minute average, from the fugitive dust source

8.1 lbs. OC/hr. and 24.3 tons OC/yr.**

**The permitted allowable organic compound emission rate is based on all of the parting spray applied being emitted

2. Additional Terms and Conditions

- 2.a** Compliance with OAC rule 3745-31-05 shall be demonstrated by the use of a baghouse(s) and compliance with the limits in term A.I.1.

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.

This is an existing source and the applicant has historical data demonstrating compliance with the rolling 12-month summation of 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:
- a. The operating hours for each month.
 - b. The rolling , 12-month summation of the operating hours.
2. The permittee shall properly install, 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 installed, 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 source shall use a parting spray consisting of water-based non-photochemically reactive materials.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month operating hours limitation excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.
2. The permittee shall submit pressure drop deviation (excursion) reports that identify 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 range specified in the permit.

IV. Reporting Requirements (continued)

3. These reports, as denoted in terms A.IV.1. and 2., are due by the date described in Part 1- General Terms and Conditions of the permit under section (A) (1).
4. The permittee shall maintain monthly records of the following information:
 - a. The parting spray usage for each month.
 - b. The rolling 12-month summation of parting spray usage.

V. Testing Requirements

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

1.a Emission Limitation:

1.44 tons of PM per year, as a rolling 12-month summation from the stack.

Applicable Compliance Method:

Compliance with the 1.44 tons of PM per rolling limitation shall be assumed as long as the 6,000 hours per rolling 12-month summation is met. This is based both on the recordkeeping requirements in term A.III. and the following calculation:

$$(\text{MASER})(\text{AOH})(\text{CONV}) = 1.44 \text{ tons of PM per year}$$

where

MASER = the maximum allowable stack emission rate (0.48 lbs. PM*/hr.)

AOH = the actual operating hours**

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

**As long as the 12-month hours of operation limitation in term A.II. is met, compliance with this limitation is demonstrated.

V. Testing Requirements (continued)

- 1.b** The permittee shall conduct, or have conducted, emission testing for the baghouse in accordance with the following requirements:
- a. The emission testing shall be conducted within 3 months after issuance of the permit.
 - b. The emissions testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulate.
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Pollutant	Test Method	Location
Particulate	Method 5	40 CFR Part 60, Appendix A

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

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

Note: compliance with the 0.48 lb PE/hr shall be assumed as long as 0.01

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s).

Compliance with the 0.48 lb PE/hr shall be assumed as long as the 0.01 gr/dscf is met.

None

- 1.c** Emission Limitation:

The OC emissions shall not exceed 8.1 pounds per hour.

Applicable Compliance Method:

Compliance shall be determined by using the following calculation:

$$(MXPB)(MANU) = 8.1 \text{ pounds of organic compounds per hour}$$

where

MXPB = the maximum parting spray utilized (2 gal/hr.)

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

V. Testing Requirements (continued)

1.d Emission Limitation:

The organic compound emissions shall not exceed 24.3 tons per year
Applicable Compliance Method:

Compliance shall be determined by using the following calculation:
 $(MXPH)(MANU)(AOH)(CONV) = 24.3$ tons of organic compounds per year

where

MXPH = the maximum parting spray utilized (2 gal/hr.)
MANU = the emission factor provided by the manufacturer (4.05 lbs OC/gal.)
AOH = the actual operating hours (6,000 hrs/yr)
CONV = conversion factor (1 ton/ 2,000 lbs.)

1.e Emission Limitation:

0% opacity, as a six-minute average, from the stack

Applicable Compliance Method:

Compliance shall be determined according to test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR Part 60.

1.f Emission Limitation:

20% opacity, as a three-minute average, from the fugitive dust source

Applicable Compliance Method:

40 CFR Part 60, Method 9, with opacity readings taken from any exit of the building

1.g Emission Limitation:

0.00049 PE/hr from the fugitive dust source.

Applicable Compliance Method:

Based upon the following calculation supplied by the permittee:

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

where

FPER= the Fugitive Process Emission Rate (0.00049 lb 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 (0.04 lb/ ton of metal poured)

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

CAP = Control Device Capture Efficiency (1.0-0.999)

V. Testing Requirements (continued)

1.h Emission Limitation:

0.00147 ton of PE per year, as a rolling 12-month summation from the fugitive dust source.

Applicable Compliance Method:

Compliance with the 0.00147 ton of PE per rolling limitation shall be assumed as long as the 6,000 hours per rolling 12-month summation is met. This is based both on the recordkeeping requirements in term A.III. and the following calculation:

$$(\text{MAFER})(\text{AOH})(\text{CONV}) = 0.00147 \text{ ton of PE per year}$$

where

MAFER=the maximum allowable fugitive emission rate (0.00049 lb PE/hr.)

AOH = the actual operating hours** (6,000 hours/ year)

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

** As long as the 12-month hours of operation limitation in term A.II. is met, compliance with this limitation is demonstrated.

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>
ferrous foundry mold making line number 2		

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

1. The permit to install for this emissions unit (P058) was evaluated based on the actual materials (parting spray) specified by the permittee in the permit to install application. To fulfill the best available technology requirements of OAC rule 3745-31-05 and to ensure compliance with OAC rule 3745-15-07 (Air Pollution Nuisances Prohibited), the emission limitation(s) specified in this permit was (were) established using the Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") and is (are) based on both the materials used and the design parameters of the emissions unit's exhaust system, as specified in the application. The Ohio EPA's "Air Toxic Policy" was applied for each pollutant using the SCREEN 3.0 model (or other Ohio EPA approved model) and compared the predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

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 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:

VI. Miscellaneous Requirements (continued)

- 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
- 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.

Record keeping requirements for emissions units that must comply with the Air Toxic Policy

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that a 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.

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

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	OAC rule 3745-31-05(D) PTI #05-8008	0.58 lb particulate emissions (PE)/hr and 1.74 tons PE/yr; 0.31 lb OC/hr and 0.93 ton OC/yr
	OAC rule 3745-17-07(A)(1)	The emissions limitations specified by these rules are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05 (A)(3)
	OAC rule 3745-17-11(B)(1)	The emissions limitations specified by these rules are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05 (A)(3)

2. Additional Terms and Conditions

- 2.a Best available technology shall consist of the use of fabric filter(s) with a designated control efficiency of 99+% and a scrubber with a designed control efficiency of 95+%.

II. Operational Restrictions

1. The pressure drop across the scrubber shall be continuously maintained at a value of not less than 0.5 inches of water at all times while this emission unit is in operation.
2. The water flow rate for the scrubber shall be continuously maintained at a value of not less than 25 gallons per minute at all times while the emission unit is in operation.
3. The pH of the scrubber shall be maintained within the range of pH 1 to 4.5.
4. 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 install, operate and maintain equipment to monitor the static pressure drop across the scrubbers and the scrubber water flow rate while the emission unit (s) are in operation. The monitoring devices shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

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

- A. the pressure drop across the scrubber (s) , in inches of water;
- B. the scrubber water flow rate, in gallons per minute.
- C. the pH of the scrubber water.

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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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 Melting Operation #5 (P060)

Activity Description: HPDC melting furnace #5

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 melting operation w/melting furnace, two holding furnaces, transfer trough, dross skimming rake and funnel	OAC rule 3745-31-05(A)(3) PTI #05-08011	0.25 lb particulate emission (PE)/ hr 1.09 tons PE/yr 2.51 lbs nitrous oxides (NOx)/hr 10.99 tons NOx/yr 0.66 lb organic compounds (OC)/hr 2.89 tons OC/year 2.97 lbs sulfur dioxide (SO2)/hr 13.0 tons SO2/yr 0.11 lb carbon monoxide (CO)/hr 0.48 ton CO/yr Use of a scrubber with a designed control efficiency of 97% 20% opacity, as a six minute average, from the stack The requirements established pursuant to this rule are equivalent to the requirements of OAC rule 3745-17-07(A)(1)
	OAC rule 3745-18-06(D)(2)	The emissions limitations specified by these rules are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05 (A)(3)
	OAC rule 3745-21-08(B)	The emissions limitations specified by these rules are less stringent than the emissions limitations 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 emissions limitations specified by these rules are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05 (A)(3)

2. Additional Terms and Conditions

- 2.a** Use of a scrubber with a designed control efficiency of 97%

II. Operational Restrictions

1. The pressure drop across the scrubber shall be continuously maintained at a value of not less than 5 inches of water at all times while this emission unit is in operation.
2. The water flow rate for the scrubber shall be continuously maintained at a value of not less than 55 gallons per minute at all times while the emission unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly install, operate and maintain equipment to monitor the static pressure drop across the scrubbers and the scrubber water flow rate while the emission unit (s) are in operation. The monitoring devices shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

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

- A. the pressure drop across the scrubber (s) , in inches of water;
- B. the scrubber water flow rate, in gallons per minute.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify all periods of time during which the following scrubber parameters were not maintained at or above the required levels:
 - (a) The static pressure drop across the scrubber.
 - (b) The scrubber water flow rate.

V. Testing Requirements

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

V. Testing Requirements (continued)

- 1.a** P060 emission rates are based upon P001 emission rates, but are modified to reflect the proportionately larger capacity (i.e. 3.3 tph for P060 versus 2.5 tph for P001)

$$\text{P060's AHER} = (\text{P001's AHER}) (3.3 / 2.5) = 1.32 \text{ lb PE / hr}$$

Emission Limitation:

0.25 lb particulate emissions (PE)/hr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$\text{AER} = (\text{AHER}) + (\text{FER}) = 0.101 \text{ lb PE / hr}$$

Where:

AHER = Actual Hourly Emission Rate = 0.10 lb PE / hr (based upon stack testing conducted on P001 on 3/20/99)

$$\text{FER} = \text{fugitive emission rate} = (\text{AHER}) (1 - \text{CE}) = 0.001 \text{ lb PE / hr}$$

Where:

CE = capture efficiency = 99% which is an estimate of Honda's

V. Testing Requirements (continued)

1.b Emission Limitation:

1.09 tons particulate emissions (PE)/yr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$\text{AER} = (\text{AHER}) + (\text{FER}) = 0.101 \text{ lb PE / hr}$$

Where:

AHER = Actual Hourly Emission Rate = 0.10 lb PE / hr (based upon stack testing conducted on P001 on 3/20/99)

$$\text{FER} = \text{fugitive emission rate} = (\text{AHER}) (1 - \text{CE}) = 0.001 \text{ lb PE / hr}$$

Where:

CE = capture efficiency = 99% which is an estimate of Honda's

1.c Emission Limitation:

2.97 lbs SO₂/hr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$\text{AER} = (\text{EF}) \times (\text{MPWR}) \times (\text{CONV}) = 2.97 \text{ lbs SO}_2/\text{hr}$$

where

AER= the allowable emission rate (2.97 lbs SO₂/hr)

EF= the emission factor (0.9 lb SO₂/ton aluminum melted)

MPWR= the maximum process weight rate (6,600 lbs. aluminum melted / hr)

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

V. Testing Requirements (continued)

1.d Emission Limitation:

13.0 tons sulfur dioxide SO₂/yr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$AAER = (AER) \times (MHPY) \times (CONV) = 13.0 \text{ tons SO}_2/\text{yr}$$

where

AAER= the annual allowable emission rate (13.0 tons SO₂/yr)

AER= the allowable emission rate (2.97 lbs SO₂ /hr)

MHPY= the maximum hours per year (8, 760 hrs/yr)

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

1.e Emission Limitation:

0.11 lbs. CO/hr.

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation for natural gas combustion:

$$AER = (BBTU) \times (BCONV) \times (COEF) \times (HRS) = 0.11 \text{ lb CO/yr}$$

where:

AER= the allowable emission rate (0.11 lb CO/hr)

BCOMB = the maximum burner combustion rate(5,122 cubic feet/hr)

BCONV = the conversion factor (1 mm cf/ 1,000,000 cf/lb)

COEF = CO Emission Factor (21.0 lbs/mmcf, from (AP-42 5th. Edition, Table 1.4-2)

1.f Emission Limitation:

0.48 tons carbon monoxide (CO)/yr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$AAER = (AER) \times (MHPY) \times (CONV) = 0.48 \text{ tons CO/yr}$$

where

AAER= the annual allowable emission rate (0.48 tons CO/yr)

AER= the allowable emission rate (0.11 CO /hr)

MHPY= the maximum hours per year (8, 760 hrs/yr)

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

V. Testing Requirements (continued)

1.g Emission Limitation:

2.51 lbs nitrous oxides (NOx)/hr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$\text{AER} = (\text{EF}) \times (\text{MPWR}) \times (\text{CONV}) = 2.51 \text{ lbs NOx/hr}$$

where

AER= the allowable emission rate (2.51 lbs/hr)

EF= the emission factor (0.76 lb NOx/ton aluminum melted , SCC 3-04-001-03

MPWR= the maximum process weight rate (6,600 lbs aluminum melted / hr)

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

1.h Emission Limitation:

10.99 tons sulfur dioxide NOx/yr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$\text{AAER} = (\text{AER}) \times (\text{MHPY}) \times (\text{CONV}) = 10.99 \text{ tons NOx/yr}$$

where

AAER= the annual allowable emission rate (10.99 tons SO₂/yr)

AER= the allowable emission rate (2.51 lbs NOx /hr)

MHPY= the maximum hours per year (8, 760 hrs/yr)

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

V. Testing Requirements (continued)

1.i Emission Limitation:

0.66 lb organic compounds (OC)/hr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$\text{AER} = (\text{EF}) \times (\text{MPWR}) \times (\text{CONV}) = 0.66 \text{ lb OC/hr}$$

where

AER= the allowable emission rate (0.66 lb OC/hr)

EF= the emission factor (0.20 lb OC/ton aluminum melted, SCC 3-04-001-03)

MPWR= the maximum process weight rate (6,600 lbs aluminum melted / hr)

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

1.j Emission Limitation:

2.89 tons organic compounds (OC)/yr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$\text{AAER} = (\text{AER}) \times (\text{MHPY}) \times (\text{CONV}) = 2.89 \text{ tons OC/yr}$$

where

AAER= the annual allowable emission rate (2.89 tons OC/yr)

AER= the allowable emission rate (0.66 lb OC /hr)

MHPY= the maximum hours per year (8, 760 hrs/yr)

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

1.k Emission Limitation:

20% opacity, as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

Compliance shall be determined according to test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR Part 60.

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/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	OAC rule 3745-31-05(A)(3) PTI #05-06208	1.91 lbs particulate emissions (PE)/hr and 4.30 tons PE/yr Visible emissions from the stack shall not exceed 0% opacity 0.01 gr/dscf from the stack
	OAC rule 3745-17-07(A)(1)	The emissions limitations specified by these rules are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05 (A)(3)
	OAC rule 3745-17-11(B)(1)	The emissions limitations specified by these rules are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05 (A)(3)

2. Additional Terms and Conditions

- 2.a The particulate emissions from this emissions unit shall be controlled by a cyclone venting the emissions to a baghouse with a designed control efficiency of 99.5+%; and direct venting to the same baghouse which emits less than or equal to 0.01 gr/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.

II. Operational Restrictions (continued)

2. The maximum annual operating hours for this emissions unit shall not exceed 4,500 hours per year, based upon a rolling, 12- month summation of the operating hours.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the baghouse(s) while the emissions unit(s) is in operation. The monitoring equipment shall be installed, 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 for this emissions unit:
 - a. The operating hours for each month.
 - b. The rolling , 12-month summation of the operating hours.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify 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 range specified in term A. II. 1.

V. Testing Requirements

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

V. Testing Requirements (continued)

1.a Emission Limitation:
 1.91 lbs PE/hr and 4.30 tons PE/year

Applicable Compliance Method:

Compliance shall be assumed as long the both the 0.010 gr./dscf PE limit from the baghouse stack and 0% Opacity, as a six minute average, from the baghouse stack is met. This is based both on the operating requirements in term A.II. and the following calculation:

$$(BFR) \times (AV) \times (ST / BET) \times (BEP / SP) \times (BEF) \times (TI) \times (CONV) = 4.30 \text{ tons of PE per year}$$

where

- BFR = Baghouse Flow Rate (19,600 acfm)
- AV = the air variability factor (105%)
- ST = Standard Temperature (530 Rankine)
- BET = Baghouse Exit Temperature (560 Rankine)
- BEP = Baghouse Exit Temperature (14.69b/in2)
- SP = Standard Pressure (14.69b/in2)
- BEF = Baghouse Efficiency (0.010 grains/dscf)
- TI = Time (60 minutes per hour)
- CONV = conversion factor (1 lb = 7000 grains)

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

- a. The emission testing shall be conducted within 3 months after issuance of the permit and within 6 months prior to permit renewal.
- b. The emissions testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulate.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Pollutant	Test Method	Location
Particulate	Method 5	40 CFR Part 60, Appendix A

V. Testing Requirements (continued)

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

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

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s).

Compliance with the annual PE emission limitatio shall be assumed as long as compliance with the hourly gr/dscf limitation (0.010 gr/dscf) is maintained.

- 1.b** Emission Limitation:
0% opacity, as a six-minute average, from the baghouse stack.

Applicable Compliance Method:

Compliance shall be determined through visible emission observations performed in accordance with 40CFR, 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: 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(x2), interlocked safety flares	OAC rule 3745-31-05(A)(3) PTI#05-08174	0.12 lb particulate emissions (PE)/ hr 0.53 tons PE/yr 0.62 lb nitrous oxides (NOx)/hr 2.73 tons NOx/yr 1.2 lbs organic compounds (OC)/hr 5.26 tons OC/year 0.0025 lb sulfur dioxide (SO2)/hr 0.01 ton SO2/yr 2.0 lbs carbon monoxide (CO)/hr 8.94 tons CO/yr 0.0336 lb cyanide (CN)/hr 0.15 ton CN/yr 20% opacity, as a six minute average, from the stack The requirements established pursuant to this rule are equivalent to the requirements of OAC rule 3745-17-07(A)(1)
	OAC rule 3745-18-06(D)(2)	The emissions limitations specified by these rules are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05 (A)(3)
	OAC rule 3745-21-08(B)	The emissions limitations specified by these rules are less stringent than the emissions limitations 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 emissions limitations specified by these rules are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05 (A)(3)

2. Additional Terms and Conditions

2.a The use of natural gas or propane fuel represents Best Available Technology for this source.

II. Operational Restrictions

1. None

III. Monitoring and/or Record Keeping Requirements

1. None

IV. Reporting Requirements

1. None

V. Testing Requirements

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

1.a Emission Limitation:

0.12 lb particulate emissions (PE)/hr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

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

where

PEER = the PE Emission rate (0.10 lb PE/hr). This is based on the 02/19/95 Method 5 emission test of a similar emissions unit (P048)

AF= Adjustment factor of 120%

Since this limit reflects the potential emissions of this source, no additional compliance determination is required.

V. Testing Requirements (continued)

1.b Emission Limitation:

0.53 ton of PE per year

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

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

where

AAER = the annual allowable emission rate (0.53 ton/yr)

PEER = the PE Emission rate (0.10 lb PE/hr.). This is based on the 02/19/95, Method 5 emission testing of a similar emissions unit (P048)

AF= the adjustment factor of 120%

AOH = the actual operating hours**

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

**Based on 8760 operating hours per year.

Since these limits reflect the potential emissions of this source, no additional compliance determination is required.

1.c Emission Limitation:

0.624 lb NOx/hr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

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

where

PEER = the NOx emission rate (0.52 lb NOx/hr). This is based on the 02/19/95, Method 7E emission testing of a similar emissions unit (P048)

AF= Adjustment factor of 120%

Since this limit reflects the potential emissions of this source, no additional compliance determination is required.

V. Testing Requirements (continued)

1.d Emission Limitation:

2.73 tons NO_x per year

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$(PEER) \times (AF) \times (AOH) \times (CONV) = 2.73 \text{ tons of NO}_x \text{ per year}$$

where

AAER = the annual allowable emission rate (2.73 ton NO_x/yr) where

PEER = the NO_x emission rate (0.52 lb/hr). This is based on the 02/19/95, Method 7E emission testing of a similar emissions unit (P048).

AF = the adjustment factor of 120%

AOH = the actual operating hours**

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

**Based on 8760 operating hours per year.

Since these limits reflect the potential emissions of this source, no additional compliance determination is required.

1.e Emission Limitation:

2.0 lbs CO/hr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

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

where

PEER = the CO emission rate (1.70 lbs CO/hr). This is based on the 04/27/95, Method 10 emission testing of a similar emissions unit (P048)

AF= Adjustment factor of 120%

Since this limit reflects the potential emissions of this source, no additional compliance determination is required.

V. Testing Requirements (continued)

1.f Emission Limitation:

8.94 tons CO per year

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$AAER = (PEER) \times (AF) \times (AOH) \times (CONV) = 8.94 \text{ tons of CO per year}$$

where

AAER = the annual allowable emission rate (8.94 ton CO/yr)

PEER = the CO emission rate (1.70 lbs/hr). This is based on the 04/27/95, Method 10 emission testing of a similar emissions unit

AF= the adjustment factor of 120%

AOH = the actual operating hours**

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

**Based on 8760 operating hours per year.

Since these limits reflect the potential emissions of this source, no additional compliance determination is required.

1.g Emission Limitation:

1.20 lbs OC/hr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$(PEER) \times (AF) = 1.20 \text{ lbs of OC per hour}$$

where

PEER = the OC emission rate (0.59 lbs OC/hr). This is based on the 02/19/95, Method 25A emission testing of a similar emissions unit (P048)

AF= Adjustment factor of 120%

Since this limit reflects the potential emissions of this source, no additional compliance determination is required.

V. Testing Requirements (continued)

1.h Emission Limitation:

5.26 tons OC per year

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

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

where

AAER = the annual allowable emission rate (5.26 ton OC/yr)

PEER = the OC emission rate (0.59 lbs/hr). This is based on the 02/19/95, Method 25A emission testing of this unit

AF= the adjustment factor of 120%

AOH = the actual operating hours**

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

**Based on 8760 operating hours per year.

Since these limits reflect the potential emissions of this source, no additional compliance determination is required.

1.i Emission Limitation:

0.0336 lb CN/hr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$(PEER) \times (AF) = 0.0336 \text{ lb of CN per hour}$$

where

PEER = the VOC emission rate (0.028 lb CN/hr). This is based on the 02/19/95, California Air Resource Board Method 426 Method, emission testing of a similar emissions unit (P048)

AF= Adjustment factor of 120%

Since this limit reflects the potential emissions of this source, no additional compliance determination is required.

V. Testing Requirements (continued)

1.j Emission Limitation:

0.15 ton CN per year

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$(PEER) \times (AF) \times (AOH) \times (CONV) = 0.15 \text{ ton of CN per year}$$

where

AAER = the annual allowable emission rate (0.15 ton CN/yr)

PEER = the CN emission rate (0.028 lb/hr). This is based on the 02/19/95, California Air Resource Board Method 426, emission testing of a similar unit (P048)

AF = the adjustment factor of 120%

AOH = the actual operating hours**

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

**Based on 8760 operating hours per year.

Since these limits reflect the potential emissions of this source, no additional compliance determination is required.

1.k Emission Limitation

20% Opacity, as a six 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

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: 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- without 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)/hr 6.31 tons of NOx/yr 0.41 lb of volatile organic compounds (VOC)/hr 1.80 tons of VOC/year 0.02 lb of sulfur dioxide (SO2)/hr 0.09 ton of SO2/yr 0.9 lb of carbon monoxide (CO)/hr 3.94 ton of CO/yr Use of unleaded fuel 20% opacity, as a six minute average, from the stack Compliance with the requirements of this rule also include compliance with the requirements specified in OAC rule 3745-17-07(A)(1)
	OAC rule 3745-23-06(B)	The NOx 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)	The CO emission limitation specified by this rule is less stringent than the emissions 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 emission limitation specified by this rule is less stringent than the emissions limitation established pursuant to OAC rule 3745-31-05(A)(3)

2. Additional Terms and Conditions

None

II. Operational Restrictions

1. This emissions unit shall only use unleaded fuel.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain records of the following information:
 - (a) The types of gasoline used by the emissions unit.

IV. Reporting Requirements

1. If the permittee uses any other type of fuel other than unleaded gasoline in this emissions unit, the permittee shall notify the Ohio EPA, Southwest District Office within 30 days of becoming aware of the occurrence.

V. Testing Requirements

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

1.a Emission Limitation:

1.44 lbs of PE/hr

Applicable Compliance Method:

The hourly PE limitation was established by the following methodology:

$$\text{HAER} = (\text{PEER}) \times (\text{AF}) = 1.44 \text{ lbs of PE/hr}$$

where:

HAER = the hourly allowable emission rate (1.44 lbs of PE/hr)

PEER=the PE Emission rate (1.2 lbs of PE/hr) is based on the 02/19/95 test data provided by Honda.

AF= Adjustment factor of 120%

Since this limit reflects the potential emissions of this source, no additional compliance determination is required.

V. Testing Requirements (continued)

1.b Emission Limitation:

6.31 tons of PE/yr

Applicable Compliance Method:

The annual PE limitation may be determined by the following methodology:

$$AAER = (PEER) \times (AF) \times (MHPY) \times (CONV) = 6.31 \text{ tons of PE/yr}$$

where:

AAER = the annual allowable emission rate (6.31 tons of PE/yr)

PEER = the PE Emission rate (1.44 lbs PE/hr) is based on the 02/19/95, test data provided by Honda

AF = the adjustment factor of 120%

MHPY = the maximum hours per year (8,760)

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

1.c Emission Limitation:

1.44 lbs of NOx/hr

Applicable Compliance Method:

The hourly NOx limitation was established by the following methodology:

$$HAER = (PEER) \times (AF) = 1.44 \text{ lbs of NOx/hr}$$

where:

HAER = the hourly allowable emission rate (1.44 lbs of NOx/hr)

PEER = the NOx Emission rate (1.12 lbs of NOx/hr.). This is based on the 02/19/95 test data provided by Honda.

AF = Adjustment factor of 120%

Since this limit reflects the potential emissions of this source, no additional compliance determination is required.

1.d Emission Limitation:

6.31 tons of NOx/yr

Applicable Compliance Method:

The annual NOx limitation may be determined by the following methodology:

$$AAER = (PEER) \times (AF) \times (MHPY) \times (CONV) = 6.31 \text{ tons of NOx/yr}$$

where:

AAER = the annual allowable emission rate (6.31 tons of NOx/yr)

PEER = the NOx emission rate (1.20 lbs of NOx/hr) is based on the 02/19/95, test data provided by Honda

AF = the adjustment factor of 120%

MHPY = the maximum hours per year (8,760)

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

V. Testing Requirements (continued)

1.e Emission Limitation:

0.9 lb CO/hr

Applicable Compliance Method:

The hourly CO limitation was established by the following methodology:

$$\text{HAER} = (\text{PEER}) \times (\text{AF}) = 0.9 \text{ lb of CO/hr}$$

where:

HAER = the hourly allowable emission rate (0.9 lb of CO/hr)

PEER = the CO Emission rate (0.75 lb of CO/hr) is based on the 02/19/95 test data provided by Honda.

AF = Adjustment factor of 120%

Since this limit reflects the potential emissions of this source, no additional compliance determination is required.

1.f Emission Limitation:

3.940 tons of CO/yr

Applicable Compliance Method:

The annual CO limitation may be determined by the following methodology:

$$(\text{PEER}) \times (\text{AF}) \times (\text{MHPY}) \times (\text{CONV}) = 3.94 \text{ tons of CO/yr}$$

where:

AAER = the annual allowable emission rate (3.94 tons of CO/yr)

PEER = the CO emission rate (0.75 lbs/hr) is based on the 02/19/95, test data provided by Honda

AF = the adjustment factor of 120%

MHPY = the maximum hours per year (8,760)

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

V. Testing Requirements (continued)

1.g Emission Limitation:

0.41 lb VOC/hr

Applicable Compliance Method:

The hourly VOC limitation was established by the following methodology:

$$\text{HAER} = (\text{PEER}) \times (\text{AF}) = 0.41 \text{ lb of VOC/hr}$$

where:

HAER = the hourly allowable emission rate (0.34 lb VOC/hr)

PEER = the VOC Emission rate (0.34 lb VOC/hr). This is based on the 02/19/95 test data provided by Honda.

AF= Adjustment factor of 120%

Since this limit reflects the potential emissions of this source, no additional compliance determination is required.

1.h Emission Limitation:

1.80 tons of VOC/yr

Applicable Compliance Method:

The annual VOC limitation may be determined by the following methodology:

$$\text{HAER} = (\text{PEER}) \times (\text{AF}) \times (\text{MHPY}) \times (\text{CONV}) = 1.80 \text{ tons of VOC/yr}$$

where:

AAER = the annual allowable emission rate (1.80 tons of VOC/yr)

PEER = the VOC emission rate (0.34 lbs VOC/hr). This is based on the 02/19/95, test data provided by Honda

AF= the adjustment factor of 120%

MHPY= the maximum hours per year (8,760)

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

1.i Emission Limitation

20% Opacity, as a six minute average, from the stack

Applicable Compliance Method:

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 Melting Furnace #6 (P074)

Activity Description: HPDC Melting Furnace #6

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 melting furnace #6 rated @ 3.3 ton/hour	OAC rule 3745-31-05(A)(3) PTI #05-08447	0.25 lb particulate emission (PE)/ hr 1.75 tons PE/yr 2.51 lbs nitrous oxides (NOx)/hr 10.97 tons NOx/yr 0.66 lb organic compounds (OC)/hr 2.89 tons OC/year 2.97 lbs sulfur dioxide (SO2)/hr 13.01 tons SO2/yr 0.11 lb carbon monoxide (CO)/hr 0.48 ton CO/yr Use of a scrubber with a designed control efficiency of 97% 20% opacity, as a six minute average, from the stack The requirements established pursuant to this rule are equivalent to the requirements of OAC rule 3745-17-07(A)(1)
	OAC rule 3745-18-06(D)(2)	The emissions limitations specified by these rules are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05 (A)(3)
	OAC rule 3745-21-08(B)	The emissions limitations specified by these rules are less stringent than the emissions limitations 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 emissions limitations specified by these rules are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05 (A)(3)

2. Additional Terms and Conditions

- 2.a** Use of a scrubber with a designed control efficiency of 97%

II. Operational Restrictions

1. The pressure drop across the scrubber shall be continuously maintained at a value of not less than 5 inches of water at all times while this emission unit is in operation.
2. The water flow rate for the scrubber shall be continuously maintained at a value of not less than 55 gallons per minute at all times while the emission unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly install, operate and maintain equipment to monitor the static pressure drop across the scrubbers and the scrubber water flow rate while the emission unit (s) are in operation. The monitoring devices shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

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

- A. the pressure drop across the scrubber (s) , in inches of water;
- B. the scrubber water flow rate, in gallons per minute.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify all periods of time during which the following scrubber parameters were not maintained at or above the required levels:
 - (a) The static pressure drop across the scrubber.
 - (b) The scrubber water flow rate.

V. Testing Requirements

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

V. Testing Requirements (continued)

- 1.a** P074 emission rates are based upon P001 emission rates, but are modified to reflect the proportionately larger capacity (i.e. 3.3 tph for P074 versus 2.5 tph for P001)

$$\text{P074's AHER} = (\text{P001's AHER}) (3.3 / 2.5) = 0.132 \text{ lb PE / hr}$$

Emission Limitation:

0.25 lb particulate emissions (PE)/hr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$\text{AER} = (\text{AHER}) + (\text{FER}) = 0.101 \text{ lb PE / hr}$$

Where:

AHER = Actual Hourly Emission Rate = 0.10 lb PE / hr (based upon stack testing conducted on P001 on 3/20/99)

$$\text{FER} = \text{fugitive emission rate} = (\text{AHER}) (1 - \text{CE}) = 0.001 \text{ lb PE / hr}$$

Where:

CE = capture efficiency = 99% which is an estimate of Honda's

V. Testing Requirements (continued)

1.b Emission Limitation:

1.75 tons particulate emissions (PE)/yr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$\text{AAER} = (\text{AER}) \times (\text{MHPY}) \times (\text{CONV}) = 1.75 \text{ tons PE/yr}$$

where

AAER= the annual allowable emission rate (1.75 tons PE/yr)

AER= the allowable emission rate (0.25 lb PE/hr)

MHPY= the maximum hours per year (8, 760 hrs/yr)

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

1.c Emission Limitation:

2.97 lbs SO₂/hr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$\text{AER} = (\text{EF}) \times (\text{MPWR}) \times (\text{CONV}) = 2.97 \text{ lbs SO}_2/\text{hr}$$

where

AER= the allowable emission rate (2.97 lbs SO₂/hr)

EF= the emission factor (0.9 lb SO₂/ton aluminum melted)

MPWR= the maximum process weight rate (6600 lbs aluminum melted / hr)

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

1.d Emission Limitation:

13.01 tons sulfur dioxide SO₂/yr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$\text{AAER} = (\text{AER}) \times (\text{MHPY}) \times (\text{CONV}) = 13.01 \text{ tons SO}_2/\text{yr}$$

where

AAER= the annual allowable emission rate (13.01 tons SO₂/yr)

AER= the allowable emission rate (2.97 lbs SO₂ /hr)

MHPY= the maximum hours per year (8, 760 hrs/yr)

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

V. Testing Requirements (continued)

1.e Emission Limitation:

0.11 lbs. CO/hr.

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation for natural gas combustion:

$$\text{AER} = (\text{BBTU}) \times (\text{BCONV}) \times (\text{COEF}) \times (\text{HRS}) = 0.11 \text{ lb CO/yr}$$

where

AER= the allowable emission rate (0.11 lb CO/hr)

BCOMB = the maximum burner combustion rate(5,122 cubic feet/hr)

BCONV = the conversion factor (1 mm cf/ 1,000,000 cf/lb)

COEF = CO Emission Factor (21.0 lbs/mmcf, from (AP-42 5th. Edition, Table 1.4-2)

1.f Emission Limitation:

0.48 tons carbon monoxide (CO)/yr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$\text{AAER} = (\text{AER}) \times (\text{MHPY}) \times (\text{CONV}) = 0.48 \text{ tons CO/yr}$$

where

AAER= the annual allowable emission rate (0.48 tons CO/yr)

AER= the allowable emission rate (0.11 CO /hr)

MHPY= the maximum hours per year (8, 760 hrs/yr)

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

1.g Emission Limitation:

2.51 lbs nitrous oxides (NOx)/hr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$\text{AER} = (\text{EF}) \times (\text{MPWR}) \times (\text{CONV}) = 2.51 \text{ lbs NOx/hr}$$

where

AER= the allowable emission rate (2.51 lbs/hr)

EF= the emission factor (0.76 lb NOx/ton aluminum melted , SCC 3-04-001-03

MPWR= the maximum process weight rate (6,600 lbs aluminum melted / hr)

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

V. Testing Requirements (continued)

1.h Emission Limitation:

10.97 tons NO_x/yr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$AAER = (AER) \times (MHPY) \times (CONV) = 10.97 \text{ tons NO}_x/\text{yr}$$

where

AAER= the annual allowable emission rate (10.97 tons NO_x / yr)

AER= the allowable emission rate (2.51 lbs NO_x / hr)

MHPY= the maximum hours per year (8, 760 hrs/yr)

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

1.i Emission Limitation:

0.66 lb organic compounds (OC)/hr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$AER = (EF) \times (MPWR) \times (CONV) = 0.66 \text{ lb OC/hr}$$

where

AER= the allowable emission rate (0.66 lb OC/hr)

EF= the emission factor (0.20 lb OC/ton aluminum melted, SCC 3-04-001-03)

MPWR= the maximum process weight rate (6600 lbs aluminum melted / hr)

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

1.j Emission Limitation:

2.89 tons organic compounds (OC)/yr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$AAER = (AER) \times (MHPY) \times (CONV) = 2.89 \text{ tons OC/yr}$$

where

AAER= the annual allowable emission rate (2.89 tons OC/yr)

AER= the allowable emission rate (0.66 lb OC /hr)

MHPY= the maximum hours per year (8, 760 hrs/yr)

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

Facility Name: **Honda of America Mfg., Inc. Anna Engine Plant**

Facility ID: **05-75-00-0174**

Emissions Unit: **Aluminum Melting Furnace #6 (P074)**

V. Testing Requirements (continued)

1.k Emission Limitation:

20% opacity, as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

Compliance shall be determined according to test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR Part 60.

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: 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 with a baghouse	OAC rule 3745-31-05(A)(3) (PTI 05-08921)	2.05 lbs particulate emissions (PE)/hr and 6.15 tons of PE/yr Visible emissions from the stack shall not exceed 0% opacity 0.01 gr PE/dscf from the stack
	OAC rule 3745-17-07(A)(1)	The emissions limitations specified by these rules are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05 (A)(3)
	OAC rule 3745-17-11(B)(1)	The emissions limitations specified by these rules are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05 (A)(3)
		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 particulate emissions from this emissions unit shall be controlled by venting the emissions to a baghouse(s) with a designed control efficiency of 99+%.

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 per 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 month.
 - b. The rolling , 12-month summation of the operating hours.
2. The permittee shall properly install, 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 installed, 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 emission unit was in operation and the pressure drop across the baghouse did not comply with the allowable range specified in term A. II. 1.

V. Testing Requirements

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

V. Testing Requirements (continued)

1.a Emission Limitation:
 2.05 lbs PE/hr and 6.15 tons PE/year

Applicable Compliance Method:

Compliance shall be assumed as long the both the 0.010 gr./dscf PE limit from the baghouse stack and 0% Opacity, as a six minute average, from the baghouse stack is met. This is based both on the operating requirements in term A.II. and the following calculation:

$$(BFR) \times (AV) \times (ST / BET) \times (BEP / SP) \times (BEF) \times (TI) \times (CONV) = 6.15 \text{ tons of PE per year}$$

where

- BFR = Baghouse Flow Rate (21,069 acfm)
- AV = the air variability factor (105%)
- ST = Standard Temperature (530 Rankine)
- BET = Baghouse Exit Temperature (560 Rankine)
- BEP = Baghouse Exit Temperature (14.69b/in2)
- SP = Standard Pressure (14.69b/in2)
- BEF = Baghouse Efficiency (0.010 grains/dscf)
- TI = Time (60 minutes per hour)
- CONV = conversion factor (1 lb = 7000 grains)

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

- a. The emission testing shall be conducted within 3 months after issuance of the permit and within 6 months prior to permit renewal.
- b. The emissions testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulate.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Pollutant	Test Method	Location
Particulate	Method 5	40 CFR Part 60, Appendix A

V. Testing Requirements (continued)

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

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

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s).

Compliance with the annual PE emission limitatio shall be assumed as long as compliance with the hourly gr/dscf limitation (0.010 gr/dscf) is maintained.

- 1.b** Emission Limitation:
0% opacity, as a six-minute average, from the baghouse stack.

Applicable Compliance Method:

Compliance shall be determined through visible emission observations performed in accordance with 40CFR, 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: 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

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 recycling and preparation system w/conveyors, silos, screens, cooling unit, bucket elevators, and muller	OAC rule 3745-31-05(A)(3) PTI #05-08921	5.77 lbs particulate emissions (PE)/hr and 17.31 tons PE/yr Visible emissions from the stack shall not exceed 0% opacity 0.01 gr/dscf from the stack
	OAC rule 3745-17-07(A)(1)	The emissions limitations specified by these rules are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05 (A)(3)
	OAC rule 3745-17-11(B)(1)	The emissions limitations specified by these rules are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05 (A)(3)

2. Additional Terms and Conditions

- 2.a The particulate emissions from this emissions unit shall be controlled by venting the emissions to a baghouse(s) with a designed control efficiency of 99+%.

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.

II. Operational Restrictions (continued)

2. 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.

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 month.
 - b. The rolling , 12-month summation of the operating hours.
2. The permittee shall properly install, 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 installed, 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 emission unit was in operation and the pressure drop across the baghouse did not comply with the allowable range specified in term A. II. 1.

V. Testing Requirements

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

V. Testing Requirements (continued)

1.a Emission Limitation:
 5.77 lbs PE/hr and 17.31 tons PE/year

Applicable Compliance Method:

Compliance shall be assumed as long the both the 0.010 gr./dscf PE limit from the baghouse stack and 0% Opacity, as a six minute average, from the baghouse stack is met. This is based both on the operating requirements in term A.II. and the following calculation:

$$(BFR) \times (AV) \times (ST / BET) \times (BEP / SP) \times (BEF) \times (TI) \times (CONV) = 17.31 \text{ tons of PE per year}$$

where

- BFR = Baghouse Flow Rate (59,270 acfm)
- AV = the air variability factor (105%)
- ST = Standard Temperature (530 Rankine)
- BET = Baghouse Exit Temperature (560 Rankine)
- BEP = Baghouse Exit Temperature (14.69b/in2)
- SP = Standard Pressure (14.69b/in2)
- BEF = Baghouse Efficiency (0.010 grains/dscf)
- TI = Time (60 minutes per hour)
- CONV = conversion factor (1 lb = 7000 grains)

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

- a. The emission testing shall be conducted within 3 months after issuance of the permit and within 6 months prior to permit renewal
- b. The emissions testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulate.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Pollutant	Test Method	Location
Particulate	Method 5	40 CFR Part 60, Appendix A

V. Testing Requirements (continued)

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

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

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s).

Compliance with the annual PE emission limitation shall be assumed as long as compliance with the hourly gr/dscf limitation (0.010 gr/dscf) is maintained.

- 1.b** Emission Limitation:
0% opacity, as a six-minute average, from the baghouse stack.

Applicable Compliance Method:

Compliance shall be determined through visible emission observations performed in accordance with 40CFR, 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: 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 and venting to a baghouse	OAC Rule 3745-31-05(D)	Total Controlled particulate (PE) emissions not to exceed 9.71 tons per rolling 12-months from Ferrous Casting Line #4 baghouse stack.
	OAC rule 3745-31-05(A)(3) PTI #05-11350	Total Controlled PE emissions not to exceed 2.22 lb/hr from Ferrous Casting Line #4 baghouse stack.
		0.004 gr of PE/dscf from the baghouse stack.
		0% opacity, as a six minute average, from the baghouse stack.
		Total Combined Uncontrolled PE emissions from Spin Cast Machine #1 and Spin Cast Machine #2 not to exceed 0.0028 tons per year.
		Total Uncontrolled PE emissions from Spin Cast Machine #1 not to exceed 0.00073 lb per hour.
		Emissions from natural gas usage in the Spin Cast Machine #1 mold pre-heat burner shall not exceed: 0.1 lb of nitrogen oxides (NOx)/hour 0.4 tons of NOx/year 0.1 lb of carbon monoxide(CO)/hour 0.4 tons of CO/year 0.0041 lb of organic compounds (OC)/hour 0.013 tons of OC/year 0.00045 lb of sulfur oxides (SOx)/hour 0.0014 tons of SOx/year

<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)	20% Opacity, as a three minute average, from any building exhaust associated with Ferrous Casting Line #4.
	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 Compliance with OAC rule 3745-31-05 shall be demonstrated by the following:

1. the use of hoods, fans, and other equipment to adequately enclose, contain, capture, vent and control PM dust by venting to a baghouse and
2. compliance with the limits in term A.I.1.

2.b This emission unit shall use only detergent based or earthen based mold release agents

II. Operational Restrictions

1. The maximum throughput for Spin Cast Machine #1 shall not exceed 1.1 tons of iron per hour and the maximum combined throughput for Spin Cast Machine #1 and Spin Cast Machine #2 shall not exceed 8268 tons of iron rolling, 12- months.
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 each month.
 - b. The rolling, 12-month summation of the iron throughput.

(No hourly recordkeeping required. 1.1 tons of iron per hour represents the maximum designed capacity of the equipment.)

2. The permittee shall properly install, 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 installed, 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 which identify all exceedances of the rolling, 12-month iron throughput limitation.
2. The permittee shall submit deviation (excursion) reports that identify 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 range specified in term A. II. 2

V. Testing Requirements

1. Compliance with the emission limitation specified in section A.I.1. shall be determined in accordance with the following method(s):

- 1.a Emission Limitation:

9.71 tons of PE/yr, as a rolling 12-month summation from the stack

Applicable Compliance Method:

Compliance shall be assumed as long the 0.004 gr./dscf PE limit from the baghouse stack is met. This is based both on the operating requirements in term A.II. and the following calculation:

$$(\text{MASER}) \times (\text{AOH}) \times (\text{CONV}) = 9.71 \text{ tons of PE/yr}^{**}$$

where:

MASER = the maximum allowable stack emission rate (2.21 lbs of PE/hr.)

AOH = the actual operating hours

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

**Based on 8760 operating hours per year.

V. Testing Requirements (continued)

1.b Emission Limitation:
 2.22 lbs of PE/hr-(stack emissions)

Compliance shall be assumed as long the both the 0.004 gr./dscf PE limit from the baghouse stack and 0% Opacity, as a six minute average, from the baghouse stack is met. This is based both on the operating requirements in term A.II. and the following calculation:

$$(BFR) \times (AV) \times (ST / BET) \times (BEP / SP) \times (BEF) \times (TI) \times (CONV) = 2.22 \text{ tons of PE/yr}$$

where:

- BFR = Baghouse Flow Rate (65,000 acfm)
- AV = the air variability factor (105%)
- ST = Standard Temperature (530 Rankine)
- BET = Baghouse Exit Temperature (560 Rankine)
- BEP = Baghouse Exit Pressure (14.69 lb / in**2)
- SP = Standard Pressure (14.69 lb / in**2)
- BEF = Baghouse Efficiency (0.004 grains/dscf)
- TI = Time (60 minutes per hour)
- CONV = conversion factor (1 lb = 7000 grains)

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

- a. The emission testing shall be conducted within 3 months after issuance of the permit and within 6 months prior to permit renewal
- b. The emissions testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulate.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Location	Pollutant	Test Method
Particulate	Methods 1-4 and 5	40 CFR Part 60, Appendix A

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(s) 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 appropriate Ohio EPA, Southwest District Office 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(s) and the testing procedures provide a valid characterization of the emissions from the emissions unit(s) and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA, Southwest District Office within 30 days following completion of the test(s).

V. Testing Requirements (continued)

1.c Emission Limitation:

Not to exceed 0.0028 tons of Uncontrolled PE emissions, as a rolling 12-month summation for Spin Cast Machine #1 and Spin Cast Machine #2.

Applicable Compliance Method:

Compliance shall be assumed as long as the combined maximum iron throughput rate for Spin Cast Machine #1 and Spin Cast Machine #2 per rolling 12-month summation is not exceeded. This is based on the recordkeeping requirements in term A.III. and the summation of the following calculations:

Process Emissions

$$(MMR) \times (PMER) \times (CONV) \times (SF) \times (1-CAP) = 0.0028 \text{ tons of PE per year}$$

where:

MMR = the combined maximum metal rate (8268 tons per year)**

PMER=the PE Emission rate (0.33 lb PE/ton of metal)(Air Emissions from Permanent Mold Castings of Ductile Iron Pipe, Marvin D McKinley, Professor of chemical Engineering, University of Alabama, September 1994.)

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

SF= Safety Factor of 2

CAP = Control Device Capture Efficiency (99.9%)

and

Natural Gas Combustion

$$(BBTU) \times (1/BCONV) \times (PMEF) \times (1-CAP) \times (CONV) \times (HRS) = 0.00005 \text{ tons of PM per year}$$

where

BBTU = Burner BTU/hr (735,000 BTU/hr)

BCONV = BTU to scf conversion factor (1000 BTU/scf)

PMEF = PM Emission Factor (7.6 lb PM/106 scf)(AP-42 Version 5. Table 1.4-2, dated 7/98)

CAP = Control Device Capture Efficiency (99.9%)

CONV = Conversion Factor (1 ton/2000 lbs)

HRS = Operating Hours per year (8760 hours per year)

**As long as the 12-month combined maximum iron throughput limitation in term A.II. is not exceeded, compliance with this limitation is demonstrated.

V. Testing Requirements (continued)

1.d Emission Limitation

0.00073 lbs of Uncontrolled PE emissions per hour as a summation from Spin Cast Machine #1.

Applicable Compliance Method:

Compliance shall be assumed as long as the maximum iron throughput rate of 1.1 tons of iron per hour is not exceeded. This is based on both the record keeping requirements in term A.III. and the summation of the following calculations.

Process Emissions

$(MMR) \times (PMER) \times (SF) \times (1-CAP) = 0.00073$ lbs of PM per hour

where

PMER=the PE Emission rate (0.33 lb PE/ton of metal)(Air Emissions from Permanent Mold Castings of Ductile Iron Pipe, Marvin D McKinley, Professor of chemical Engineering, University of Alabama, September 1994.)

MMR = the maximum metal rate (1.1 ton iron/hour)**

SF= Safety Factor of 2

CAP = Control Device Capture Efficiency (99.9%)

and

Natural Gas Combustion

$(BBTU) \times (1/BCONV) \times (PMEF) \times (1-CAP) = 0.00001$ lbs of PE per hour

where

BBTU = Burner BTU/hr (735,000 BTU/hr)

BCONV = BTU to scf conversion factor (1000 BTU/scf)

PMEF = PM Emission Factor (7.6 lb PM/106 scf)(AP-42 Version 5. Table 1.4-2, dated 7/98)

CAP = Control Device Capture Efficiency (99.9%)

**This limit represents the maximum capacity of the Line # 4 Spin Cast Machine #1. Since this limit reflects the maximum throughput capacity of this source, no additional compliance determination is required.

1.e Emission Limitation:

NOx Emissions from Spin Cast Machine #1 shall not exceed 0.1 lb/hr and 0.4 ton/year per rolling 12 months, CO Emissions from Spin Cast Machine #1 shall not exceed 0.1 lbs/hr and 0.4 tons/year per rolling 12 months, OC emissions from Spin Cast Machine #1 shall not exceed 0.0041 lb/hr and 0.013 ton/year per rolling 12 months, and SOx emissions from Spin Cast Machine #1 shall not exceed 0.0045 lb/hr and 0.0014 ton/year per rolling 12 months.

NOx, CO, OC and SOx Emissions are generated solely by the combustion of natural gas.

Applicable Compliance Method:

These limits represent the maximum capacity of the burners. These emission limitations were determined by multiplying the maximum natural gas usage from the burners by the emission factors for each pollutant (AP-42 Version 5, Table 1.4-2). Since these limits reflect the potential emissions of the burners, no additional compliance determination is required.

V. Testing Requirements (continued)

- 1.f** Emission Limitation:
0% opacity, as a six-minute average, from the baghouse stack.

Applicable Compliance Method:

Compliance shall be determined according to test method 9 as set forth in "Appendix on Test Methods" in 40 CFR Part 60.

- 1.g** Emission Limitation:
20% Opacity, as a three minute average, from any building exhaust associated with Ferrous Casting Line #4.

Applicable Compliance Method:

40 CFR Part 60, Method 9, with opacity readings taken from any exit of the building

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 #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	OAC Rule 3745-31-05(D) PTI#05-11350	Total Controlled PM emissions not to exceed 9.71 tons per rolling 12-months from Ferrous Casting Line #4 baghouse stack.
	OAC rule 3745-31-05(A)(3) PTI #05-11350	Total Controlled PM emissions shall not exceed 2.22 lb per hr from Ferrous Casting Line #4 baghouse stack.
		0.004 gr./dscf from the baghouse stack.
		0% Opacity, as a six minute average, from the baghouse stack.
		Total Combined Uncontrolled PM Emissions from Spin Cast Machine #1 and Spin Cast Machine #2 not to exceed 0.0028 tons per year.
		Total Uncontrolled PM Emissions from Spin Cast Machine #1 not to exceed 0.00073 lb per hour.
		Emissions from natural gas usage in the Spin Cast Machine #1 mold pre-heat burner shall not exceed: 0.1 lb NOx/hour 0.4 tons NOx/year 0.1 lb CO/hour 0.4 tons CO/year 0.0041 lb OC/hour 0.013 tons OC/year 0.00045 lb SOx/hour 0.0014 tons SOx/year

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
		20% Opacity, as a three minute average, from any building exhaust associated with Ferrous Casting Line #4.
	OAC 3745-17-07 (A)(1)	Less stringent than OAC rule 3745-31-05
	OAC rule 3745-17-11(B)(1)	Less stringent than OAC rule 3745-31-05 (A)(3)

2. Additional Terms and Conditions

2.a Compliance with OAC rule 3745-31-05 shall be demonstrated by the following:

1. the use of hoods, fans, and other equipment to adequately enclose, contain, capture, vent and control PM dust by venting to a baghouse and
2. compliance with the limits in term A.I.1.

2.b This emission unit shall use only detergent based or earthen based mold release agents

II. Operational Restrictions

1. The maximum throughput for Spin Cast Machine #1 shall not exceed 1.1 tons of iron per hour and the maximum combined throughput for Spin Cast Machine #1 and Spin Cast Machine #2 shall not exceed 8268 tons of iron rolling, 12- months.
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 each month.
 - b. The rolling, 12-month summation of the iron throughput.

(No hourly recordkeeping required. 1.1 tons of iron per hour represents the maximum designed capacity of the equipment.)

2. The permittee shall properly install, 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 installed, 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 which identify all exceedances of the rolling, 12-month iron throughput limitation.
2. The permittee shall submit deviation (excursion) reports that identify 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 range specified in term A. III. 2

V. Testing Requirements

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

1.a Emission Limitation:
 9.71 tons of Controlled PM per year, as a rolling 12-month summation from the baghouse stack for Ferrous Casting Line #4.

Applicable Compliance Method:

Compliance shall be assumed as long the 0.004 gr./dscf PM limit from the baghouse stack is met. This is based both on the operating requirements in term A.II. and the following calculation:

$$(MASER)(AOH)(CONV) = 9.71 \text{ tons of PM per year}^{**}$$

where

MASER = the maximum allowable stack emission rate (2.21 lbs PM/hr.)

AOH = the actual operating hours

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

**Based on 8760 operating hours per year.

1.b Emission Limitation:
 2.22 lbs of Controlled PM/hour from the baghouse stack for Ferrous Casting Line #4.

Compliance shall be assumed as long the both the 0.004 gr./dscf PM limit from the baghouse stack and 0% Opacity, as a six minute average, from the baghouse stack is met. This is based both on the operating requirements in term A.II. and the following calculation:

$$(BFR) \times (AV) \times (ST / BET) \times (BEP / SP) \times (BEF) \times (TI) \times (CONV) = 2.21 \text{ tons of PM per year}$$

where

BFR = Baghouse Flow Rate (65,000 acfm)

AV = the air variability factor (105%)

ST = Standard Temperature (530 Rankine)

BET = Baghouse Exit Temperature (560 Rankine)

BEP = Baghouse Exit Temperature (14.69b/in²)

SP = Standard Pressure (14.69b/in²)

BEF = Baghouse Efficiency (0.004 grains/dscf)

TI = Time (60 minutes per hour)

CONV = conversion factor (1 lb = 7000 grains)

The permittee shall conduct, or have conducted, emission testing for the baghouse stack for Ferrous Casting Line #4 in accordance with the following requirements:

- a. The emission testing shall be conducted within 3 months after issuance of the permit and within 6 months prior to permit renewal
- b. The emissions testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulate.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Pollutant	Test Method	Location
Particulate	Method 5	40 CFR Part 60, Appendix A

V. Testing Requirements (continued)

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

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

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s).

V. Testing Requirements (continued)

1.c Emission Limitation:

Not to exceed 0.0028 tons of Uncontrolled PM emissions, as a rolling 12-month summation for Spin Cast Machine #1 and Spin Cast Machine #2.

Applicable Compliance Method:

Compliance shall be assumed as long as the combined maximum iron throughput rate for Spin Cast Machine #1 and Spin Cast Machine #2 per rolling 12-month summation is not exceeded. This is based on the recordkeeping requirements in term A.III. and the summation of the following calculations:

Process Emissions

$(MMR) \times (PMER) \times (CONV) \times (SF) \times (1-CAP) = 0.0028$ tons of PM per year

where

MMR = the combined maximum metal rate (8268 tons per year)**

PMER=the PM Emission rate (0.33 lb PM/ton of metal)(Air Emissions from Permanent Mold Castings of Ductile Iron Pipe, Marvin D McKinley, Professor of chemical Engineering, University of Alabama, September 1994.)

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

SF= Safety Factor of 2

CAP = Control Device Capture Efficiency (99.9%)

and

Natural Gas Combustion

$(BBTU) \times (1/BCONV) \times (PMEF) \times (1-CAP) \times (CONV) \times (HRS) = 0.00005$ tons of PM per year

where

BBTU = Burner BTU/hr (735,000 BTU/hr)

BCONV = BTU to scf conversion factor (1000 BTU/scf)

PMEF = PM Emission Factor (7.6 lb PM/106 scf)(AP-42 Version 5. Table 1.4-2, dated 7/98)

CAP = Control Device Capture Efficiency (99.9%)

CONV = Conversion Factor (1 ton/2000 lbs)

HRS = Operating Hours per year (8760 hours per year)

**As long as the 12-month combined maximum iron throughput limitation in term A.II. is not exceeded, compliance with this limitation is demonstrated.

V. Testing Requirements (continued)

1.d Emission Limitation

0.00073 lbs of Uncontrolled PM emissions per hour as a summation from Spin Cast Machine #1.

Applicable Compliance Method:

Compliance shall be assumed as long as the maximum iron throughput rate of 1.1 tons of iron per hour is not exceeded. This is based on both the record keeping requirements in term A.III. and the summation of the following calculations.

Process Emissions

$(MMR) \times (PMER) \times (SF) \times (1-CAP) = 0.00073$ lbs of PM per hour

where

PMER=the PM Emission rate (0.33 lb PM/ton of metal)(Air Emissions from Permanent Mold Castings of Ductile Iron Pipe, Marvin D McKinley, Professor of chemical Engineering, University of Alabama, September 1994.)

MMR = the maximum metal rate (1.1 ton iron/hour)**

SF= Safety Factor of 2

CAP = Control Device Capture Efficiency (99.9%)

and

Natural Gas Combustion

$(BBTU) \times (1/BCONV) \times (PMEF) \times (1-CAP) = 0.00001$ lbs of PM per hour

where

BBTU = Burner BTU/hr (735,000 BTU/hr)

BCONV = BTU to scf conversion factor (1000 BTU/scf)

PMEF = PM Emission Factor (7.6 lb PM/106 scf)(AP-42 Version 5. Table 1.4-2, dated 7/98)

CAP = Control Device Capture Efficiency (99.9%)

**This limit represents the maximum capacity of the Line # 4 Spin Cast Machine #1. Since this limit reflects the maximum throughput capacity of this source, no additional compliance determination is required.

1.e Emission Limitation:

NOx Emissions from Spin Cast Machine #1 shall not exceed 0.1 lb/hr and 0.4 ton/year per rolling 12 months, CO Emissions from Spin Cast Machine #1 shall not exceed 0.1 lbs/hr and 0.4 tons/year per rolling 12 months, OC emissions from Spin Cast Machine #1 shall not exceed 0.0041 lb/hr and 0.013 ton/year per rolling 12 months, and SOx emissions from Spin Cast Machine #1 shall not exceed 0.0045 lb/hr and 0.0014 ton/year per rolling 12 months. NOx, CO, OC and SOx Emissions are generated solely by the combustion of natural gas.

Applicable Compliance Method:

These limits represent the maximum capacity of the burners. These emission limitations were determined by multiplying the maximum natural gas usage from the burners by the emission factors for each pollutant (AP-42 Version 5, Table 1.4-2). Since these limits reflect the potential emissions of the burners, no additional compliance determination is required.

V. Testing Requirements (continued)

1.f Emission Limitation:
0% opacity, as a six-minute average, from the baghouse stack.

Applicable Compliance Method:

Compliance shall be determined according to test method 9 as set forth in "Appendix on Test Methods" in 40 CFR Part 60.

1.g Emission Limitation:
20% Opacity, as a three minute average, from any building exhaust associated with Ferrous Casting Line #4.

Applicable Compliance Method:

40 CFR Part 60, Method 9, with opacity readings taken from any exit of the building

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 #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	OAC Rule 3745-31-05(D) PTI #05-11350	Total Controlled PM emissions not to exceed 9.71 tons per rolling 12-months from Ferrous Casting Line #4 baghouse stack.
	OAC rule 3745-31-05(A)(3)	Total Controlled PM emissions not to exceed 2.22 lb per hr from Ferrous Casting Line #4 baghouse stack.
		0.004 gr./dscf from the baghouse stack.
		0% Opacity, as a six minute average, from the baghouse stack.
		Total Uncontrolled PM Emissions from Ferrous Casting Line #4 Shotblast Machine not to exceed 0.02 tons per year.
		Total Uncontrolled PM Emissions from Ferrous Casting Line #4 Shotblast Machine not to exceed 0.011 lb per hour.
		20% Opacity, as a three minute average, from any building exhaust associated with Ferrous Casting Line #4.
		Less stringent than OAC rule 3745-31-05
		Less stringent than OAC rule 3745-31-05 (A)(3)

2. Additional Terms and Conditions

- 2.a** Compliance with OAC rule 3745-31-05 shall be demonstrated by the following:
1. the use of hoods, fans, and other equipment to adequately enclose, contain, capture, vent and control PM dust by venting to a baghouse and;
 2. compliance with the limits in term A.I.1.

II. Operational Restrictions

1. The maximum throughput for Ferrous Casting Line #4 shall not exceed 2.2 tons of iron per hour and 8268 tons of iron per rolling, 12- months.
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 each month.
 - b. The rolling, 12-month summation of the iron throughput.

(No hourly recordkeeping required. 2.2 tons of iron per hour represents the maximum designed capacity of the equipment.)

2. The permittee shall properly install, 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 installed, 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 which identify all exceedances of the rolling, 12-month iron throughput limitation.
2. The permittee shall submit deviation (excursion) reports that identify 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 range specified in term A. II. 2.
3. These reports, as denoted in terms A.IV.1. and 2., are due by the date described in Part 1- General Terms and Conditions of the permit under section (A) (1).

V. Testing Requirements

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

V. Testing Requirements (continued)

1.a Emission Limitation:

9.71 tons of Controlled PM per year, as a rolling 12-month summation from the baghouse stack for Ferrous Casting Line #4..

Applicable Compliance Method:

Compliance shall be assumed as long the 0.004 gr./dscf PM limit from the baghouse stack is met. This is based both on the operating requirements in term A.II. and the following calculation:

$$(MASER)(AOH)(CONV) = 9.71 \text{ tons of PM per year}$$

where

MASER = the maximum allowable stack emission rate (2.21 lbs PM/hr.)

AOH = the actual operating hours**

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

**Based on 8760 operating hours per year.

1.b Emission Limitation:

2.21 lbs of Controlled PM/hour from the baghouse for Ferrous Casting Line #4.

Compliance shall be assumed as long the both the 0.004 gr./dscf PM limit from the baghouse stack and 0% Opacity, as a six minute average, from the baghouse stack is met. This is based both on the operating requirements in term A.II. and the following calculation:

$$(BFR) \times (AV) \times (ST / BET) \times (BEP / SP) \times (BEF) \times (TI) \times (CONV) = 2.21 \text{ tons of PM per year}$$

where

BFR = Baghouse Flow Rate (65,000 acfm)

AV = the air variability factor (105%)

ST = Standard Temperature (530 Rankine)

BET = Baghouse Exit Temperature (560 Rankine)

BEP = Baghouse Exit Temperature (14.69b/in2)

SP = Standard Pressure (14.69b/in2)

BEF = Baghouse Efficiency (0.004 grains/dscf)

TI = Time (60 minutes per hour)

CONV = conversion factor (1 lb = 7000 grains)

The permittee shall conduct, or have conducted, emission testing for the baghouse stack for Ferrous Casting Line #4 in accordance with the following requirements:

- a. The emission testing shall be conducted within 3 months after issuance of the permit and within 6 months prior to permit renewal
- b. The emissions testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulate.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Pollutant	Test Method	Location
Particulate	Method 5	40 CFR Part 60, Appendix A

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

V. Testing Requirements (continued)

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

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s).

1.c Emission Limitation:

0.02 tons of Uncontrolled PM emissions, as a rolling 12-month summation from Ferrous Casting Line #4 Shotblast Machine.

Applicable Compliance Method:

Compliance shall be assumed as long as the maximum iron throughput rate per rolling 12-month summation is not exceeded. This is based on the recordkeeping requirements in term A.III. and the following calculation:

$$(MMR) \times (PMER) \times (CONV) \times (1-CAP) \times (1-BCAP) = 0.02 \text{ tons of PM per year}$$

where

MMR = the maximum metal rate (8268 tons per year)**

PMER=the PM Emission rate (15.5 lb PM/ton of metal)(Modern Casting, January 1972)

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

CAP = Control Device Capture Efficiency (99.9%)

BCAP = Building Capture Efficiency (70%) (April 10,1998 letter to Ironton Iron Inc. from Stephen Giles, Director of Portsmouth Local Air Agency)

**As long as the 12-month maximum iron throughput limitation in term A.II. is not exceeded, compliance with this limitation is demonstrated.

V. Testing Requirements (continued)

- 1.d** Emission Limitation:
0.011 lbs of Uncontrolled PM emissions per hour as a summation from Ferrous Casting Line #4 Shotblast Machine.

Applicable Compliance Method:

Compliance shall be assumed as long as the maximum iron throughput rate of 2.2 tons of iron per hour is not exceeded. This is based on both the record keeping requirements in term A.III. and the following calculation.

$$(MMR) \times (PMER) \times (1-CAP) \times (1-BCAP) = 0.011 \text{ lbs of PM per hour}$$

where

MMR = the maximum metal rate (2.2 ton iron/hour)**

PMER=the PM Emission rate (15.5 lb PM/ton of metal)(Modern Casting, January 1972)

CAP = Control Device Capture Efficiency (99.9%)

BCAP = Building Capture Efficiency (70%) (April 10,1998 letter to Ironton Iron Inc. from Stephen Giles, Director of Portsmouth Local Air Agency)

**This limit represents the maximum capacity of the Line # 4 Shotblast Machine. Since this limit reflects the maximum throughput capacity of this source, no additional compliance determination is required.

- 1.e** Emission Limitation:
0% opacity, as a six-minute average, from the baghouse stack.

Applicable Compliance Method:

Compliance shall be determined according to test method 9 as set forth in "Appendix on Test Methods" in 40 CFR Part 60.

- 1.f** Emission Limitation:
20% Opacity, as a three minute average, from any building exhaust associated with Ferrous Casting Line #4.

Applicable Compliance Method:

40 CFR Part 60, Method 9, with opacity readings taken from any exit of the building.

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 #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	OAC Rule 3745-31-05(D) PTI #05-11350	Total Controlled PM emissions not to exceed 9.71 tons per rolling 12-months from Ferrous Casting Line #4 baghouse stack.
	OAC rule 3745-31-05(A)(3) PTI #05-11350	Total Controlled PM emissions not to exceed 2.21 lb per hr from Ferrous Casting Line #4 baghouse stack.
		0.004 gr./dscf from the baghouse stack.
		0% Opacity, as a six minute average, from the baghouse stack.
		Total Combined Uncontrolled PM Emissions from Tube Cutting Machine #1 and Tube Cutting Machine #2 not to exceed 0.003 tons per year.
		Total Uncontrolled PM Emissions from Ferrous Casting Line #4 Tube Cutting Machine #1 not to exceed 0.0006 lb per hour.
		20% Opacity, as a three minute average, from any building exhaust associated with Ferrous Casting Line #4.
	OAC 3745-17-07 (A)(1)	Less stringent than OAC rule 3745-31-05
	OAC rule 3745-17-11(B)(1)	Less stringent than OAC rule 3745-31-05 (A)(3)

2. Additional Terms and Conditions

2.a Compliance with OAC rule 3745-31-05 shall be demonstrated by the following:

1. the use of hoods, fans, and other equipment to adequately enclose, contain, capture, vent and control PM dust by venting to a baghouse and
2. compliance with the limits in term A.I.1.

II. Operational Restrictions

1. The maximum throughput for Tube Cutting Machine #1 shall not exceed 1.1 tons of iron per hour and the maximum combined throughput for Tube Cutting Machine #1 and Tube Cutting Machine #2 shall not exceed 8268 tons of iron rolling, 12- months.
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 each month.
 - b. The rolling, 12-month summation of the iron throughput.

(No hourly recordkeeping required. 1.1 tons of iron per hour represents the maximum designed capacity of the equipment.)

2. The permittee shall properly install, 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 installed, 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 which identify all exceedances of the rolling, 12-month iron throughput limitation.
2. The permittee shall submit deviation (excursion) reports that identify 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 range specified in term A. II. 2.

V. Testing Requirements

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

V. Testing Requirements (continued)

1.a Emission Limitation:
 9.71 tons of Controlled PM per year, as a rolling 12-month summation from the baghouse stack for Ferrous Casting Line #4..

Applicable Compliance Method:

Compliance shall be assumed as long the 0.004 gr./dscf PM limit from the baghouse stack is met. This is based both on the operating requirements in term A.II. and the following calculation:

$$(MASER)(AOH)(CONV) = 9.71 \text{ tons of PM per year}$$

where

MASER = the maximum allowable stack emission rate (2.21 lbs PM/hr.)

AOH = the actual operating hours**

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

**Based on 8760 operating hours per year.

1.b Emission Limitation:
 2.22 lbs of Controlled PM/hour from the baghouse stack for Ferrous Casting Line #4.

Compliance shall be assumed as long the both the 0.004 gr./dscf PM limit from the baghouse stack and 0% Opacity, as a six minute average, from the baghouse stack is met. This is based both on the operating requirements in term A.II. and the following calculation:

$$(BFR) \times (AV) \times (ST / BET) \times (BEP / SP) \times (BEF) \times (TI) \times (CONV) = 2.22 \text{ tons of PM per year}$$

where

BFR = Baghouse Flow Rate (65,000 acfm)

AV = the air variability factor (105%)

ST = Standard Temperature (530 Rankine)

BET = Baghouse Exit Temperature (560 Rankine
 (14.69b/in²))

BEP = Baghouse Exit Temperature

SP = Standard Pressure (14.69b/in²)

BEF = Baghouse Efficiency (0.004 grains/dscf)

TI = Time (60 minutes per hour)

CONV = conversion factor (1 lb = 7000 grains)

The permittee shall conduct, or have conducted, emission testing for the baghouse stack for Ferrous Casting Line #4 in accordance with the following requirements:

- a. The emission testing shall be conducted within 3 months after issuance of the permit and within 6 months prior to permit renewal
- b. The emissions testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulate.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Pollutant	Test Method	Location
Particulate	Method 5	40 CFR Part 60, Appendix A

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

V. Testing Requirements (continued)

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

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s).

1.c Emission Limitation:

Not to exceed 0.003 tons of Uncontrolled PM emissions, as a rolling 12-month summation for Tube Cutting Machine #1 and Tube Cutting Machine #2.

Applicable Compliance Method:

Compliance shall be assumed as long as the combined maximum iron throughput rate for Tube Cutting Machine #1 and Tube Cutting Machine #2 per rolling 12-month summation is not exceeded. This is based on the recordkeeping requirements in term A.III. and the following calculation:

$$(MMR) \times (PMER) \times (CONV) \times (1-CAP) \times (1-BCAP) = 0.003 \text{ tons of PM per year}$$

where

MMR = the maximum metal rate (8268 tons per year)**

PMER=the PM Emission rate (1.7 lb PM/ton of metal)(SCC ID 3-04-003-40)

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

CAP = Control Device Capture Efficiency (99.9%)

BCAP = Building Capture Efficiency (70%) (April 10,1998 letter to Ironton Iron Inc. from Stephen Giles, Director of Portsmouth Local Air Agency)

**As long as the 12-month maximum iron throughput limitation in term A.II. is not exceeded, compliance with this limitation is demonstrated.

V. Testing Requirements (continued)

1.d Emission Limitation

0.0006 lbs of Uncontrolled PM emissions per hour as a summation from Tube Cutting Machine #1.

Applicable Compliance Method:

Compliance shall be assumed as long as the maximum iron throughput rate of 1.1 tons of iron per hour is not exceeded. This is based on both the record keeping requirements in term A.III. and the following calculation.

$(MMR) \times (PMER) \times (1-CAP) \times (1-BCAP) = 0.0006 \text{ lbs of PM per hour}$

where

MMR = the maximum metal rate (1.1 ton iron/hour)**

PMER=the PM Emission rate (1.7 lb PM/ton of metal)(SCC ID 3-04-003-40)

CAP = Control Device Capture Efficiency (99.9%)

BCAP = Building Capture Efficiency (70%) (April 10,1998 letter to Ironton Iron Inc. from Stephen Giles, Director of Portsmouth Local Air Agency)

**This limit represents the maximum capacity of the Line # 4 Tube Cutting Machine #1. Since this limit reflects the maximum throughput capacity of this source, no additional compliance determination is required.

1.e Emission Limitation:

0% opacity, as a six-minute average, from the baghouse stack.

Applicable Compliance Method:

Compliance shall be determined according to test method 9 as set forth in "Appendix on Test Methods" in 40 CFR Part 60.

1.f Emission Limitation:

20% Opacity, as a three minute average, from any building exhaust associated with Ferrous Casting Line #4.

Applicable Compliance Method:

40 CFR Part 60, Method 9, with opacity readings taken from any exit of the building.

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 #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	OAC Rule 3745-31-05(D)	Total Controlled PM emissions not to exceed 9.71 tons per rolling 12-months from Ferrous Casting Line #4 baghouse stack.
	OAC rule 3745-31-05(A)(3) PTI #05-11350	Total Controlled PM emissions not to exceed 2.22 lb per hr from Ferrous Casting Line #4 baghouse stack. 0.004 gr./dscf from the baghouse stack. 0% Opacity, as a six minute average, from the baghouse stack.
	OAC 3745-17-07 (A)(1)	Total Combined Uncontrolled PM Emissions from Tube Cutting Machine #1 and Tube Cutting Machine #2 not to exceed 0.003 tons per year. Total Uncontrolled PM Emissions from Ferrous Casting Line #4 Tube Cutting Machine #2 not to exceed 0.0006 lb per hour. 20% Opacity, as a three minute average, from any building exhaust associated with Ferrous Casting Line #4.
	OAC rule 3745-17-11(B)(1)	Less stringent than OAC rule 3745-31-05 Less stringent than OAC rule 3745-31-05 (A)(3)

2. Additional Terms and Conditions

2.a Compliance with OAC rule 3745-31-05 shall be demonstrated by the following:

1. the use of hoods, fans, and other equipment to adequately enclose, contain, capture, vent and control PM dust by venting to a baghouse and
2. compliance with the limits in term A.I.1.

II. Operational Restrictions

1. The maximum throughput for Tube Cutting Machine #1 shall not exceed 1.1 tons of iron per hour and the maximum combined throughput for Tube Cutting Machine #1 and Tube Cutting Machine #2 shall not exceed 8268 tons of iron rolling, 12- months.
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 each month.
 - b. The rolling, 12-month summation of the iron throughput.

(No hourly recordkeeping required. 1.1 tons of iron per hour represents the maximum designed capacity of the equipment.)

2. The permittee shall properly install, 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 installed, 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 which identify all exceedances of the rolling, 12-month iron throughput limitation.
2. The permittee shall submit deviation (excursion) reports that identify 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 range specified in term A. II. 2.

V. Testing Requirements

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

V. Testing Requirements (continued)

1.a Emission Limitation:
 9.71 tons of Controlled PM per year, as a rolling 12-month summation from the baghouse stack for Ferrous Casting Line #4..

Applicable Compliance Method:

Compliance shall be assumed as long the 0.004 gr./dscf PM limit from the baghouse stack is met. This is based both on the operating requirements in term A.II. and the following calculation:

$$(MASER)(AOH)(CONV) = 9.71 \text{ tons of PM per year}$$

where

MASER = the maximum allowable stack emission rate (2.21 lbs PM/hr.)

AOH = the actual operating hours**

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

**Based on 8760 operating hours per year.

1.b Emission Limitation:
 2.22 lbs of Controlled PM/hour from the baghouse stack for Ferrous Casting Line #4.

Compliance shall be assumed as long the both the 0.004 gr./dscf PM limit from the baghouse stack and 0% Opacity, as a six minute average, from the baghouse stack is met. This is based both on the operating requirements in term A.II. and the following calculation:

$$(BFR) \times (AV) \times (ST / BET) \times (BEP / SP) \times (BEF) \times (TI) \times (CONV) = 2.21 \text{ tons of PM per year}$$

where

BFR = Baghouse Flow Rate (65,000 acfm)

AV = the air variability factor (105%)

ST = Standard Temperature (530 Rankine)

BET = Baghouse Exit Temperature (560 Rankine
 (14.69b/in²))

BEP = Baghouse Exit Temperature

SP = Standard Pressure (14.69b/in²)

BEF = Baghouse Efficiency (0.004 grains/dscf)

TI = Time (60 minutes per hour)

CONV = conversion factor (1 lb = 7000 grains)

The permittee shall conduct, or have conducted, emission testing for the baghouse stack for Ferrous Casting Line #4 in accordance with the following requirements:

- a. The emission testing shall be conducted within 3 months after issuance of the permit and within 6 months prior to permit renewal
- b. The emissions testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulate.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Pollutant	Test Method	Location
Particulate	Method 5	40 CFR Part 60, Appendix A

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

V. Testing Requirements (continued)

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

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s).

1.c Emission Limitation:

Not to exceed 0.003 tons of Uncontrolled PM emissions, as a rolling 12-month summation for Tube Cutting Machine #1 and Tube Cutting Machine #2.

Applicable Compliance Method:

Compliance shall be assumed as long as the combined maximum iron throughput rate for Tube Cutting Machine #1 and Tube Cutting Machine #2 per rolling 12-month summation is not exceeded. This is based on the recordkeeping requirements in term A.III. and the following calculation:

$$(MMR) \times (PMER) \times (CONV) \times (1-CAP) \times (1-BCAP) = 0.003 \text{ tons of PM per year}$$

where

MMR = the maximum metal rate (8268 tons per year)**

PMER=the PM Emission rate (1.7 lb PM/ton of metal)(SCC ID 3-04-003-40)

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

CAP = Control Device Capture Efficiency (99.9%)

BCAP = Building Capture Efficiency (70%) (April 10,1998 letter to Ironton Iron Inc. from Stephen Giles, Director of Portsmouth Local Air Agency)

**As long as the 12-month maximum iron throughput limitation in term A.II. is not exceeded, compliance with this limitation is demonstrated.

V. Testing Requirements (continued)

1.d Emission Limitation

0.0006 lbs of Uncontrolled PM emissions per hour as a summation from Tube Cutting Machine #1.

Applicable Compliance Method:

Compliance shall be assumed as long as the maximum iron throughput rate of 1.1 tons of iron per hour is not exceeded. This is based on both the record keeping requirements in term A.III. and the following calculation.

$(MMR) \times (PMER) \times (1-CAP) \times (1-BCAP) = 0.0006 \text{ lbs of PM per hour}$

where

MMR = the maximum metal rate (1.1 ton iron/hour)**

PMER=the PM Emission rate (1.7 lb PM/ton of metal)(SCC ID 3-04-003-40)

CAP = Control Device Capture Efficiency (99.9%)

BCAP = Building Capture Efficiency (70%) (April 10,1998 letter to Ironton Iron Inc. from Stephen Giles, Director of Portsmouth Local Air Agency)

**This limit represents the maximum capacity of the Line # 4 Tube Cutting Machine #2. Since this limit reflects the maximum throughput capacity of this source, no additional compliance determination is required.

1.e Emission Limitation:

0% opacity, as a six-minute average, from the baghouse stack.

Applicable Compliance Method:

Compliance shall be determined according to test method 9 as set forth in "Appendix on Test Methods" in 40 CFR Part 60.

1.f Emission Limitation:

20% Opacity, as a three minute average, from any building exhaust associated with Ferrous Casting Line #4.

Applicable Compliance Method:

40 CFR Part 60, Method 9, with opacity readings taken from any exit of the building.

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 #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>
Autopour Equipment & Emissions from Transfer into Autopour System	OAC Rule 3745-31-05(D) PTI #05-11350	Total Controlled PM emissions not to exceed 9.71 tons per rolling 12-months from Ferrous Casting Line #4 baghouse stack.
	OAC rule 3745-31-05(A)(3) PTI #05-11350	Total Controlled PM emissions not to exceed 2.22 lb per hr from Ferrous Casting Line #4 baghouse stack.
		0.004 gr./dscf from the baghouse stack.
		0% Opacity, as a six minute average, from the baghouse stack.
		Total Uncontrolled PM Emissions from Ferrous Casting Line #4 Autopour System not to exceed 0.27 tons per year.
		Total Uncontrolled PM Emissions from Ferrous Casting Line #4 Autopour System not to exceed 0.15 lb per hour.
		20% Opacity, as a three minute average, from any building exhaust associated with Ferrous Casting Line #4.
	OAC 3745-17-07 (A)(1)	Less stringent than OAC rule 3745-31-05
	OAC rule 3745-17-11(B)(1)	Less stringent than OAC rule 3745-31-05 (A)(3)

2. Additional Terms and Conditions

2.a Compliance with OAC rule 3745-31-05 shall be demonstrated by the following:

1. the use of hoods, fans, and other equipment to adequately enclose, contain, capture, vent and control PM dust by venting to a baghouse and
2. compliance with the limits in term A.I.1.

II. Operational Restrictions

1. The maximum throughput for Ferrous Casting Line #4 Autopour System shall not exceed 2.2 tons of iron per hour and 8268 tons of iron per rolling, 12- months.
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 each month.
 - b. The rolling, 12-month summation of the iron throughput.

(No hourly recordkeeping required. 1.1 tons of iron per hour represents the maximum designed capacity of the equipment.)

2. The permittee shall properly install, 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 installed, 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 which identify all exceedances of the rolling, 12-month iron throughput limitation.
2. The permittee shall submit deviation (excursion) reports that identify 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 range specified in term A. II. 2.

V. Testing Requirements

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

V. Testing Requirements (continued)

- 1.a** Emission Limitation:
 9.71 tons of Controlled PM per year, as a rolling 12-month summation from the baghouse stack for Ferrous Casting Line #4..

Applicable Compliance Method:

Compliance shall be assumed as long the 0.004 gr./dscf PM limit from the baghouse stack is met. This is based both on the operating requirements in term A.II. and the following calculation:

$$(MASER)(AOH)(CONV) = 9.71 \text{ tons of PM per year}$$

where

MASER = the maximum allowable stack emission rate (2.21 lbs PM/hr.)

AOH = the actual operating hours**

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

**Based on 8760 operating hours per year.

- 1.b** Emission Limitation:
 2.21 lbs of Controlled PM/hour from the baghouse stack for Ferrous Casting Line #4.

Compliance shall be assumed as long the both the 0.004 gr./dscf PM limit from the baghouse stack and 0% Opacity, as a six minute average, from the baghouse stack is met. This is based both on the operating requirements in term A.II. and the following calculation:

$$(BFR) \times (AV) \times (ST / BET) \times (BEP / SP) \times (BEF) \times (TI) \times (CONV) = 2.22 \text{ tons of PM per year}$$

where

BFR = Baghouse Flow Rate (65,000 acfm)

AV = the air variability factor (105%)

ST = Standard Temperature (530 Rankine)

BET = Baghouse Exit Temperature (560 Rankine
 (14.69b/in²))

BEP = Baghouse Exit Temperature

SP = Standard Pressure (14.69b/in²)

BEF = Baghouse Efficiency (0.004 grains/dscf)

TI = Time (60 minutes per hour)

CONV = conversion factor (1 lb = 7000 grains)

The permittee shall conduct, or have conducted, emission testing for the baghouse stack for Ferrous Casting Line #4 in accordance with the following requirements:

- a. The emission testing shall be conducted within 3 months after issuance of the permit and within 6 months prior to permit renewal
- b. The emissions testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulate.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Pollutant	Test Method	Location
Particulate	Method 5	40 CFR Part 60, Appendix A

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

V. Testing Requirements (continued)

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

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s).

1.c Emission Limitation:

0.27 tons of Uncontrolled PM emissions, as a rolling 12-month summation from Ferrous Casting Line #4 Autopour System.

Applicable Compliance Method:

Compliance shall be assumed as long as the maximum iron throughput rate per rolling 12-month summation is not exceeded. This is based on the recordkeeping requirements in term A.III. and the summation of the following calculations:

Holding

$$(MMR) \times (PMER) \times (CONV) \times (1-CAP) = 0.18 \text{ tons of PM per year}$$

where

MMR = the maximum metal rate (8268 tons per year)**

PMER=the PM Emission rate (0.86 lb PM/ton of metal)(SCC ID 3-04-003-03)

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

CAP = Control Device Capture Efficiency (95%)

Pouring

$$(MMR) \times (PMER) \times (CONV) \times (1-CAP) = 0.09 \text{ tons of PM per year}$$

where

MMR = the maximum metal rate (8268 tons per year)**

PMER=the PM Emission rate (2.06 lb PM/ton of metal)(SCC ID 3-04-003-20)

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

CAP = Control Device Capture Efficiency (99%)

**As long as the 12-month maximum iron throughput limitation in term A.II. is not exceeded, compliance with this limitation is demonstrated.

V. Testing Requirements (continued)

- 1.d** Emission Limitation
0.15 lbs of Uncontrolled PM emissions per hour as a summation from Ferrous Casting Line #4 Autopour System.

Applicable Compliance Method:

Compliance shall be assumed as long as the maximum iron throughput rate of 2.2 tons of iron per hour is not exceeded. This is based on both the record keeping requirements in term A.III. and the summation of the following calculations.

Holding

$$(MMR) \times (PMER) \times (1-CAP) = 0.1 \text{ lbs of PM per hour}$$

where

MMR = the maximum metal rate (2.2 ton iron/hour)**

PMER=the PM Emission rate (0.86 lb PM/ton of metal)(SCC ID 3-04-003-03)

CAP = Control Device Capture Efficiency (95%)

Pouring

$$(MMR) \times (PMER) \times (1-CAP) = 0.05 \text{ lbs of PM per hour}$$

where

MMR = the maximum metal rate (2.2 ton iron/hour)**

PMER=the PM Emission rate (2.06 lb PM/ton of metal)(SCC ID 3-04-003-20)

CAP = Control Device Capture Efficiency (99%)

**This limit represents the maximum capacity of the Line # 4 Autopour System. Since this limit reflects the maximum throughput capacity of this source, no additional compliance determination is required.

- 1.e** Emission Limitation:
0% opacity, as a six-minute average, from the baghouse stack.

Applicable Compliance Method:

Compliance shall be determined according to test method 9 as set forth in "Appendix on Test Methods" in 40 CFR Part 60.

- 1.f** Emission Limitation:
20% Opacity, as a three minute average, from any building exhaust associated with Ferrous Casting Line #4.

Applicable Compliance Method:

40 CFR Part 60, Method 9, with opacity readings taken from any exit of the building.

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: 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 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.	OAC rule 3745-31-05(A)(3) PTI #05-2421	4.54 lbs particulate emissions (PE)/hr and 13.62 tons PE/yr 10.0 lbs carbon monoxide (CO)/hr and 30.0 tons CO/yr 5.1 lbs nitrous oxides (NOx)/hr and 15.3 tons NOx/yr 19.2 lbs sulfur oxides (SOx)/hr and 57.6 tons SOx/yr Visible emissions shall not exceed 20% opacity, as a six-minute average, except as provided by rule 0.03 gr/dscf from the stack

<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 requirements established pursuant to this rule are equivalent to the requirements of OAC rule 3745-17-07(A)(1)
	OAC rule 3745-17-11(B)(1)	The emissions limitations specified by these rules are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05 (A)(3)
	OAC rule 3745-23-06(B)	The emissions limitations specified by these rules are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05 (A)(3)
	OAC rule 3745-18-06(D)(2)	The emissions limitations specified by these rules are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05 (A)(3)

2. Additional Terms and Conditions

- 2.a The particulate emissions 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.

II. Operational Restrictions

1. The pressure drop across the baghouses shall be maintained within the range of 1 to 15 inches of water while any emission unit controlled by the baghouses 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 baghouses are in operation.
2. 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.
3. The control of the fugitive emissions from the melting system shall be accomplished by employing a charge door which shall be open only when charging is occurring and by maintaining a sufficient draft across the charge door so as to minimize or eliminate fugitive emissions at all times.
4. The carbon monoxide gases generated during the operation of the grey iron cupola shall be burned at 1,300 degrees Fahrenheit 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 operating hours for each month.
 - b. The rolling , 12-month summation of the operating hours.
2. The permittee shall properly install, 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 installed, 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 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 3-hour blocks of time during which the average combustion temperature within the thermal incinerator, when the emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance
- (b) A log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify 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 range specified in term A. II. 1.
2. The permittee shall submit deviation (excursion) reports which identify all 3-hour blocks of time during which the average combustion temperature within the afterburner did not comply with the temperature limitation specified above.

V. Testing Requirements

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

V. Testing Requirements (continued)

- 1.a** Emission Limitation:
4.54 lbs PE/hr and 13.62 tons PE/year

Applicable Compliance Method:

Compliance shall be assumed as long the both the 0.030 gr./dscf PE limit from the baghouse stack and 20% Opacity, as a six minute average, from the baghouse stack is met. This is based both on the operating requirements in term A.II. and the following calculation:

$$\text{AHER} = (\text{BFR}) \times (\text{AV}) \times (\text{ST} / \text{BET}) \times (\text{BEP} / \text{SP}) \times (\text{BER}) \times (\text{TI}) \times (\text{CONV}) = 4.54 \text{ lbs PE/hr}$$

where

AHER = Allowable Hourly Emission Rate (4.54 lbs PE/hr)
acfm)

BFR = Baghouse Flow Rate (17,769

AV = the air variability factor (105%)

ST = Standard Temperature (530 Rankine)

BET = Baghouse Exit Temperature (560 Rankine)

BEP = Baghouse Exit Pressure (14.69 lb/in**2)

SP = Standard Pressure (14.69 lb/in**2)

BER = Baghouse Emission Rate (0.03 grains / dscf)

TI = Time (60 minutes per hour)

CONV = conversion factor (1 lb = 7000 grains)

AAER = AHER x AHPY x EF where:

AAER = Allowable Annual Emission Rate (13.62 tons PE / yr)

AHPY = Allowable Hours Per Year (6000 hours/yr)

CONV = 1 ton / 2000 lbs

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

- a. The emission testing shall be conducted within 3 months after issuance of the permit and within 6 months prior to permit renewal.
- b. The emissions testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulate, carbon monoxide, nitrous oxides, and sulfur oxides.

V. Testing Requirements (continued)

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

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

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

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s).

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

Pollutant	Test Method	Location
SO ₂	Method 6	40 CFR Part 60, Appendix A
NO _x	Method 7	40 CFR Part 60, Appendix A
CO	Method 10	40 CFR Part 60, Appendix A
Particulates	Method 5	40 CFR Part 60, Appendix A

1.b Emission Limitation:
20% opacity, as a six-minute average, from the baghouse stack.

Applicable Compliance Method:

Compliance shall be determined through visible emission observations performed in accordance with 40CFR, Part 60, Appendix A, Method 9.

V. Testing Requirements (continued)

1.c Emission Limitation:

5.1 lbs NOx/hr

Compliance shall be assumed based on the following calculation:

$$\text{AER} = (\text{EF}) \times (\text{MPWR}) = 5.1 \text{ lbs NOx/hr}$$

where

AER= the allowable emission rate (5.1 lbs NOx/hr)

EF= the emission factor (0.225 lb NOx/ ton of iron melted)

MPWR= the maximum process weight rate (22.6 tons of iron melted / hr)

1.d Emission Limitation:

15.3 tons nitrous oxides NOx/yr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$\text{AAER} = (\text{AER}) \times (\text{MHPY}) \times (\text{CONV}) = 15.3 \text{ tons NOx/yr}$$

where

AAER= the annual allowable emission rate (15.3 tons NOx/yr)

AER= the allowable emission rate (5.1 lbs NOx /hr)

MHPY= the maximum hours per year (6,000 hrs/yr)

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

1.e Emission Limitation:

19.2 lbs SOx/hr

Compliance shall be assumed based on the following calculation:

$$\text{AER} = (\text{EF}) \times (\text{MPWR}) = 19.2 \text{ lbs SOx/hr}$$

where

AER= the allowable emission rate (19.2 lbs SOx/hr)

EF= the emission factor (0.849 lb SOx/ ton of iron melted)

MPWR= the maximum process weight rate (22.6 tons of iron melted / hr)

V. Testing Requirements (continued)

1.f Emission Limitation:

57.6 tons sulfur oxides SO_x/yr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$AAER = (AER) \times (MHPY) \times (CONV) = 57.6 \text{ tons SO}_x/\text{yr}$$

where

AAER= the annual allowable emission rate (57.6 tons SO_x/yr)

AER= the allowable emission rate (19.2 lbs SO_x /hr)

MHPY= the maximum hours per year (6,000 hrs/yr)

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

1.g Emission Limitation:

10.0 lbs CO/hr

Compliance shall be assumed based on the following calculation:

$$AER = (EF) \times (MPWR) = 10.0 \text{ lbs CO/hr}$$

where

AER= the allowable emission rate (10.0 lbs CO/hr)

EF= the emission factor (0.442 lb CO/ ton of iron melted)

MPWR= the maximum process weight rate (22.6 tons of iron melted / hr)

1.h Emission Limitation:

30.0 tons sulfur oxides CO/yr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$AAER = (AER) \times (MHPY) \times (CONV) = 30.0 \text{ tons CO/yr}$$

where

AAER= the annual allowable emission rate (30.0 tons CO/yr)

AER= the allowable emission rate (10.0 lbs CO/hr)

MHPY= the maximum hours per year (6,000 hrs/yr)

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

Facility Name: **Honda of America Mfg., Inc. Anna Engine Plant**
Facility ID: **05-75-00-0174**
Emissions Unit: **Foundry Melting System (P901)**

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 w/automatic pouring unit and electric furnace	OAC rule 3745-31-05(A)(3) PTI #05-08921	2.47 lbs particulate emissions (PE)/hr and 7.4 tons PE/yr 0.36 lb sulfur dioxide(SO ₂)/hr and 1.08 tons/yr 0.18 lb nitrous oxides (NO _x)/hr and 0.54 ton/yr 2.53 lbs volatile organic compounds (VOC)/hr and 7.59 tons/yr negligible carbon monoxide emissions (CO) Visible emissions from the stack shall not exceed 0% opacity
	OAC rule 3745-17-07(A)(1)	0.01 gr/dscf from the stack The emissions limitations specified by these rules are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05
	OAC rule 3745-17-11(B)(1)	The emissions limitations specified by these rules are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05
	OAC rule 3745-21-07	The emissions limitations specified by these rules are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
	OAC rule 3745-23-06(B)	The emissions limitations specified by these rules are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05
	OAC rule 3745-18-06(D)(2)	The emissions limitations specified by these rules are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05

2. Additional Terms and Conditions

- 2.a The particulate emissions from the Mold Pouring and Cooling Line #1 (P902) shall be hooded (95% designed control efficiency) and vented to baghouse(s) with a designed control efficiency of 99+% or an emission rate less than or equal to 0.01 gr/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 per 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 month.
 - b. The rolling , 12-month summation of the operating hours.
2. The permittee shall properly install, 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 installed, 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 emission unit was in operation and the pressure drop across the baghouse did not comply with the allowable range specified in term A. II. 1.

V. Testing Requirements

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

V. Testing Requirements (continued)

1.a Emission Limitation:
2.47 lbs particulate emissions (PE)/hr and 7.4 tons PE/yr

Applicable Compliance Method:

Compliance shall be assumed as long the both the 0.010 gr./dscf PE limit from the baghouse stack and 0% Opacity, as a six minute average, from the baghouse stack is met. This is based both on the operating requirements in term A.II. and the following calculation:

$$(BFR) \times (AV) \times (ST / BET) \times (BEP / SP) \times (BEF) \times (TI) \times (CONV) = 7.4 \text{ tons of PE per year}$$

where

- BFR = Baghouse Flow Rate (25,385 acfm)
- AV = the air variability factor (105%)
- ST = Standard Temperature (530 Rankine)
- BET = Baghouse Exit Temperature (560 Rankine)
- BEP = Baghouse Exit Temperature (14.69b/in²)
- SP = Standard Pressure (14.69b/in²)
- BEF = Baghouse Efficiency (0.010 grains/dscf)
- TI = Time (60 minutes per hour)
- CONV = conversion factor (1 lb = 7000 grains)

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

- a. The emission testing shall be conducted within 3 months after issuance of the permit and within 6 months prior to permit renewal.
- b. The emissions testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulate.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Pollutant	Test Method	Location
Particulate	Method 5	40 CFR Part 60, Appendix A

1.b Emission Limitation:
0% opacity, as a six-minute average, from the baghouse stack.

Applicable Compliance Method:

Compliance shall be determined through visible emission observations performed in accordance with 40CFR, Part 60, Appendix A, Method 9.

V. Testing Requirements (continued)

1.c Emission Limitation:

0.36 lb SO_x/hr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$\text{AER} = (\text{EF}) \times (\text{MPWR}) \times (\text{CONV}) = 0.36 \text{ lb SO}_x/\text{hr}$$

where

AER= the allowable emission rate (0.36 lbs SO_x/hr)

EF= the emission factor (0.2 lb SO_x/ton grey iron poured, from SCC 3-04-003-20)

MPWR= the maximum process weight rate (36,000 lbs grey iron poured/hr)

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

1.d Emission Limitation:

1.08 tons sulfur dioxide SO_x/yr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$\text{AAER} = (\text{AER}) \times (\text{MHPY}) \times (\text{CONV}) = 1.08 \text{ tons SO}_2/\text{yr}$$

where

AAER= the annual allowable emission rate (1.08 tons SO₂/yr)

AER= the allowable emission rate (0.36 lbs SO_x /hr)

MHPY= the maximum hours per year (6,000 hrs/yr)

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

V. Testing Requirements (continued)

1.e Emission Limitation:

0.18 lb nitrous oxides (NOx)/hr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$\text{AER} = (\text{EF}) \times (\text{MPWR}) \times (\text{CONV}) = 0.18 \text{ lb NOx/hr}$$

where

AER= the allowable emission rate (0.18 lb/hr)

EF= the emission factor (0.01 lb NOx/ton grey iron poured , SCC 3-04-003-20

MPWR= the maximum process weight rate (38,016 lbs grey iron poured/hr)

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

1.f Emission Limitation:

0.54 ton NOx/yr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$\text{AAER} = (\text{AER}) \times (\text{MHPY}) \times (\text{CONV}) = 0.54 \text{ ton NOx/yr}$$

where

AAER= the annual allowable emission rate (0.54ton NOx/yr)

AER= the allowable emission rate (0.18 lb NOx /hr)

MHPY= the maximum hours per year (6,000 hrs/yr)

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

V. Testing Requirements (continued)

1.g Emission Limitation:

2.53 lbs VOC/hr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$\text{AER} = (\text{EF}) \times (\text{MPWR}) \times (\text{CONV}) = 2.53 \text{ lbs/hr}$$

where

AER= the allowable emission rate (2.53 lb/hr)

EF= the emission factor (0.14 lb/ton grey iron poured , SCC 3-04-003-20

MPWR= the maximum process weight rate (38,016 lbs grey iron poured/hr)

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

1.h Emission Limitation:

7.59 tons VOC/yr

Applicable Compliance Method:

Compliance shall be assumed based on the following calculation:

$$\text{AAER} = (\text{AER}) \times (\text{MHPY}) \times (\text{CONV}) = 7.59 \text{ tons VOC/yr}$$

where

AAER= the annual allowable emission rate (7.59 tons VOC/yr)

AER= the allowable emission rate (2.53 lbs VOC /hr)

MHPY= the maximum hours per year (6,000 hrs/yr)

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

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

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>
mold pouring and cooling line #2 w/transfer ladle, electric pouring unit, and cooling conveyor	OAC rule 3745-31-05(A)(3) PTI #05-6208	4.54 lbs particulate emissions (PE)/hr and 10.22 tons PE/yr Visible emissions from the stack shall not exceed 0% opacity 0.01 gr/dscf from the stack
	OAC rule 3745-17-07(A)(1)	The emissions limitations specified by these rules are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05 (A)(3)
	OAC rule 3745-17-11(B)(1)	The emissions limitations specified by these rules are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05 (A)(3)

2. Additional Terms and Conditions

- 2.a The particulate emissions from this emissions unit shall be controlled by venting 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 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.

II. Operational Restrictions (continued)

2. 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.

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 month.
 - b. The rolling , 12-month summation of the operating hours.
2. The permittee shall properly install, 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 installed, 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 emission unit was in operation and the pressure drop across the baghouse did not comply with the allowable range specified in term A. II. 1.

V. Testing Requirements

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

V. Testing Requirements (continued)

1.a Emission Limitation:
 4.54 lbs PE/hr and 10.22 tons PE/year

Applicable Compliance Method:

Compliance shall be assumed as long the both the 0.010 gr./dscf PE limit from the baghouse stack and 0% Opacity, as a six minute average, from the baghouse stack is met. This is based both on the operating requirements in term A.II. and the following calculation:

$$(BFR) \times (AV) \times (ST / BET) \times (BEP / SP) \times (BER) \times (TI) \times (CONV) = 17.31 \text{ tons of PE per year}$$

where

- BFR = Baghouse Flow Rate (46,642 acfm)
- AV = the air variability factor (105%)
- ST = Standard Temperature (530 Rankine)
- BET = Baghouse Exit Temperature (560 Rankine)
- BEP = Baghouse Exit Temperature (14.69b/in2)
- SP = Standard Pressure (14.69b/in2)
- BER = Baghouse Emission Rate (0.01 grains/dscf)
- TI = Time (60 minutes per hour)
- CONV = conversion factor (1 lb = 7000 grains)

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

- a. The emission testing shall be conducted within 3 months after issuance of the permit and within 6 months prior to permit renewal.
- b. The emissions testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulate.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Pollutant	Test Method	Location
Particulate	Method 5	40 CFR Part 60, Appendix A

V. Testing Requirements (continued)

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

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

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s).

Compliance with the annual PE emission limitation shall be assumed as long as compliance with the hourly gr/dscf limitation (0.010 gr/dscf) is maintained.

- 1.b** Emission Limitation:
0% opacity, as a six-minute average, from the baghouse stack.

Applicable Compliance Method:

Compliance shall be determined through visible emission observations performed in accordance with 40CFR, 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: 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 and venting to a baghouse	OAC 3745-31-05(D) (PTI 05-10137)	8.64 tons of PM*-10/yr., as a rolling 12-month summation; see term A.II.2.
	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 3745-17-07(B)(1)	The visible fugitive PE requirements established pursuant to this rule are equivalent to the requirements of OAC rule 3745-17-07(B)(1)
	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)

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
	OAC rule 3745-31-05(A)(3) PTI #05-10137	2.88 lbs. PM*PM10/hour from the stack 0.79 lbs. PM*/hr. From the fugitive dust source 0.010 gr./dscf 0% opacity, as a six minute average, from the stack *PM emissions are assumed to be all PM-10 emissions 20% opacity, as a three minute average, from the fugitive dust source

2. Additional Terms and Conditions

- 2.a** Compliance with OAC rule 3745-31-05 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 and compliance with the limits in term A.I.1.
- 2.b** Compliance with the emission limits from OAC rule 3745-17-07(B)(1) shall satisfy the BAT requirement of OAC rule 3745-31-05.

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.

This is an existing source and the applicant has historical data demonstrating compliance with the rolling 12-month summation of 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:
 - a. The operating hours for each month.
 - b. The rolling , 12-month summation of the operating hours.
- 2. The permittee shall properly install, 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 installed, calibrated, and maintained in accordance with the manufacture'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 deviation reports shall be submitted in accordance with paragraph A.I.e.ii of the General Terms and Conditions of this permit.
2. The permittee shall submit pressure drop deviation (excursion) reports that identify all periods of time during which this emission unit was in operation and the pressure drop across the baghouse did not comply with the allowable range specified in the permit.
3. These reports, as denoted in terms A.IV.1. and 2., are due by the date described in Part 1 - General Terms and Conditions of the permit under section (A)(1).

V. Testing Requirements

1. Compliance with the emission limitation(s) specified in section A.I.1 shall be determined in accordance with the following method(s):

1.a Emission Limitation:

8.64 tons of PE*/PM-10 per year, as a rolling 12-month summation

Applicable Compliance Method:

Compliance with the 8.64 tons of PE*/PM-10 per rolling limitation shall be assumed as long as the 6,000 hours per rolling 12-month summation is met. This is based both on the recordkeeping requirements in term A.III. and may be determined by the following methodology:

$$(\text{MASER}) \times (\text{AOH}) \times (\text{CONV}) = 8.64 \text{ tons of PE}^*/\text{PM-10}/\text{yr}$$

where:

MASER = the maximum allowable stack emission rate (2.88 lbs of PE*/hr)

AOH = the actual operating hours **

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

* PE emissions are assumed to be all PM-10 emissions.

** As long as the 12-month hours of operation limitation in term A.II. is met, compliance with this limitation is demonstrated.

V. Testing Requirements (continued)

- 1.b** The permittee shall conduct, or have conducted, emission testing for the baghouse(s) in accordance with the following requirements:
- a. The emission testing shall be conducted within 3 months after issuance of the permit and within 6 months prior to permit renewal.
 - b. The emissions testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulate.
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Pollutant	Test Method	Location
Particulate	Methods 1-4, and 5	40 CFR Part 60, Appendix A

- 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(s) 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).

Compliance with the 2.88 lbs. PE/hr emission limitation shall be assumed as long as the 0.01 gr PE/dscf emission limitation is met.

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

1.c Emission Limitation:

Visible particulate emissions from the stack shall not exceed 0% opacity, as a six-minute average.

Applicable Compliance Method:

Compliance shall be determined according to test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR Part 60.

1.d Emission Limitation:

20% opacity, as a three-minute average, from the fugitive dust source.

Applicable Compliance Method:

40 CFR Part 60, Method 9, with readings taken from any exit of the building.

V. Testing Requirements (continued)

1.e Emission Limitation:

0.79 lb of PE/hr of fugitive emissions

Applicable Compliance Method:

Based upon the following calculation supplied by the permittee:

$$\text{FPER} = (\text{MPWR}) \times (\text{EF}) \times (1 - \text{CAP}) = 0.79 \text{ lb of PE/hr}$$

where:

FPER= the fugitive process emission rate (0.79 lb PE/hr)

MPWR= the maximum process weight rate (33,000 lbs of metal poured/hr, based upon the maximum design capacity of the equipment)

EF=the emission factor (0.48 lb of PE/ton of metal poured, estimated by Honda)

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

CAP = Control Device Capture Efficiency (1.0-0.01)

1.f Emission Limitation:

2.37 tons of PE/yr, as a rolling 12-month summation of fugitive emissions

Applicable Compliance Method:

Compliance with the 2.37 tons of PE per rolling limitation shall be assumed as long as the 6,000 hours per rolling 12-month summation is met. This is based both on the recordkeeping requirements in term A.III. and may be determined by the following methodology:

$$(\text{MAFER})(\text{AOH})(\text{CONV}) = 2.37 \text{ tons of PE/yr}$$

where:

MAFER=the maximum allowable fugitive emission rate (0.79 lb of PE/hr.)

AOH = the actual operating hours** (6,000 hours/ year)

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

** As long as the 12-month hours of operation limitation in term A.II. is met, compliance with this limitation is demonstrated.

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>
holding furnace & transit ladle system #2	OAC 3745-31-05(D)	8.64 tons PM*-10/yr., as a rolling 12-month summation; see term A.II.2.
	OAC rule 3745-17-07(A)(1)	
	OAC rule 3745-17-07(B)(1)	
	OAC rule 3745-17-11(B)(1)	Less stringent than OAC rule 3745-31-05
	OAC rule 3745-31-05(A)(3)	Less stringent than OAC rule 3745-31-05
		2.09 2.88 lbs. PM*PM10/hour from the stack
		0.79 lbs. PM*/hr. From the fugitive dust source
		0.010 gr./dscf
		0% opacity, as a six minute average, from the stack
		*PM emissions are assumed to be all PM-10 emissions
		20% opacity, as a three minute average, from the fugitive dust source

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

Facility Name: **Honda of America Mfg., Inc. Anna Engine Plant**
Facility ID: **05-75-00-0174**
Emissions Unit: **Holding Furnace No. 2 and Transit Ladle System (P90**

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

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 castings line 3 melting system	OAC rule 3745-31-05(A)(3) PTI #05-7140	0.088 lb particulate emissions (PE)/hr and 0.385 ton PE/yr
		0.00036 lb lead (Pb)/hr and 0.00158 ton Pb/yr
		Visible emissions from the stack shall not exceed 0% opacity
	OAC rule 3745-17-07(A)(1)	0.001 gr/acf from the stack
	OAC rule 3745-17-11(B)(1)	The emissions limitations specified by these rules are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05 (A)(3)

2. Additional Terms and Conditions

- 2.a The particulate emissions from this emissions unit shall be controlled by hooding and venting the emissions to a baghouse.

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 2 to 10 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 install, 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 installed, 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 emission unit was in operation and the pressure drop across the baghouse did not comply with the allowable range specified in term A. II. 1.

V. Testing Requirements

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

- 1.a Emission Limitation:
0.088 lbs particulate emissions (PE)/hr and 0.385 ton PE/yr

Applicable Compliance Method:

Compliance shall be assumed as long the both the 0.001 gr./acf PE limit from the baghouse stack and 0% Opacity, as a six minute average, from the baghouse stack is met. This is based both on the operating requirements in term A.II. and the following calculation:

$$(BFR) \times (AV) \times (BER) \times (TI) \times (CONV) = 0.385 \text{ ton PE/yr}$$

where

- BFR = Baghouse Flow Rate (10,320 acfm)
- AV = the air variability factor (105%)
- BER = Baghouse Emission Rate (0.001 grains/acf)
- TI = Time (60 minutes per hour)
- CONV = conversion factor (1 lb = 7000 grains)

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

- a. The emission testing shall be conducted within 3 months after issuance of the permit and within 6 months prior to permit renewal.
- b. The emissions testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulate and lead.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Pollutant	Test Method	Location
Particulate	Method 5	40 CFR Part 60, Appendix A
Lead	Method12	

V. Testing Requirements (continued)

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

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

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s).

- 1.b** Emission Limitation:
0% opacity, as a six-minute average, from the baghouse stack.

Applicable Compliance Method:

Compliance shall be determined according to test method 9 as set forth in "Appendix on Test Methods" in 40 CFR Part 60.

- 1.c** Emission Limitation:
0.00033 lb lead (Pb)/hr and 0.00158 ton Pb/yr

Applicable Compliance Method:

Compliance shall be assumed as long as both the 0.001 gr./acf PE limit from the baghouse stack and 0% Opacity, as a six minute average, from the baghouse stack is met. This is based both on the operating requirements in term A.II. and the following calculation:

$$(BFR) \times (AV) \times (BEF) \times (TI) \times (CONV) = 0.385 \text{ ton PE/yr}$$

where

BFR = Baghouse Flow Rate (10,320 acfm)

AV = the air variability factor (105%)

BEF = Baghouse Efficiency (0.001 grains/acf)

TI = Time (60 minutes per hour)

CONV = conversion factor (1 lb = 7000 grains)

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 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 casting line 3 casting system	OAC rule 3745-31-05(A)(3) PTI #05-7140	0.155 lb particulate emissions (PE)/hr and 0.679 ton PE/yr Visible emissions from the stack shall not exceed 0% opacity 0.001 gr/acf from the stack
	OAC rule 3745-17-07(A)(1)	The emissions limitations specified by these rules are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05 (A)(3)
	OAC rule 3745-17-11(B)(1)	The emissions limitations specified by these rules are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05 (A)(3)

2. Additional Terms and Conditions

- 2.a** The particulate emissions from this emissions unit shall be controlled by hooding and venting the emissions to a baghouse.

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 2 to 10 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 install, 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 installed, 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 emission unit was in operation and the pressure drop across the baghouse did not comply with the allowable range specified in term A. II. 2.

V. Testing Requirements

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

V. Testing Requirements (continued)

- 1.a** Emission Limitation:
0.155 lbs particulate emissions (PE)/hr and 0.679 ton PE/yr

Applicable Compliance Method:

Compliance shall be assumed as long the both the 0.001 gr./acf PE limit from the baghouse stack and 0% Opacity, as a six minute average, from the baghouse stack is met. This is based both on the operating requirements in term A.II. and the following calculation:

$$(BFR) \times (AV) \times (BEF) \times (TI) \times (CONV) = 0.679 \text{ ton PE/yr}$$

where

BFR = Baghouse Flow Rate (18,200 acfm)

AV = the air variability factor (105%)

BEF = Baghouse Efficiency (0.001 grains/acf)

TI = Time (60 minutes per hour)

CONV = conversion factor (1 lb = 7000 grains)

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

- a. The emission testing shall be conducted within 3 months after issuance of the permit and within 6 months prior to permit renewal
- b. The emissions testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulate and lead.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Pollutant	Test Method	Location
Particulate	Method 5	40 CFR Part 60, Appendix A

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

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

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s).

V. Testing Requirements (continued)

- 1.b** Emission Limitation:
0% opacity, as a six-minute average, from the baghouse stack.

Applicable Compliance Method:

Compliance shall be determined according to test method 9 as set forth in "Appendix on Test Methods" in 40 CFR Part 60.

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: 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	OAC rule 3745-31-05(A)(3) PTI #05-8004	0.24 lb particulate emissions (PE)/hr and 1.05 ton PE/yr Visible emissions from the stack shall not exceed 20% opacity 0.01 gr/dscf from the stack
	OAC rule 3745-17-07(A)(1)	The requirements established pursuant to this rule are equivalent to the requirements of OAC rule 3745-17-07 (A) (1)
	OAC rule 3745-17-11(B)(1)	The emissions limitations specified by these rules are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05 (A)(3)

2. Additional Terms and Conditions

- 2.a** The particulate emissions from this emissions unit shall be controlled by hooding and venting 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 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 install, 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 installed, 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 emission unit was in operation and the pressure drop across the baghouse did not comply with the allowable range specified in term A. II. 1.

V. Testing Requirements

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

V. Testing Requirements (continued)

- 1.a** Emission Limitation:
0.24 lbs particulate emissions (PE)/hr and 1.05 tons PE/yr

Applicable Compliance Method:

Compliance shall be assumed as long the both the 0.01 gr./dscf PE limit from the baghouse stack and 20% Opacity, as a six minute average, from the baghouse stack is met. This is based both on the operating requirements in term A.II. and the following calculation:

$$(BFR) \times (AV) \times (BEF) \times (TI) \times (CONV) = 0.24 \text{ lb PE/hr}$$

where

BFR = Baghouse Flow Rate (2,467 acfm)

AV = the air variability factor (105%)

BEF = Baghouse Efficiency (0.01 grains/dscf)

TI = Time (60 minutes per hour)

CONV = conversion factor (1 lb = 7000 grains)

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

- a. The emission testing shall be conducted within 3 months after issuance of the permit and within 6 months prior to permit renewal.
- b. The emissions testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulate.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Pollutant	Test Method	Location
Particulate	Method 5	40 CFR Part 60, Appendix A

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

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

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s).

V. Testing Requirements (continued)

- 1.b** Emission Limitation:
20% opacity, as a six-minute average, from the baghouse stack.

Applicable Compliance Method:

Compliance shall be determined according to test method 9 as set forth in "Appendix on Test Methods" in 40 CFR Part 60.

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: Cupola Material Preparation and Handling (Z001)

Activity Description: Cupola Material Preparation and Handling

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>
cupola material preparation and handling w/28 metric-ton-capacity electric induction holding furnace with one (1) metric-ton-capacity transit ladle		

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

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>
P910 - holding furnace and transit ladle system line 1	OAC rule 3745-31-05(D)	11.92 tons PE (stack and fugitive)/yr.*; as a rolling, 12-month summation; see term A.II.1.
	OAC rule 3745-31-05(A) (3)	3.18 lbs. PE/hour* from the stack
		0.792 lbs. PE/hour* from the fugitive dust source
		9.54 tons PE/year from the stack
		2.376 tons PE/year from the fugitive dust source
		0.010 gr./dscf
		0% opacity, as a six minute average, from the stack
	OAC rule 3745-17-11	20% opacity, as a three minute average, from the fugitive dust source
		*PE emissions are assumed to be all PM-10 emissions
	OAC rule 3745-17-07(A)(1)	The emissions limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
The emissions limitation specified by this rule is less stringent than the emission 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 3745-17-07(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 shall be demonstrated by the use of hooding and venting to a baghouse(s) and compliance with the limits in term A.I.1.

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.

This is an existing source and the applicant has historical data demonstrating compliance with the rolling 12-month summation of 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:
- a. The operating hours for each month.
 - b. The rolling , 12-month summation of the operating hours.
2. The permittee shall properly install, 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 installed, 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 which identify all exceedances of the rolling, 12-month operating hours limitation excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.
2. The permittee shall submit pressure drop deviation (excursion) reports that identify 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 range specified in the permit.
3. These reports, as denoted in terms A.IV.1. and 2., are due by the date described in Part 1- General Terms and Conditions of the permit under section (A) (1).

V. Testing Requirements

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

1.a Emission Limitation:
1.91 lbs PE/hr and 4.30 tons PE/year

Applicable Compliance Method:

Compliance shall be assumed as long the both the 0.010 gr./dscf PE limit from the baghouse stack and 0% Opacity, as a six minute average, from the baghouse stack is met. This is based both on the operating requirements in term A.II. and the following calculation:

$$(BFR) \times (AV) \times (ST / BET) \times (BEP / SP) \times (BER) \times (TI) \times (CONV) = 4.30 \text{ tons of PE per year}$$

where

BFR = Baghouse Flow Rate (65,000 acfm)

AV = the air variability factor (105%)

ST = Standard Temperature (530 Rankine)

BET = Baghouse Exit Temperature (560 Rankine)

BEP = Baghouse Exit Temperature (14.69b/in²)

SP = Standard Pressure (14.69b/in²)

BER = Baghouse Emission Rate (0.010 grains/dscf)

TI = Time (60 minutes per hour)

CONV = conversion factor (1 lb = 7000 grains)

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

- a. The emission testing shall be conducted approximately 2.5 years after permit issuance and within 6 months prior to permit renewal.
- b. The emissions testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulate.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Location	Pollutant	Test Method
40 CFR Part 60, Appendix A	Particulate	Method 5

V. Testing Requirements (continued)

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

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

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s).

Compliance with the annual PE emission limitation shall be assumed as long as compliance with the hourly gr/dscf limitation (0.010 gr/dscf) is maintained.

- 1.b** Emission Limitation:
0% opacity, as a six-minute average, from the baghouse stack.

Applicable Compliance Method:

Compliance shall be determined through visible emission observations performed in accordance with 40CFR, Part 60, Appendix A, Method 9.

- 1.c** Compliance with the 11.92 tons of PE* per rolling limitation shall be assumed as long as the 6,000 hours per rolling 12-month summation is met. This is based both on the record keeping requirements in term A.III. and the following calculation:

$$(\text{MASER})(\text{AOH})(\text{CONV})+(\text{MAFER})(\text{AOH})(\text{CONV}) = 11.92 \text{ tons of PE* per year}$$

where

MASER = the maximum allowable stack emission rate (3.18 lbs PE*/hr.)

MAFER = the maximum allowable fugitive emission rate (0.792 lbs PE*/hr.)

AOH = the actual operating hours**

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

* PE emissions are assumed to be all PM-10 emissions.

** As long as the 12-month hours of operation limitation in term A.II. is met, compliance with this limitation is demonstrated.

- 1.d** Emission Limitation:

20% opacity, as a three-minute average, from the fugitive dust source

Applicable Compliance Method:

40 CFR Part 60, Method 9, with opacity readings taken from any exit of the building.

V. Testing Requirements (continued)

1.e Emission Limitation:

0.792 lbs. PE/hr of fugitive emissions

Applicable Compliance Method:

$(MPWR) (CONV) (EF) (1 - CEF) = 0.792 \text{ lbs. PE/hr}$

Where:

MPWR = maximum process weight rate (33,000 lbs./hour)

CONV = conversion factor (1 ton/2000 pounds)

EF = emission factor (0.48 lbs. PE/ton)

CEF = capture efficiency (0.9)

1.f Emission Limitation:

2.376 tons of PE per year of fugitive emissions

Applicable Compliance Method:

$(MAER)(MAH)(CONV) = 2.376 \text{ tons of PE per year of fugitive emissions}$

where

MAER= the maximum allowable emission rate (0.792 lb. PE/hr.-fugitive)

MAH= the maximum annual hours of operation (6,000 hrs./yr.)

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

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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