



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

01/08/03

CERTIFIED MAIL

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

02-85-01-0001
The Quality Castings Company
Steve Steiner
1200 North Main Street
Orrville, OH 44667-0058

Dear Steve Steiner:

Enclosed is the Ohio EPA Preliminary Proposed Title V permit that was issued in draft form on (not issued). The comment period for the Draft permit has ended. We are now ready to submit this permit to USEPA for approval.

We are submitting this for your review and comment. If you do not agree with the Preliminary Proposed Title V permit as written, you now have the opportunity to raise your concerns. **Please submit, in writing, any comments you may have within fourteen (14) days from your receipt of this letter to:**

Ohio Environmental Protection Agency
Jim Orlemann, Manager, Engineering Section
Division of Air Pollution Control
P.O.Box 1049
Columbus, OH 43216-1049

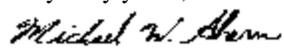
and

Northeast District Office
2110 East Aurora Road
Twinsburg, OH 44087
(330) 425-9171

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

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

Very truly yours,


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

cc: Northeast District Office
File, DAPC PMU



State of Ohio Environmental Protection Agency

PRELIMINARY PROPOSED TITLE V PERMIT

Issue Date: 01/08/03

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: 02-85-01-0001 to:
The Quality Castings Company
1200 North Main Street
Orrville, OH 44667-0058

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 Description. Rows include units F002 through F027 and P029 through P903, detailing various industrial processes like scrap reclaiming, sand handling, and core making.

You will be contacted approximately eighteen (18) months prior to the expiration date regarding the renewal of this permit. If you are not contacted, please contact the appropriate Ohio EPA District Office or local air agency listed below. This permit and the authorization to operate the air contaminant sources (emissions units) at this facility shall expire at midnight on the expiration date shown above. If a renewal permit is not issued prior to the expiration date, the permittee may continue to operate pursuant to OAC rule 3745-77-04(A) and in accordance with the terms of this permit beyond the expiration date, provided that a complete renewal application is submitted no earlier than eighteen (18) months and no later than one-hundred eighty (180) days prior to the expiration date.

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

Northeast District Office
2110 East Aurora Road
Twinsburg, OH 44087
(330) 425-9171

OHIO ENVIRONMENTAL PROTECTION AGENCY

Christopher Jones
Director

PART I - GENERAL TERMS AND CONDITIONS

A. State and Federally Enforceable Section

1. Monitoring and Related Record Keeping and Reporting Requirements

- a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
 - i. The date, place (as defined in the permit), and time of sampling or measurements.
 - ii. The date(s) analyses were performed.
 - iii. The company or entity that performed the analyses.
 - iv. The analytical techniques or methods used.
 - v. The results of such analyses.
 - vi. The operating conditions existing at the time of sampling or measurement.
(Authority for term: OAC rule 3745-77-07(A)(3)(b)(i))
- b. Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
(Authority for term: OAC rule 3745-77-07(A)(3)(b)(ii))
- c. The permittee shall submit required reports in the following manner:
 - i. Reports of any required monitoring and/or record keeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
(Authority for term: OAC rule 3745-77-07(A)(3)(c))
 - ii. **All reporting required in accordance with the OAC rule 3745-77-07(A)(3)(c) with respect to emission limitations, operational restrictions, and control device operating parameter limitations shall be submitted in the following manner:**
 - (a) Written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations ; (ii) the probable cause of such deviations; and (iii) any corrective actions or preventive measures taken, shall be promptly made to the appropriate Ohio EPA District Office or local air agency. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, i.e., in Part III of this Title V permit, the written reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year, and shall cover the previous calendar quarters. In identifying each deviation, the permittee shall specify the applicable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. These written reports shall satisfy the requirements (in part) of OAC rule 3745-77-07(A)(3)(c)(i) and (ii) pertaining to the submission of monitoring reports every six

months and the requirements (in part) of OAC rule 3745-77-07(A)(3)(c)(iii) pertaining to the prompt reporting of all deviations. See B.6 below if no deviations occurred during the quarter.

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

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

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

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

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

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

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

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

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

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

2. Scheduled Maintenance/Malfunction Reporting

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

3. Risk Management Plans

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

4. Title IV Provisions

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

5. Severability Clause

A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.
(Authority for term: OAC rule 3745-77-07(A)(6))

6. General Requirements

- a. The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and reissuance, or modification, or for denial of a permit renewal application.
- b. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.
- c. This permit may be modified, reopened, revoked, or revoked and reissued, for cause, in accordance with A.10 below. The filing of a request by the permittee for a permit modification, revocation and

reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.

- d. This permit does not convey any property rights of any sort, or any exclusive privilege.
- e. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

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

7. Fees

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

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

8. Marketable Permit Programs

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

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

9. Reasonably Anticipated Operating Scenarios

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

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

10. Reopening for Cause

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

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

- b. This permit is issued to an affected source under the acid rain program and additional requirements (including excess emissions requirements) become applicable. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the permit, and shall not require a reopening of this permit.
- c. The Director of the Ohio EPA or the Administrator of the U.S. EPA determines that the federally applicable requirements in this permit are based on a material mistake, or that inaccurate statements were made in establishing the emissions standards or other terms and conditions of this permit related to such federally applicable requirements.
- d. The Administrator of the U.S. EPA or the Director of the Ohio EPA determines that this permit must be revised or revoked to assure compliance with the applicable requirements.

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

11. Federal and State Enforceability

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

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

12. Compliance Requirements

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

- c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually, or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
 - i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
 - ii. An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

- d. Compliance certifications concerning the terms and conditions contained in this permit that are federally enforceable emission limitations, standards, or work practices, shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) and the Administrator of the U.S. EPA in the following manner and with the following content:
 - i. Compliance certifications shall be submitted annually on a calendar year basis. The annual certification shall be submitted on or before April 30th of each year during the permit term.
 - ii. Compliance certifications shall include the following:
 - (a) An identification of each term or condition of this permit that is the basis of the certification.
 - (b) The permittee's current compliance status.
 - (c) Whether compliance was continuous or intermittent.
 - (d) The method(s) used for determining the compliance status of the source currently and over the required reporting period.
 - (e) Such other facts as the Director of the Ohio EPA may require in the permit to determine the compliance status of the source.
 - iii. Compliance certifications shall contain such additional requirements as may be specified pursuant to sections 114(a)(3) and 504(b) of the Act.

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

13. Permit Shield

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

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

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

14. Operational Flexibility

The permittee is authorized to make the changes identified in OAC rule 3745-77-07(H)(1)(a) to (H)(1)(c) within the permitted stationary source without obtaining a permit revision, if such change is not a modification

under any provision of Title I of the Act [as defined in OAC rule 3745-77-01(JJ)], and does not result in an exceedance of the emissions allowed under this permit (whether expressed therein as a rate of emissions or in terms of total emissions), and the permittee provides the Administrator of the U.S. EPA and the appropriate Ohio EPA District Office or local air agency with written notification within a minimum of seven days in advance of the proposed changes, unless the change is associated with, or in response to, emergency conditions. If less than seven days notice is provided because of a need to respond more quickly to such emergency conditions, the permittee shall provide notice to the Administrator of the U.S. EPA and the appropriate District Office of the Ohio EPA or local air agency as soon as possible after learning of the need to make the change. The notification shall contain the items required under OAC rule 3745-77-07(H)(2)(d).

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

15. Emergencies

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

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

16. Off-Permit Changes

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

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

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

(I) of rule 3745-77-07 of the Administrative Code shall affect any applicable obligation under Chapter 3745-31 of the Administrative Code.

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

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

17. Compliance Method Requirements

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

(This term is provided for informational purposes only.)

18. Insignificant Activities

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

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

19. Permit to Install Requirement

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

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

20. Air Pollution Nuisance

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

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

B. State Only Enforceable Section

1. Reporting Requirements Related to Monitoring and Record Keeping Requirements

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or record keeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
- b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (i) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and record keeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. In identifying each deviation, the permittee

shall specify the applicable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

2. Records Retention Requirements

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

3. Inspections and Information Requests

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

4. Scheduled Maintenance/Malfunction Reporting

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

5. Permit Transfers

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

6. Additional Reporting Requirements When There Are No Deviations of 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. All asbestos renovation and demolition activities conducted at this facility shall be performed in accordance with the applicable requirements specified in 40 CFR Part 61 and OAC Chapter 3745-20.
2. This facility is subject to the applicable requirements specified in OAC Chapter 3745-25. In accordance with Ohio EPA Engineering Guide #64, the emission control action programs, as specified in OAC rule 3745-25-03, shall be developed and submitted within 60 days after receiving notification from Ohio EPA.
3. The permittee will be subject to the upcoming/proposed 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 63 Subpart B (Section 63.50 through Section 63.56), the permittee is required to submit an application to revise the permit to include equivalent emission limitations as a result of a case-by-case MACT determination. The application is required to be submitted in two parts. The deadline to submit the Part I application as specified in Section 63.53 was May 15, 2002.
4. If the final MACT Standard is not promulgated by May 15, 2004, the permittee shall submit the Part II application as specified in Section 63.53. The Part II application shall be submitted no later than May 15, 2004, and must contain the information in paragraphs (a) through (f) of this section.
 - a. For a new affected source, the anticipated date of startup of operation.
 - b. The hazardous air pollutants emitted by each affected source in the relevant source category and an estimated total uncontrolled and controlled emission rate for hazardous air pollutants 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, and, at the option of the owner or operator, a recommended MACT floor.
 - 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 this part.

The Part II application for a MACT determination may, but is not required to, contain the following information:

- a. Recommended emission limitations for the affected source and support information. The owner or operator may recommend a specific design, equipment, work practice, or operational standard, or combination thereof, as an emission limitation.
- b. A description of the control technologies that would be applied to meet the emission limitation including technical information on the design, operation, size, estimated control efficiency and any other information deemed appropriate by the permitting authority, and identification of the affected sources to which the control technologies must be applied.
- c. Relevant parameters to be monitored and frequency of monitoring to demonstrate continuous compliance with the MACT emission limitation over the applicable reporting period.

A. State and Federally Enforcable Section (continued)

5. If the NESHAP is promulgated before May 15, 2004, the facility will be subject 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 standards. If the permittee is subject to the final standards, the following information shall also be included in the Initial Notification Report:
 - 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 standards and the permittee'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 hazardous air pollutant; and
 - v. a statement of whether or not the permittee is a major source or an area source according to the promulgated MACT.
 - b. Within 60 days following completion of any required compliance demonstration activity specified in the 40 CFR Part 63 Subpart EEEEE, the permittee shall submit a notification of compliance status that contains the following information:
 - i. the methods used to determine compliance;
 - ii. the results of any performance test, opacity or visible emission observations, continuous monitoring systems (CMS) performance evaluations, and/or other monitoring procedures or methods that were conducted;
 - iii. the methods that will be used for determining continuous compliance, including a description of monitoring and reporting requirements and test methods;
 - iv. the type and quantity of hazardous air pollutants emitted by the source, reported in units and averaging times in accordance with the test methods specified in 40 CFR Part 63 Subpart EEEEE;
 - v. an analysis demonstrating whether the affected source is a major source or an area source;
 - vi. a description of the air pollution control equipment or method for each emission point, including each control device or method for each hazardous air pollutant and the control efficiency (percent) for each control device or method; and
 - vii. a statement of whether or not the permittee has complied with the requirements of 40 CFR Part 63 Subpart EEEEE.

B. State Only Enforceable Section

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

B006 - gas fired heater Inliner #3
B007 - gas fired heater cleaning room south #6
B008 - gas fired heater floor mold west #5
B009 - gas heater floor mold east #4
B010 - gas fired heater cleaning room north #7
B011 - gas fired heater core room south #9
B012 - gas fired heater core room north #10
B013 - gas fired heater Pangborn #8
F001 - spent sand piles
F009 - nobake pour/cool line
P028 - core drying oven (north)
Z001 - core drying oven (south)
Z002 - ladle heating
Z003 - ladle lining mixer
Z004 - welding
Z005 - plant heating
Z006 - transfer ladles
Z007 - propane storage tank
Z008 - diesel storage tank
Z009 - heat treat furnace (south)
Z010 - heat treat furnace (north)
Z011 - Shell blower #1 (MC-3)
Z012 - Shell blower #2 (U-150 south)
Z013 - Shell blower #3 (U-150 north)
Z014 - Shell blower #4 (U-180 south)
Z015 - Shell blower #5 (U-180 north)
Z016 - Shell blower #6 (803 south)
Z017 - Shell blower #7 (803 north)
Z018 - Shell blower #8 (X-180)
Z019 - Shell blower #9 (U-360)
Z020- compressors (electric)
Z021- emergency generator driven by diesel engine
Z022 - emergency generator driven by natural gas engine
Z024 - ladle preheater #1
Z025 - ladle preheater #2
Z026 - ladle preheater #3
Z027 - ladle preheater #4
Z028 - ladle preheater #5
Z029 - ladle preheater #6
Z030 - ladle preheater #7
Z031 - ladle preheater #8

Z037 - cold cleaner (maint)
Z038 - cold cleaner (tool repair)
Z039 - cold cleaner (lift truck)
Z040 - cold cleaner (machine ctr.)
Z041 - cold cleaner (pattern shop)
Z042 - wood saw
Z043 - belt sander
Z044 - disk sander

Each insignificant emissions unit at this facility must comply with all applicable State and federal regulations, as well as any emissions 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: Scrap reclaimer (F002)

Activity Description: Vibrating mechanical separator used to remove metal from sand

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
scrap reclaimer	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.

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: Furnace #1 (F003)
Activity Description: Coreless induction furnace 3750 KW

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
electric induction furnace #1, with a maximum melt rate of 6 TPH (charging, melting, tapping, metal transfer and alloy refining for producing iron)	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.

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: Furnace #2 (F004)
Activity Description: Coreless induction furnace 3750 KW

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
electric induction furnace #2, with a maximum melt rate of 6 TPH (charging, melting, tapping, metal transfer and alloy refining for producing iron)	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.

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: Furnace #3 (F005)
Activity Description: Coreless induction furnace 3750 KW

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
electric induction furnace #3, with a maximum melt rate of 6 TPH (charging, melting, tapping, metal transfer and alloy refining for producing iron)	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.

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: Roadways & parking (F006)
Activity Description: Roadways and parking for employees

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>
plant roadways and parking areas	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.

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: Nobake Mold Mixing & Making Line (F008)

Activity Description: Phenolic Urethane nobake mold 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>
phenolic urethane nobake mold system	OAC rule 3745-21-07(G)(2)	exempt, pursuant to OAC rule 3745-21-07 (G)(9)(i) (See A.1.2.a.)
	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to the uncaptured fugitive emissions from this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07 (B) shall not apply to the visible fugitive emissions from this emissions unit.
	OAC rule 3745-31-05 (A)(3) (PTI No. 02-9648)	Particulate emissions (PE) shall not exceed 0.52 lb/hr from the bin vent stack. (See A.1.2.c.) Visible emissions of particulate matter from the bin vent stack shall not exceed 20% opacity as a three-minute average. Emissions of organic compounds (OC) shall not exceed 8 lbs/hr and 40 lbs/day. (See A.1.2.b.) The requirements of OAC rule 3745-31-05 (A)(3) also include compliance with the requirements of OAC rule 3745-21-07(G)(9)(i).

<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)	The requirements established pursuant to OAC rule 3745-17-07 (A) are less restrictive than the requirements established pursuant to OAC rule 3745-31-05 (A)(3).
	OAC rule 3745-17-11	The requirements established pursuant to OAC rule 3745-17-11 are less restrictive than the requirements established pursuant to OAC rule 3745-31-05 (A)(3).

2. Additional Terms and Conditions

- 2.a Although OAC rule 3745-21-07(G)(9)(i) specifies an exemption for the use of a phenolic urethane no-bake resin binder system in foundry core-making and mold-making operations, the exemption is not yet part of the federally approved SIP. This new exemption was promulgated by the Ohio EPA and became effective on June 15, 1999. The Ohio EPA has received confirmation from the USEPA concerning the acceptability of this exemption, and the permittee has agreed to consider the exemption as federally enforceable during the time from the effective date of this permit to the effective date of USEPA approval of the exemption as a revision to the Ohio SIP for ozone.
- 2.b No record keeping and monitoring is required for the hourly OC emissions limit because the maximum uncontrolled emission rate of OC cannot exceed the limit.
- 2.c The pneumatic sand conveying, from the silo to the mixer, and the mixing operation shall be vented to the bin vent.

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

- 1. The permittee shall keep the following records each day this emissions unit operates:
 - a. the company identification of the liquid organic material used;
 - b. the pounds of sand mixed; and
 - c. an estimate of the daily OC emission rate (see A.V.3.).
- 2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that include an identification of each day during which the OC emissions exceeded 40 pounds per day, and the actual OC emissions for each such day.
2. The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c. of this permit.
3. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the PE limit of 0.52 lb/hr from the bin vent shall be determined via OAC rule 3745-17-01 (B)(11), if required.
2. Compliance with the visible emission limitation for this emissions unit shall be determined in accordance with test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996, and the modifications listed in paragraph (B)(3)(a) of OAC rule 3745-17-03.
3. Emission Limitation:
40 lbs OC per day

Applicable Compliance Method:

To determine the actual emission rate for OC, the following equation shall be used:

$Ed = \text{sand usage rate (in tons per day)} \times \text{emission factor of 1.3 lb OC/ton sand}$

where

$Ed = \text{OC emission rate (lbs/day)}$

$\text{emission factor} = 1.17 \text{ lb OC/ton sand (resin)} + 0.13 \text{ lb OC/ton sand (core release)} = 1.3 \text{ lbs OC per ton of sand for phenolic urethane nobake binder system (based on emissions data obtained by the 1997 OCMA's study)}$

4. Emission Limitation:
8 lbs OC per hour

Applicable Compliance Method:

If required, emissions testing shall be performed in accordance with US EPA Method 25.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<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: Nobake Shakeout (F010)
Activity Description: Shakeout of nobake molds.

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
shakeout of nobake molds (shakeout conveyor exhaust drifts upward to roof vent)	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.
	OAC rule 3745-31-05 (A)(3) (PTI No. 02-13225)	Particulate emissions (PE) shall not exceed 4.16 lbs/hr and 18.2 tons per year. Visible particulate emissions shall not exceed 20% opacity as a three-minute average. Emissions of organic compounds (OC) shall not exceed 8 lbs/hr, 40 lbs/day, and 7.3 tons/yr. (See A.1.2.a.)
	OAC rule 3745-21-07 (G)(2)	The requirements established pursuant to OAC rule 3745-21-07 (G)(2) are less restrictive than the requirements established pursuant to OAC rule 3745-31-05 (A)(3).

2. Additional Terms and Conditions

- 2.a No record keeping and monitoring are required for the OC emission limits because the maximum uncontrolled emission rates of OC cannot exceed the limits.

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

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

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

IV. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the roof vent serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the PE limit of 18.2 tons/year shall be determined in accordance with the following equation:

$$E = T_i \times 3.2 \text{ lbs PE/ton iron} \times 1/2000 \text{ lbs per ton}$$

where

E = tons PE per year

T_i = tons of iron per year processed through the shakeout

The emission factor (3.2 lbs PE/ton iron) is specified in US EPA reference document AP-42, Compilation of Emission Factors, Section 12.10, Table 12.10-7 (1/95).

V. Testing Requirements (continued)

2. Compliance with the PE limit of 4.16 lbs/hr shall be determined in accordance with the following equation:

$$E = Ti \times 3.2 \text{ lbs PE/ton iron}$$

where

$$E = \text{lbs PE per hour}$$

Ti = maximum tons of iron per hour processed through the shakeout

The emission factor (3.2 lbs PE/ton iron) is specified in US EPA reference document AP-42, Compilation of Emission Factors, Section 12.10, Table 12.10-7 (1/95).

3. Compliance with the OC emission limit of 8 lbs/hr shall be determined in accordance with the following equation:

$$E = Ti \times 1.2 \text{ lbs OC/ton iron}$$

where

$$E = \text{lbs OC emitted per hour}$$

Ti = maximum tons of iron per hour processed through the shakeout

The emission factor (1.2 lbs OC/ton iron) is specified in US EPA reference document Factor Information Retrieval Data System, Version 6.22, SCC 30400331.

4. Compliance with the OC emission limit of 40 lbs/day shall be determined in accordance with the following equation:

$$E = Ti \times 1.2 \text{ lbs OC/ton iron}$$

where

$$E = \text{lbs OC emitted per day}$$

Ti = maximum tons of iron per day processed through the shakeout

The emission factor (1.2 lbs OC/ton iron) is specified in US EPA reference document Factor Information Retrieval Data System, Version 6.22, SCC 30400331.

5. Compliance with the OC emission limit of 7.3 tons/yr shall be determined in accordance with the following equation:

$$E = Ti \times 1.2 \text{ lbs OC/ton iron} \times 1/2000 \text{ (ton/pounds)}$$

where

$$E = \text{tons OC emitted per year}$$

Ti = tons of iron per year processed through the shakeout

The emission factor (1.2 lbs OC/ton iron) is specified in US EPA reference document Factor Information Retrieval Data System, Version 6.22, SCC 30400331.

Facility Name: **The Quality Castings Company**

Facility ID: **02-85-01-0001**

Emissions Unit: **Nobake Shakeout (F010)**

V. Testing Requirements (continued)

6. Compliance with the visible emission limitation for this emissions unit shall be determined in accordance with Reference Method 9, if requested, 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)(3)(a) and (B)(3)(b) of OAC rule 3745-17-03.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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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: Inliner Mold Line (F013)

Activity Description: Green sand molding using the Osborn Inliner automatic molding machine

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
green sand molding using the Osborn Inliner automatic molding machine, equipped with a mechanically aided scrubber	OAC rule 3745-21-07(G)	exempt (See A.1.2.a.)
	OAC rule 3745-17-07(A)	20% opacity as a six-minute average, except as provided by rule
	OAC rule 3745-17-11(B)	The requirements established pursuant to OAC rule 3745-17-11 (B) are less stringent than the requirements established pursuant to OAC rule 3745-31-05 (A)(3).
	OAC rule 3745-31-05 (A)(3) (PTI No. 02-9754)	Particulate emissions (PE) shall not exceed 0.5 pound per hour. (See A.1.2.b.) The requirements of OAC rule 3745-31-05 (A)(3) also include compliance with the requirements of OAC rule 3745-21-07(G) and OAC rule 3745-17-07(A).

2. Additional Terms and Conditions

- 2.a This emissions unit shall not employ liquid organic materials which are photochemically reactive materials, as defined in OAC rule 3745-21-01 (C)(5).
- 2.b All PE from the emissions from this emissions unit shall be vented to the scrubber.

II. Operational Restrictions

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

The scrubber water flow rate shall be continuously maintained at a value of not less than 122 gallons per minute at all times while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall keep the following records for all materials used in this emissions unit:
 - a. The identification of the chemical compound and its physical state at standard conditions.
 - b. For any liquid organic materials, whether or not the material is a photochemically reactive material, as defined in OAC rule 3745-21-01 (C)(5).
2. The permittee shall maintain daily records that document the average production rate, in tons iron per hour.
3. The permittee shall properly operate and maintain equipment to continuously monitor the static pressure drop across the scrubber and the scrubber water flow rate while the emissions unit is in operation. The monitoring devices and any recorders shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

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

- a. The pressure drop across the scrubber, in inches of water, on a continuous basis.
- b. The scrubber water flow rate, in gallons per minute, once per 8-hour period.
- c. 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 quarterly deviation (excursion) reports that include an identification of each day during which any photochemically reactive liquid organic materials were employed, an identification of said materials, and the number of pounds OC emitted each such day.
2. 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.
 - b. The scrubber water flow rate.
3. The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c. of this permit.

V. Testing Requirements

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

Emission Limitation: 0.5 pound PE per hour

Applicable Compliance Method: Compliance may be demonstrated by multiplying the maximum production rate (tons iron/hr) by the emission factor of 0.04 lb PE/ton iron.

The emission factor (0.04 lb PE/ton iron) is specified in US EPA reference document Factor Information Retrieval Data System, Version 6.22, SCC 30400320.

If required, emissions testing shall be performed in accordance with US EPA Method 5.

V. Testing Requirements (continued)

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. The emission testing shall be conducted within 12 months after this permit is issued and within 12 months prior to permit expiration.
 - b. The emission testing shall be conducted to demonstrate compliance with the mass emission limit for particulate emissions, to determine the pressure differential across the scrubber and the scrubber water flow rate, and to determine the air flow from this emissions unit.
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate: Methods 1-5 of 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 Northeast District Office.

A particulate emissions test also shall be conducted at the inlet of the control device to determine the uncontrolled mass rate of emissions for the emissions unit, for purposes of applying Figure II of OAC Rule 3745-17-11. For this testing, Method 5 of 40 CFR Part 60, Appendix A shall be employed.

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 Northeast 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 Northeast District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA Northeast 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 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 Northeast District Office within 30 days following completion of the test(s).

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<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: Hunter Mold Line (F015)
Activity Description: Green sand molding using the Hunter molding machine

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
green sand molding using the Hunter molding machine (all emissions from this emissions unit are fugitive)	OAC rule 3745-21-07(G)(2)	exempt (See A.1.2.a.)
	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.
	OAC rule 3745-31-05 (A)(3) (PTI No. 02-10374)	Particulate emissions (PE) shall not exceed 0.22 lb/hr. Visible particulate emissions shall not exceed 20% opacity as a three-minute average. Emissions of organic compounds (OC) shall not exceed an average of 6 lbs/hr for each day. The requirements of OAC rule 3745-31-05 (A)(3) also include compliance with the requirements of OAC rule 3745-21-07 (G)(2).

2. Additional Terms and Conditions

- 2.a This emissions unit shall not employ organic liquids which are photochemically reactive materials, as defined in OAC rule 3745-21-01(C)(5).

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall keep the following records for all materials used in this emissions unit:
 - a. the identification of the chemical compound and its physical state at standard conditions; and
 - b. for any liquid organic materials, whether or not the material is a photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5).
2. The permittee shall keep the following records each month for this emissions unit:
 - a. the company identification of the mold release and the pattern spray used;
 - b. the total amount of mold release and pattern spray used, in pounds;
 - c. the number of hours of operation;
 - d. an estimate of the total OC emission rate, in pounds, using an emission factor of 1.0 pound OC per pound of mold release and pattern spray used, calculated as (c) x (d); and
 - e. an estimate of the average hourly OC emission rate, calculated as (d/c).

Note: Should an alternative mold release or pattern spray be used with a lower OC emission rate, the emission factor of 1.0 pound OC per pound mold release or pattern spray may be altered upon written permission from the Director.

3. The permittee shall maintain daily records of the amount of iron produced that will employ the molds from the Hunter mold line.
4. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the location and color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that include an identification of each day during which any photochemically reactive materials were employed.
2. The permittee shall submit quarterly deviation (excursion) reports that include an identification of each month during which the average hourly OC emissions exceeded 6 pounds per hour, and the actual average hourly OC emissions for each such month.
3. The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c. of this permit.
4. The permittee shall submit semiannual written reports that (a) identify all days during which any visible fugitive particulate emissions were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit, and (b) describe any corrective actions taken to eliminate the visible fugitive particulate emissions. These reports shall be submitted to the Director (the Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Emission Limitation: 0.22 lb PE/hr

Applicable Compliance Method:

To determine the maximum PE, the following equation shall be used:

$$E = Ti \times 0.04 \text{ lb PE/ton iron}$$

where

E = maximum lbs PE per hour

Ti = maximum iron production rate for the Hunter mold line

0.04 lb PE/ton iron is an emission factor in lbs PE per ton iron produced (from Ohio EPA's document "Reasonably Available Control Measures for Fugitive Dust Sources", Table 2.7-1 for mold making)

2. Emission Limitation: Visible particulate emissions shall not exceed 20% opacity as a three-minute average.

Applicable Compliance Method: Reference Method 9, if requested, 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)(3)(a) and (B)(3)(b) of OAC rule 3745-17-03.

3. Emission Limitation: 6 lbs OC/hr

Applicable Compliance Method: Compliance with the OC emission limitation shall be based on the record keeping requirements specified in Section A.III.2 of these terms.

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: Hunter Pour/cool line (F016)

Activity Description: Pouring and cooling area for molds made on the Hunter molding 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>
pouring and cooling area for molds made on the Hunter molding machine (all emissions from this emissions unit are fugitive)	OAC rule 3745-18-06 (E)(2)	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 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.
	OAC rule 3745-31-05 (A)(3) (PTI No. 02-13225)	1.8 lbs particulate emissions (PE) per hour and 7.9 tons/yr; 0.56 lb organic compounds (OC) per hour and 2.5 tons/yr; 0.08 lb sulfur dioxide (SO ₂) per hour and 0.35 ton/yr
	OAC rule 3745-21-07 (G)	Visible particulate emissions shall not exceed 5% opacity as a six-minute average. The emission limitations specified by this rule are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

1. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install # 02-13225, issued on September 1, 1999: A.III.2., A.III.3., and A.III.4. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.
2. The permittee shall record each day the hours this emissions unit was operated.
3. The permittee shall collect and record the following information each month for this emissions unit:
 - a. the amount of metal poured, in tons;
 - b. the hours this emissions unit was in operation;
 - c. the amount of metal poured per year, in tons iron/year, calculated by summing the amount of iron poured each month in (a);
 - d. the average hourly PE emissions, in lbs PE/hour, calculated as $(a) \times (0.45 \text{ lb PE/ton iron}) / (b)$;
 - e. the annual PE emissions, in tons PE per year, calculated as $(c) \times (0.45 \text{ lb PE/ton iron}) / 2000 \text{ lbs/ton}$;
 - f. the average hourly OC emissions, in lbs OC/hour, calculated as $(a) \times (0.14 \text{ lb OC/ton iron}) / (b)$;
 - g. the annual OC emissions, in tons OC per year, calculated as $(c) \times (0.14 \text{ lb OC/ton iron}) / 2000 \text{ lbs/ton}$;
 - h. the average hourly SO₂ emissions, in lbs SO₂/hour, calculated as $(a) \times (0.02 \text{ lb SO}_2\text{/ton iron}) / (b)$; and
 - i. the annual SO₂ emissions, in tons SO₂ per year, calculated as $(c) \times (0.02 \text{ lb SO}_2\text{/ton iron}) / 2000 \text{ lbs/ton}$.

0.45 lb PE/ton iron is an emission factor, in pounds PE per ton iron produced, based on emissions testing performed for emissions unit P036.

0.14 lb OC/ton iron is the emission factor specified in US EPA reference document Factor Information Retrieval Data System, Version 6.22 SCC 30400320.

0.02 lb SO₂/ton iron is the emission factor specified in US EPA reference document Factor Information Retrieval Data System, Version 6.22, SCC 30400320.

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

IV. Reporting Requirements

1. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install # 02-13225, issued on September 1, 1999: A.IV.2., A.IV.3., A.IV.4., A.IV.5., A.IV.6., A.IV.7., A.IV.8., and A.IV.9. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

IV. Reporting Requirements (continued)

2. The permittee shall submit quarterly deviation (excursion) reports that include an identification of each month during which the average hourly PE exceeded 1.8 pounds, and the actual average hourly PE for each such month.
3. The permittee shall submit quarterly deviation (excursion) reports that include an identification of each month during which the average hourly OC emissions exceeded 0.56 pound, and the actual average hourly OC emissions for each such month.
4. The permittee shall submit quarterly deviation (excursion) reports that include an identification of each month during which the average hourly SO₂ emissions exceeded 0.08 pound, and the actual average hourly SO₂ emissions for each such month.
5. The permittee shall submit annual reports that specify the total SO₂ emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.
6. The permittee shall submit annual reports that specify the total OC emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.
7. The permittee shall submit annual reports that specify the total PE from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.
8. The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c. of this permit.
9. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):
 - 1.a Emission Limitation: Visible particulate emissions shall not exceed 5% opacity as a six-minute average.

Applicable Compliance Method: Reference Method 9, if requested, 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 paragraph (B)(3)(b) of OAC rule 3745-17-03.
 - 1.b Emission Limitation: 1.8 lbs PE/hr

Applicable Compliance Method:
Compliance shall be determined based upon the record keeping specified in A.III.3.d. If required, emissions testing shall be performed in accordance with US EPA Method 5.
 - 1.c Emission Limitation:
7.9 tons PE per year

Applicable Compliance Method:
Compliance shall be determined based upon the record keeping specified in A.III.3.e.
 - 1.d Emission Limitation:
0.56 lbs OC per hour

Applicable Compliance Method:
Compliance shall be determined based upon the record keeping specified in A.III.3.f.

V. Testing Requirements (continued)

1.e Emission Limitation:
2.5 tons OC per year

Applicable Compliance Method:
Compliance shall be determined based upon the record keeping specified in A.III.3.g.

1.f Emission Limitation:
0.08 lbs SO₂ per hour

Applicable Compliance Method:
Compliance shall be determined based upon the record keeping specified in A.III.3.h.

1.g Emission Limitation:
0.35 tons SO₂ per year

Applicable Compliance Method:
Compliance shall be determined based upon the record keeping specified in A.III.3.i.

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: 722 Mold Line (F017)

Activity Description: Green sand molding using the Osborn 722 cope and drag style of molding

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>
green sand molding using the Osborn 722 mold making system (all emissions from this emissions unit are fugitive)	OAC rule 3745-21-07(G)(2)	exempt (See A.1.2.a.)
	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.
	OAC rule 3745-31-05 (A)(3) (PTI No. 02-10374)	Particulate emissions (PE) shall not exceed 0.40 lb/hr. Visible particulate emissions shall not exceed 20% opacity as a three-minute average. Emissions of organic compounds (OC) shall not exceed 13.5 lbs/hr, as an average over each day, and 22.5 tons/yr, as a rolling 12-month summation. The requirements of OAC rule 3745-31-05 (A)(3) also include compliance with the requirements of OAC rule 3745-21-07 (G)(2).

2. Additional Terms and Conditions

- This emissions unit shall not employ organic liquids which are photochemically reactive materials, as defined in OAC rule 3745-21-01(C)(5).

II. Operational Restrictions

1. The amount of metal poured in the Osborn 722 mold making line shall not exceed 30,000 tons during each rolling 12-month period.

III. Monitoring and/or Record Keeping Requirements

1. Pursuant to OAC rule 3745-77-07 (A)(3)(a)(ii), the following record keeping requirements are as stringent as or more stringent than the record keeping requirements contained in Permit to Install # 02-10374, issued on December 18, 1996: A.III.2., A.III.3., A.III.4., and A.III.5. The reporting requirements contained in the above - referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.
2. The permittee shall keep the following records on all materials used in this emissions unit:
 - a. the identification of the chemical compound and its physical state at standard conditions; and
 - b. for any liquid organic materials, whether or not the material is a photochemically reactive material , as defined in OAC rule 3745-21-01(C)(5).
3. The permittee shall keep the following records each day this emissions unit operates:
 - a. the company identification of the mold release and the pattern spray used;
 - b. the total amount of mold release and pattern spray used, in pounds;
 - c. the number of hours of operation;
 - d. an estimate of the daily organic compound emission rate, in pounds, using an emission factor of 1.0 pound OC per pound of mold release and pattern spray used; and
 - e. an estimate of the average hourly organic compound emission rate, calculated as (d/c).

Note: Should an alternative mold release or pattern spray be used with a lower OC emission rate, the emission factor of 1.0 pound OC per pound of mold release or pattern spray may be altered upon written permission from the Director.

4. The permittee shall maintain monthly records that list the following information for this emissions unit:
 - a. tons of iron poured;
 - b. the rolling 12-month summation of the tons of iron poured;
 - c. the number of hours of operation for this emissions unit;
 - d. the average hourly PE emissions, in lbs PE/hour, calculated as $[(a) / (c)] \times 0.04 \text{ lb PE/ton iron}$;
 - e. the OC emissions (tons); and
 - f. the rolling 12-month summation of the OC emissions (tons).

0.04 lb PE/ton iron is an emission factor in lbs PE per ton iron produced from Ohio EPA's "Reasonably Available Control Measures for Fugitive Dust Sources", Table 2.7-1 for mold making.

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

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

IV. Reporting Requirements

1. Pursuant to OAC rule 3745-77-07 (A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install # 02-10374 modification, issued on December 18, 1996: A.IV.2., A.IV.3., A.IV.4., A.IV.5., A.IV.6., and A.IV.7. The reporting requirements contained in the above - referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.
2. The permittee shall submit quarterly deviation (excursion) reports that include an identification of each day during which any photochemically reactive materials were employed.
3. The permittee shall submit quarterly deviation (excursion) reports that include an identification of each day during which the average hourly OC emission rate of 13.5 pounds was exceeded, and the actual average hourly OC emission rate for each such day.
4. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 12-month production rate limitation of 30,000 tons metal, and the actual rolling 12-month production rate for each such exceedance.
5. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling 12-month OC emission limitation of 22.5 tons, and the actual rolling 12-month OC emission rate for each such exceedance.
6. The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c. of this permit.
7. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Emission Limitation: 0.40 lb PE/hr

Applicable Compliance Method:

Compliance shall be determined based upon the record keeping specified in A.III.4.d.

2. Emission Limitation: Visible particulate emissions shall not exceed 20% opacity as a three-minute average.

Applicable Compliance Method: Reference Method 9, if requested, 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)(3)(a) and (B)(3)(b) of OAC rule 3745-17-03.

V. Testing Requirements (continued)

3. Emission Limitation: 13.5 lbs OC/hr

Applicable Compliance Method: Compliance with the OC emission limitation shall be based on the record keeping requirements in Section A.III.3 of these terms.

4. Emission Limitation: 22.5 tons OC/yr, as a rolling 12-month summation

Applicable Compliance Method: Compliance with the OC emission limitation shall be based on the record keeping requirements in Section A.III.3 and A.III.4 of these terms. To determine the monthly OC emission rate (tons), sum the daily OC emission rate (lbs/day) for the entire month and divide by 2000 (lbs/ton).

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: 722 Pour/cool Line (F018)

Activity Description: Pouring and cooling area for the molds made on the Osborn 722 molding 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>
pouring and cooling area for the molds made on the Osborn 722 molding machine (all emissions from this emissions unit are fugitive)	OAC rule 3745-18-06 (E)(2)	Emissions of sulfur dioxide (SO ₂) shall not exceed 481.5 lbs/hr. (See A.1.2.a.)
	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.
	OAC rule 3745-31-05 (A)(3) (PTI No. 02-9748)	Particulate emissions (PE) shall not exceed 4.0 lbs/hr. Visible particulate emissions shall not exceed 5% as a six-minute average.
	OAC rule 3745-21-07 (G)	Emissions of organic compounds (OC) shall not exceed 20 lbs/day. The requirements of OAC rule 3745-31-05 (A)(3) also include compliance with the requirements of OAC rule 3745-18-06(E)(2), and OAC rule 3745-21-07 (G). exempt (See A.1.2.b.)

2. Additional Terms and Conditions

- 2.a No record keeping and monitoring is required for the SO₂ emissions limit because the maximum uncontrolled emission rate of SO₂ cannot exceed the limit.
- 2.b This emissions unit shall not employ organic liquids which are photochemically reactive materials, as defined in OAC rule 3745-21-01(C)(5).

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

- 1. The permittee shall record daily the hours this emissions unit was operated.
- 2. The permittee shall collect and record the following information each month for this emissions unit:
 - a. the amount of metal poured, in tons;
 - b. the days this emissions unit was in operation;
 - c. the hours this emissions unit was in operation;
 - d. the amount of metal poured per year, in tons iron/year, calculated by summing the amount of iron poured each month in (a);
 - e. the average hourly PE emissions, in lbs PE/hour, calculated as (a) x (0.45 lb PE/ton iron) / (c);
 - f. the annual PE emissions, in tons PE per year, calculated as (d) x (0.45 lb PE/ton iron) / 2000 lbs/ton;
 - g. the average daily OC emissions, in lbs OC/day, calculated as (a) x (0.14 lb OC/ton iron) / (b); and
 - h. the annual OC emissions, in tons OC per year, calculated as (d) x (0.14 lb OC/ton iron) / 2000 lbs/ton; and]

0.45 lb PE/ton iron is an emission factor, in pounds PE per ton iron produced, based on emissions testing done for emissions unit P036.

0.14 lb OC/ton iron is the emission factor specified in US EPA reference document Factor Information Retrieval Data System, Version 6.22 SCC 30400320.

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

IV. Reporting Requirements

- 1. The permittee shall submit quarterly deviation (excursion) reports that include an identification of each month during which the average hourly PE exceeded 4.0 pounds, and the actual average PE rate for each such month.
- 2. The permittee shall submit quarterly deviation (excursion) reports that include an identification of each month during which the daily OC emissions exceeded 20 pounds, and the actual OC emissions for each such month.
- 3. The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c. of this permit.

IV. Reporting Requirements (continued)

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

V. Testing Requirements

1. Emission Limitation:
481.5 lbs SO₂/hour

Applicable Compliance Method:

Compliance shall be demonstrated by multiplying the emission factor of .02 lb SO₂/ton of iron times the maximum amount of metal that can be poured in an hour. 0.02 lb SO₂/ton iron is the emission factor specified in US EPA reference document Factor Information Retrieval Data System, Version 6.22, SCC 30400320.

2. Emission Limitation: 4.0 lbs PE/hr

Applicable Compliance Method:

Compliance shall be determined based upon the record keeping specified in A.III.2.d.

3. Emission Limitation: Visible particulate emissions shall not exceed 5% opacity as a six-minute average.

Applicable Compliance Method: Reference Method 9, if requested, 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 paragraph (B)(3)(b) of OAC rule 3745-17-03.

4. Emission Limitation:
20 lbs OC/day

Applicable Compliance Method:

Compliance shall be determined based upon the record keeping specified in A.III.2.g.

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: Nobake Core Line including mixer (F019)
Activity Description: Phenolic Urethane nobake core production

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>
phenolic urethane nobake core production (all emissions from this emissions unit are fugitive)	OAC rule 3745-17-07(A)	In accordance with paragraph (A)(3)(h) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(A) shall not apply to this emissions unit.
	OAC rule 3745-21-07(G)(9)(i)	exempt, pursuant to OAC rule 3745-21-07 (G)(9)(i) (See A.I.2.b.)
	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.
	OAC rule 3745-31-05 (A)(3) (PTI No. 02-9755)	Particulate emissions (PE) shall not exceed 0.75 lb/hr. Visible particulate emissions shall not exceed 20% opacity as a three-minute average. Emissions of organic compounds (OC) shall not exceed an average of 8 lbs/hr, as an average over each day, and 40 lbs/day.
		The requirements of OAC rule 3745-31-05 (A)(3) also include compliance with the requirements of OAC rule 3745-21-07 (G).

2. Additional Terms and Conditions

- 2.a** Although OAC rule 3745-21-07(G)(9)(i) specifies an exemption for the use of a phenolic urethane no-bake resin binder system in foundry core-making and mold-making operations, the exemption is not yet part of the federally approved SIP. This new exemption was promulgated by the Ohio EPA and became effective on June 15, 1999. The Ohio EPA has received confirmation from the USEPA concerning the acceptability of this exemption, and the permittee has agreed to consider the exemption as federally enforceable during the time from the effective date of this permit to the effective date of USEPA approval of the exemption as a revision to the Ohio SIP for ozone.

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall keep the following records each day this emissions unit operates:
 - a. the company identification of the liquid organic materials used;
 - b. the amount of sand mixed, in pounds;
 - c. the number of hours of operation;
 - d. an estimate of the daily OC emission rate, in pounds OC/day, calculated as (b) x (1.3 lb OC/ton sand);
 - e. an estimate of the average hourly OC emission rate (pounds/hour), calculated as (d/c); and
 - f. the average hourly PE emissions, in lbs PE/hour, calculated as (b) x 0.38 lb PE/ton sand / (c).

0.38 lb PE/ton sand is the sum of two emission factors: core making (0.35) and mechanical core sand unloading (0.03) both from the Ohio EPA RACM document, Table 2.7-1.

The emission factor for OC = 1.17 lb OC/ton sand (resin) + 0.13 lb OC/ton sand (core release) = 1.3 lbs OC per ton of sand for phenolic urethane nobake binder systems (based on emissions data obtained by the 1997 OCMA study).

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

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that include an identification of each day during which the average hourly OC emissions exceeded 8.0 pounds, and the actual average hourly OC emissions for each such day.
2. The permittee shall submit quarterly deviation (excursion) reports that include an identification of each day during which the daily OC emissions exceeded 40 pounds, and the actual daily OC emissions for each such day.

IV. Reporting Requirements (continued)

3. The permittee shall submit quarterly deviation (excursion) reports that include an identification of each day during which the average hourly PE emissions exceeded 0.75 pound, and the actual average hourly PE emissions.
4. The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c. of this permit.
5. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Emission Limitation:
0.75 lb PE/hr

Applicable Compliance Method:

Compliance shall be determined based upon the record keeping specified in A.III.1.f.

2. Emission Limitation: Visible particulate emissions shall not exceed 20% opacity as a three-minute average.

Applicable Compliance Method: Reference Method 9, if requested, 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)(3)(a) and (B)(3)(b) of OAC rule 3745-17-03.

3. Emission Limitation:
40 lbs OC per day

Applicable Compliance Method:

Compliance is based upon the record keeping specified in Section A.III.1.d.

4. Emission Limitation:
8 lbs OC per hour

Applicable Compliance Method:

Compliance is based on the record keeping specified in Section A.III.1. of these terms and conditions.

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: Ductile Iron Inoculation Inliner I (F020)
Activity Description: Ladle treatment style ductile iron production

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>
ductile iron production at inliner using a Tundish ladle	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.

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: Ductile Iron Inoculation Back Floor II (F021)

Activity Description: Ladle treatment style ductile iron production

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>
ductile iron production in the back floor using a Tundish ladle	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.

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: Core Sand Receiving and Transfer (F022)
Activity Description: Loading and unloading sand for core making

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>
five core sand silos with bucket elevator and belt transfer	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.

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: Mold Sand Receiving and Transfer (F023)
Activity Description: Unloading mold sand from trucks and transferring storage hopper/silo

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>
loading and unloading sand and mold making (silos and mixers are vented through bin vents on silos)	OAC rule 3745-17-07(A)	In accordance with paragraph (A)(3)(h) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(A) shall not apply to this emissions unit.
	OAC rule 3745-17-11(A)	exempt (See A.1.2.a.)
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.
	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.

2. Additional Terms and Conditions

- 2.a In accordance with OAC 3745-17-11(A)(2)(a)(ii), "Figure II" of OAC rule 3745-17-11 shall not apply to stack emissions from this emissions unit because the uncontrolled particulate emissions are less than 10 pounds per hour. In accordance with OAC 3745-17-11(A)(2)(b)(ii), "Table I" of OAC rule 3745-17-11 shall not apply to this emissions unit because it is located in Wayne County.
- 2.b The PE from the silos and mixers shall be vented to the bin vents serving the silos.

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: Fischer Mold Line (F024)

Activity Description: Green sand mold making using compression sand into cope and drag flasks

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>
Georg Fischer mold making line (all emissions from this emissions unit are fugitive)	OAC rule 3745-17-08 (B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08 (B) shall not apply to this emissions unit.
	OAC rule 3745-17-07 (B)	In accordance with paragraph (B)(11)(d) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07 (B) shall not apply to this emissions unit.
	OAC rule 3745-21-07 (G)	exempt (See A.II.1.)
	OAC rule 3745-31-05 (A)(3) (PTI No. 02-2565)	0.12 lb particulate emissions (PE) and PM10 emissions per hour and 0.05 TPY 25.5 lbs organic compounds (OC) per hour and 10.5 TPY Visible emissions from the building housing this emissions unit shall not exceed 5% opacity as a 6- minute average. See A.II.2.
		The requirements of OAC rule 3745-31-05 (A)(3) also include compliance with the requirements of OAC rule 3745-21-07(G).

2. Additional Terms and Conditions

None

II. Operational Restrictions

1. The permittee shall not employ any photochemically reactive material, as defined in OAC rule 3745-21-01 (C)(5), in this emissions unit.
2. The maximum production rate for this emissions unit shall not exceed 8,200 tons of metal, based upon a rolling, 12-month summation of the production rates.

III. Monitoring and/or Record Keeping Requirements

1. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install # 02-2565, issued on March 31, 1999: A.III.2., A.III.3., A.III.4., and A.III.5. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.
2. The permittee shall maintain monthly records of the following information:
 - a. the metal production rate for each month; and
 - b. the rolling, 12-month summation of the metal production rates.
3. The permittee shall maintain monthly records of the following information:
 - a. the name and identification of each liquid organic material employed in this emissions unit; and
 - b. a determination whether the material is a photochemically reactive material, as defined in OAC rule 3745-21-01 (C)(5).
4. The permittee shall record the following information each day:
 - a. the name and identification of each parting spray employed;
 - b. the number of gallons of each parting spray employed;
 - c. the pounds of OC per gallon of each parting spray employed;
 - d. the number of hours of operation of this emissions unit;
 - e. the amount, in pounds, of sand mixed;
 - f. the daily OC emissions, in lbs/day, calculated as the summation of (b) x (c) for each parting spray employed; and
 - g. the average hourly OC emissions, in lbs/hour, calculated as (f) / (d).

Note: Should an alternative mold release or pattern spray be used with a lower OC emission rate, the emission factor of 1.0 pound OC per pound mold release or pattern spray may be altered upon written permission from the Director.

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

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

IV. Reporting Requirements

1. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install # 02-2565, issued on March 31, 1999: A.IV.2., A.IV.3., A.IV.4., A.IV.5., A.IV.6., and A.IV.7. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.
2. The permittee shall submit quarterly deviation (excursion) reports that include an identification of each day during which the average hourly OC emissions exceeded the emissions limitation of 25.5 pounds, and the actual average hourly OC emissions.
3. The permittee shall submit annual reports that specify the total OC emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.
4. The permittee shall submit quarterly deviation (excursion) reports that include an identification of each month during which the rolling, 12-month iron production rate exceeded the operational restriction of 8,200 tons of metal, and the actual annual production rate.
5. The permittee shall submit quarterly deviation (excursion) reports that include an identification of each month during which a photochemically reactive material was employed.
6. The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c. of this permit.
7. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

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

V. Testing Requirements (continued)

- 1.a** Emission Limitation:
0.12 lb PE per hour

Applicable Compliance Method:

To determine compliance with the PE limitation, the following equation shall be used:

$$E = \text{maximum iron produced (tons per hour)} \times 0.04 \text{ (lb/ton)}$$

where:

$$E = \text{PE (lbs/hour)}$$

0.04 = emission factor in lbs PE per ton iron produced (from Ohio EPA's document "Reasonably Available Control Measures for Fugitive Dust Sources", Table 2.7-1 for mold making)

- 1.b** Emission Limitation:
0.05 ton PE per year

Applicable Compliance Method:

To determine compliance with the PE limitation, the following equation shall be used:

$$E = \text{iron produced (tons per year)} \times 0.04 \text{ (lb/ton)} \times 1/2000 \text{ (ton/lbs)}$$

where:

$$E = \text{PE (tons/year)}$$

0.04 = emission factor in lb PE per ton iron produced (from Ohio EPA's document "Reasonably Available Control Measures for Fugitive Dust Sources", Table 2.7-1 for mold making)

- 1.c** Emission Limitation:
25.5 pounds OC per hour

Applicable Compliance Method:

Compliance shall be based upon the record keeping specified in A.III.4.g.

- 1.d** Emission Limitation:
10.5 tons OC per year

Applicable Compliance Method:

Compliance shall be based upon the summation of the daily emission rates recorded for the record keeping specified in A.III.4.f during the calendar year.

- 1.e** Emission Limitation: Visible particulate emissions shall not exceed 5% opacity as a six-minute average.

Applicable Compliance Method: Reference Method 9, if requested, 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 paragraph (B)(3)(b) of OAC rule 3745-17-03.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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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: Fischer Pour and Cool Line (F025)

Activity Description: Iron pouring and cooling of castings made on the Fischer Mold Line

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>
Georg Fischer pouring & cooling line with in-mold inoculation (all emissions from this emissions unit are fugitive)	OAC rule 3745-17-08 (B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08 (B) shall not apply to this emissions unit.
	OAC rule 3745-17-07 (B)	In accordance with paragraph (B)(11)(d) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07 (B) shall not apply to this emissions unit.
	OAC rule 3745-21-07 (G)	The requirements of OAC rule 3745-21-07 (G) are less stringent than the requirements established pursuant to OAC rule 3745-31-05 (A)(3).
	OAC rule 3745-31-05 (A)(3) (PTI No. 02-2565)	9.1 lbs particulate emissions (PE)/PM10 per hour and 2.5 TPY
		1.4 lbs organic compounds (OC) per hour and 0.57 TPY
		40 lbs carbon monoxide (CO) per hour and 16.4 TPY
		Visible emissions shall not exceed 5% opacity as a 6-minute average.
		See A.II.1.

2. Additional Terms and Conditions

None

II. Operational Restrictions

1. The maximum annual production rate for this emissions unit shall not exceed 8,200 tons of metal, based upon a rolling, 12-month summation of the production rates.

III. Monitoring and/or Record Keeping Requirements

1. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install # 02-2565, issued on March 31, 1999: A.III.2., A.III.3., and A.III.4. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.
2. The permittee shall record the following information each day to determine the emission rates of PE, OC, and CO:
 - a. the metal production rate;
 - b. the hours this emissions unit was in operation;
 - c. the amount of iron poured per hour, in tons iron per hour, calculated as (a) / (b);
 - d. the amount of iron inoculated, in tons;
 - e. the iron inoculated per hour, in tons, calculated as (c) / (b);
 - f. the hourly PE rate, in lbs PE/hour, calculated as (c) X 0.45 lb PE/ton iron poured + (e) x 4.0 lbs/ton iron inoculated x (1-0.9);
 - g. the hourly CO emission rate, in lbs CO/hour, calculated as (c) x 4.0 lbs/ton iron poured; and
 - h. the hourly OC emission rate, in lbs OC/hour, calculated as (c) x 0.14 lbs/ton iron poured.

0.45 = emission factor in lbs PE per ton of iron poured (from emissions testing performed at this facility on January 18, 1996, for emissions unit P036)

4.0 = emissions factor in lbs PE per ton iron produced, from AP-42, Table 12.10-7

0.9 = control efficiency for "in-mold" inoculation

4.0 = emission factor in lbs CO/ton iron poured is from technical data provided in PTI application 02-12565, based upon emissions testing performed at Saginaw facility

0.14 = emission factor in lbs OC per ton iron poured (from SCC emission factor 30400320)

3. The permittee shall maintain records of the monthly production rate and the rolling, 12-month summation of the monthly metal production rates.
4. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

1. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install # 02-2565, issued on March 31, 1999: A.IV.2., A.IV.3., A.IV.4., A.IV.5., A.IV.6., A.IV.7., A.IV.8., A.IV.9., and A.IV.10. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.
2. The permittee shall submit quarterly deviation (excursion) reports that include an identification of each day during which the average hourly PE exceeded the emissions limitation of 9.1 pounds per hour, and the actual average hourly PE.
3. The permittee shall submit annual reports that specify the total PE emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.
4. The permittee shall submit quarterly deviation (excursion) reports that include an identification of each day during which the average hourly OC emissions exceeded the emissions limitation of 1.4 pounds per hour, and the actual average hourly OC emissions.
5. The permittee shall submit annual reports that specify the total OC emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.
6. The permittee shall submit quarterly deviation (excursion) reports that include an identification of each day during which the hourly CO emissions exceeded the emissions limitation of 40 pounds per hour, and the actual hourly CO emissions.
7. The permittee shall submit annual reports that specify the total CO emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.
8. The permittee shall submit quarterly deviation (excursion) reports that include an identification of each month during which the rolling, 12-month iron production rate exceeded the operational restriction of 8,200 tons of iron, and the actual rolling 12-month production rate.
9. The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c. of this permit.
10. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):
 - 1.a Emission Limitation:
9.1 lb PE per hour

Applicable Compliance Method:
Compliance with the average hourly PE shall be determined based upon the record keeping specified in A.III.2.f.
 - 1.b Emission Limitation:
2.5 tons PE per year

Applicable Compliance Method:
Compliance shall be demonstrated by multiplying the allowable hourly emission rate times the total hours of operation during the year, and dividing by 2000.

V. Testing Requirements (continued)

1.c Emission Limitation:
40 pounds CO per hour

Applicable Compliance Method:
Compliance shall be determined based upon the record keeping specified in A.III.2.g.

1.d Emission Limitation:
16.4 tons CO per year

Applicable Compliance Method:
Compliance shall be demonstrated by multiplying the allowable hourly emission rate times the total hours of operation during the year, and dividing by 2000.

1.e Emission Limitation:
1.4 pound OC per hour

Applicable Compliance Method:
Compliance shall be determined based upon the record keeping specified in A.III.2.h.

1.f Emission Limitation:
0.57 tons OC per year

Applicable Compliance Method:
Emission Limitation:
16.4 tons CO per year

Applicable Compliance Method:
Compliance shall be demonstrated by multiplying the allowable hourly emission rate times the total hours of operation during the year, and dividing by 2000.

1.g Emission Limitation: Visible particulate emissions shall not exceed 5% opacity as a six-minute average.

Applicable Compliance Method: Reference Method 9, if requested, 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 paragraph (B)(3)(b) of OAC rule 3745-17-03.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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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: Twelve 30" Snag Grinders (P002)

Activity Description: Twelve 30" snag grinders used to grind iron castings.

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>
twelve 30" snag grinders used to grind iron castings, all of which shall be vented to a 50,000 acfm baghouse located in the cleaning room	OAC rule 3745-17-11(A)	The requirements established pursuant to OAC rule 3745-17-11 are less stringent than the requirements established pursuant to OAC rule 3745-31-05 (A)(3).
	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed twenty percent opacity as a six-minute average, except as provided by rule.
	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.
	OAC rule 3745-31-05 (A)(3) (PTI No. 02-10103)	Particulate emissions (PE) from the baghouse shall not exceed 0.030 gr/dscf of exhaust gases and 2.7 pounds per hour.
		The requirements of OAC rule 3745-31-05 (A)(3) also include compliance with the requirements of OAC rule 3745-17-07 (A).

2. Additional Terms and Conditions

- 2.a This emissions unit is operationally united with P012 (Two Pangborne Tumblast machines), P013 (South Wheelabrator shotblast machine), P026 (North Wheelabrator shotblast machine), and P038 (pipe end grinder); and all these emission units are controlled by a common baghouse.

2. Additional Terms and Conditions (continued)

- 2.b** PE emissions from all twelve 30" snag grinders shall be vented to a baghouse.

II. Operational Restrictions

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

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse on daily basis.
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the baghouse serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

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

The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c. of this permit.

2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the baghouse serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

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

- 1.a** Emission Limitation for PE : 0.030 gr/dscf and 2.7 pounds per hour from the baghouse

Applicable Compliance Method: Compliance shall be demonstrated by the emissions testing and procedures specified in section A.V.2. of these terms and conditions.

- 1.b** Emission Limitation: Visible particulate emissions shall not exceed 20% opacity as a six-minute average.

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

V. Testing Requirements (continued)

2.a Emission testing requirements

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

- i. The emission testing shall be conducted within 12 months after issuance of the permit and within 12 months prior to permit expiration.
- ii. The emission testing shall be conducted to demonstrate compliance with the mass emission limits for particulate emissions, to determine the uncontrolled mass rate of emissions, to establish the pressure drop across the baghouse, to establish the flow rate from this emissions unit, and to determine the visible particulate emissions.
- iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): Methods 1-5 and 9 of 40 CFR Part 60, Appendix A.
- iv. The test(s) shall be conducted while this emissions unit and P012, P013, P026, and P038 are operating at or near their maximum capacities, unless otherwise specified or approved by the Ohio EPA Northeast District Office.

2.b 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 Northeast 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 Northeast District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA Northeast 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 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 Northeast District Office within 30 days following completion of the test(s).

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<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 Furnaces #4 & #5 (P011)
Activity Description: Two furnaces - each 5 ton capacity used for "holding iron"

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>
two holding furnaces	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.

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: Two Pangborn Tumbblast Machines (P012)
Activity Description: Tumbblast machines used to remove sand from the castings

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>
two tumbblast machines used to remove sand from the castings, and which are vented to the baghouse	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed twenty percent opacity as a six-minute average, except as provided by rule.
	OAC rule 3745-17-11 (B)	The requirements established pursuant to OAC rule 3745-17-11 (B) are less restrictive than the requirements established pursuant to OAC rule 3745-31-05 (A) for emissions unit P002.
	OAC rule 3745-17-08(B)	See A.I.2.a and A.I.2.b. In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.

2. Additional Terms and Conditions

- 2.a This emissions unit is operationally united with P002 (twelve snag grinders), P013 (South Wheelabrator shotblast machine), P026 (North Wheelabrator shotblast machine) and P038 (pipe end grinder); and all these emission units are controlled by a common baghouse.
- 2.b PE from the two tumbblast machines shall be vented to the baghouse serving P002.

II. Operational Restrictions

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

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse on daily basis.
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the baghouse stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. the total duration of any visible emission incident; and
 - c. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

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

The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c. of this permit.

2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the baghouse serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

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

- 1.a Emission Limitation for PE : 0.030 gr/dscf and 2.7 pounds per hour from the baghouse serving P002

Applicable Compliance Method: Compliance shall be demonstrated by the emissions testing and procedures specified in section A.V.2. of these terms and conditions.

- 1.b Emission Limitation: Visible particulate emissions shall not exceed 20% opacity as a six-minute average.

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

V. Testing Requirements (continued)

2.a Emission testing requirements

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

- i. The emission testing shall be conducted within 12 months after issuance of the permit and within 12 months prior to permit expiration.
- ii. The emission testing shall be conducted to demonstrate compliance with the mass emission limits for particulate emissions, to determine the uncontrolled mass rate of emissions, to establish the pressure drop across the baghouse, to establish the flow rate from this emissions unit, and to determine the visible particulate emissions.
- iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): Methods 1-5 and 9 of 40 CFR Part 60, Appendix A.
- iv. The test(s) shall be conducted while this emissions unit and P002, P013, P026, and P038 are operating at or near their maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office.

- 2.b** 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 Northeast 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 Northeast District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA Northeast 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 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 Northeast District Office within 30 days following completion of the test(s).

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<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: South Wheelabrator (P013)
Activity Description: Shot blast machine used to remove sand from castings

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>
shotblast which is used to remove sand from the castings, equipped with a baghouse	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed twenty percent opacity, as a six-minute average.
	OAC rule 3745-17-11 (B)	The requirements established pursuant to OAC rule 3745-17-11(B) are less stringent than the requirements established pursuant to OAC rule 3745-31-05 (A)(3). See A.I.2.a and A.I.2.b.
	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.

2. Additional Terms and Conditions

- 2.a This emissions unit is operationally united with P002 (twelve snag grinders), P012 (Pangborn tumblast machines), P026 (North Wheelabrator shotblast machine) and P038 (pipe end grinder); and all these emissions units are controlled by a common baghouse.
- 2.b PE from the shot blast machine shall be vented to the baghouse serving P002.

II. Operational Restrictions

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

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse on daily basis.
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the baghouse serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. the total duration of any visible emission incident; and
 - c. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

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

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. of these terms and conditions shall be determined in accordance with the following methods:
 - 1.a Emission Limitation: Visible particulate emissions shall not exceed 20% opacity as a six-minute average.

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

- 1.b Emission Limitation for PE: 0.030 gr/dscf and 2.7 pounds per hour from the baghouse serving P002

Applicable Compliance Method: Compliance shall be demonstrated by the emissions testing and procedures specified in section A.V.2. of these terms and conditions.

V. Testing Requirements (continued)

2.a Emissions testing requirements

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

- i. The emission testing shall be conducted within 12 months after issuance of the permit and within 12 months prior to permit expiration.
- ii. The emission testing shall be conducted to demonstrate compliance with the mass emission limit for particulate emissions, to determine the uncontrolled mass rate of emissions, to establish the pressure drop across the baghouse, to establish the flow rate from this emissions unit, and to determine the visible particulate emissions.
- iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): Methods 1-5 and 9 of 40 CFR Part 60, Appendix A.
- iv. The test(s) shall be conducted while this emissions unit and P012, P002, P026, and P038 are operating at or near their maximum capacities, unless otherwise specified or approved by the Ohio EPA Northeast District Office.

A particulate emissions test also shall be conducted at the inlet of the control device to determine the uncontrolled mass rate of emissions for the emissions unit, for purposes of applying Figure II of OAC Rule 3745-17-11. For this testing, Method 5 of 40 CFR Part 60, Appendix A shall be employed.

- 2.b** 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 Northeast 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 Northeast District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA Northeast 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 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 Northeast District Office within 30 days following completion of the test(s).

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<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: East End Shakeout (P017)

Activity Description: Shakeout system serving the 722, Hunter and Fischer mold/pour/cool lines

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
shakeout system serving the 722, Hunter, and Fischer mold lines, equipped with a baghouse	OAC rule 3745-17-08 (B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.

2. Additional Terms and Conditions

- 2.a Because the baghouse was installed in 1997, this emissions unit continues to be considered as a fugitive dust source. OAC rules 3745-17-07(A) and 3745-17-11 are not applicable.

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

1. 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 12 months prior to permit expiration. (The last emissions testing on this emissions unit which demonstrated compliance was last conducted on April 4, 2001.)
 - b. The emission testing shall be conducted to demonstrate compliance with the mass emission limit for particulate emissions, to determine the uncontrolled mass rate of emissions, to establish the proper pressure drop across the fabric filter, and to establish the flow rate from this emissions unit.
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): Methods 1-5 of 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 Northeast District Office.

A particulate emissions test also shall be conducted at the inlet of the control device to determine the uncontrolled mass rate of emissions for the emissions unit, for purposes of applying Figure II of OAC Rule 3745-17-11. For this testing, Method 5 of 40 CFR Part 60, Appendix A shall be employed.

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 Northeast 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 Northeast District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA Northeast 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 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 Northeast District Office within 30 days following completion of the test(s).

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<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: Tabor Cut-off Saw (P021)

Activity Description: Saw (#34279) used to remove gates and risers from the casting.

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>
three saws (#31816, #10452190, and #34279) used to remove the gating system from castings, equipped with a baghouse (70,000 cfm ETA Engineering)	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed twenty percent opacity, as a six-minute average, except as provided by rule.
saw (#34279) used to remove the gating system from castings, equipped with a baghouse (70,000 cfm ETA Engineering)	OAC rule 3745-17-11 (B)	The requirements established pursuant to OAC rule 3745-17-11 are less restrictive than the requirements established pursuant to OAC rule 3745-31-05 (A)(3).
three saws (#31816, #10452190, and #34279) used to remove the gating system from castings, equipped with a baghouse (70,000 cfm ETA Engineering)	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
three saws (#31816, #10452190, and #34279) used to remove the gating system from castings, equipped with a baghouse (70,000 cfm ETA Engineering)	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.
saw (#34279) used to remove the gating system from castings, equipped with a baghouse (70,000 cfm ETA Engineering)	OAC rule 3745-31-05 (A)(3) (PTI 02-3070)	Particulate emissions (PE) from the baghouse stack shall not exceed 0.5 lb/hr.
two saws (#31816 and #10452190) used to remove the gating system from castings, equipped with a baghouse (70,000 cfm ETA Engineering)	OAC rule 3745-17-11 (B)	Particulate emissions (PE) shall not exceed 10.4 pounds per hour. See A.1.2.a.

2. Additional Terms and Conditions

- If the emissions testing required for this emissions unit demonstrates that the allowable emissions rate from Figure II is more stringent than 10.4 lbs/hour, the permittee shall comply with the more stringent limitation.

II. Operational Restrictions

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

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse on daily basis.
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the baghouse serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

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

The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c. of this permit.

2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the baghouse serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the visible emission limitation shall be determined by using U.S. EPA Method 9, if required by the Ohio EPA.
2. Compliance with the PE limitation of 0.5 pound per hour for the new saw (#34279) shall be determined in accordance with OAC rule 3745-17-03(B)(10).

To determine the PE, multiply the PE concentration (gr/dscf) at the baghouse outlet by the gas flow rate from saw #34279 (dscfm) by 60 (min/hr), and by 1 lb/7000 grains.

3. Emission Limitation: Visible particulate emissions from the baghouse shall not exceed 20% opacity as a six-minute average.

Applicable Compliance Method: Reference Method 9, if requested, 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.

4. Compliance with the PE limitation of 10.4 pounds per hour for the two existing saws (#31816 and #10452190) shall be determined in accordance with OAC rule 3745-17-03 (B)(10).

To determine PE, multiply the PE concentration (gr/dscf) at the baghouse outlet by [the gas flow rate from saw #31816 (dscfm) + the gas flow rate from saw #10452190 (dscfm)] by 60 (min/hour) , and by 1 lb/7000 grains.

V. Testing Requirements (continued)

5. 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 12 months prior to permit expiration. (The last emissions testing on this emissions unit which demonstrated compliance was last conducted on April 4, 2001.)
 - b. The emission testing shall be conducted to demonstrate compliance with the mass emission limits for particulate emissions, to determine the uncontrolled mass rate of emissions, to establish the proper pressure drop across the fabric filter, and to establish the flow rate from each saw.
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): Methods 1-5 of 40 CFR Part 60, Appendix A. Method 9 readings shall be performed during each test run.
 - 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 Northeast District Office.

A particulate emissions test also shall be conducted at the inlet of the control device to determine the uncontrolled mass rate of emissions for the emissions unit, for purposes of applying Figure II of OAC Rule 3745-17-11. For this testing, Method 5 of 40 CFR Part 60, Appendix A shall be employed.

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 Northeast 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 Northeast District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA Northeast 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 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 Northeast District Office within 30 days following completion of the test(s).

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<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: Scrap preheater (P025)

Activity Description: Gas fired heater used to dry the scrap before it enters the melt furnaces-10 million BTU/hr

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>
gas fired heater used to dry the scrap before it enters the melt furnaces-10 million BTU/hr	OAC rule 3745-17-11(A)	See A.I.2.a.
	OAC rule 3745-17-07(A)	In accordance with paragraph (A)(3)(h) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(A) shall not apply to this emissions unit.
	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.

2. Additional Terms and Conditions

- 2.a In accordance with OAC 3745-17-11(A)(2)(a)(ii), "Figure II" of OAC rule 3745-17-11 shall not apply to this emissions unit because the uncontrolled particulate emissions are less than 10 pounds per hour. In accordance with OAC 3745-17-11(A)(2)(b)(ii), "Table I" of OAC rule 3745-17-11 shall not apply to this emissions unit because it is located in Wayne County.

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

Facility Name: **The Quality Castings Company**
Facility ID: **02-85-01-0001**
Emissions Unit: **Scrap preheater (P025)**

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: North Wheelabrator (P026)
Activity Description: Shot blast machine used to remove sand from castings.

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>
shot blast machine used to remove sand from castings, equipped with a baghouse	OAC rule 3745-17-11 (B)	The requirements established pursuant to OAC rule 3745-17-11 (B) are less restrictive than the requirements established pursuant to OAC rule 3745-31-05 (A)(3). (See A.1.2.a.)
	OAC rule 3745-17-07 (A)	Visible particulate emissions from any stack shall not exceed twenty percent opacity, as a six-minute average.
	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.
	OAC rule 3745-31-05 (A)(3) (PTI No. 02-11952)	Particulate emissions (PE) from the baghouse shall not exceed 0.010 gr/dscf of exhaust gases, 0.5 lb/hr and 2.2 tons/year.
		Fugitive particulate emissions shall not exceed 3.1 tons per year.
		The requirements of OAC rule 3745-31-05 (A)(3) also include compliance with the requirements of OAC rule 3745-17-07 (A).

2. Additional Terms and Conditions

- 2.a.** This emissions unit is operationally united with P002 (twelve snag grinders), P012 (Pangborn tumblast machines), P013 (South Wheelabrator shotblast machine), P038 (pipe end grinder), and all these emissions units are controlled by a common baghouse.
- 2.b.** PE from this shot blast machine shall be vented to the baghouse serving P002.

II. Operational Restrictions

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

III. Monitoring and/or Record Keeping Requirements

- 1.** Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install # 02-11952, issued on May 28, 1998: A.III.2. and A.III.3. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.
- 2.** The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse on daily basis.
- 3.** The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the baghouse serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

- 1.** Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install # 02-11952, issued on May 28, 1998: A.IV.2. and A.IV.3. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.
- 2.** The permittee shall submit quarterly pressure drop deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above.

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

V. Testing Requirements

1. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install # 02-11952, issued on May 28, 1998: A.V.2., A.V.3., A.V.4., A.V.5., and A.V.6. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.

2. Emission Limitation: Visible particulate emissions shall not exceed 20% opacity as a six-minute average.

Applicable Compliance Method: Reference Method 9, if requested, 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.

3.a Emission testing requirements

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

- i. The emission testing shall be conducted within 12 months after issuance of the permit and within 12 months prior to permit expiration.
- ii. The emission testing shall be conducted to demonstrate compliance with the mass emission limit for particulate emissions, to determine the uncontrolled mass rate of emissions, to establish the pressure drop across the baghouse, to establish the flow rate from this emissions unit, and to determine the visible particulate emissions.
- iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): Methods 1-5 and 9 of 40 CFR Part 60, Appendix A.
- iv. The test(s) shall be conducted while this emissions unit and P002, P012, P013, and P038 are operating at or near their maximum capacities, unless otherwise specified or approved by the Ohio EPA Northeast District Office.

A particulate emissions test also shall be conducted at the inlet of the control device to determine the uncontrolled mass rate of emissions for the emissions unit, for purposes of applying Figure II of OAC Rule 3745-17-11. For this testing, Method 5 of 40 CFR Part 60, Appendix A shall be employed.

- 3.b 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 Northeast 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 Northeast District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA Northeast 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 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 Northeast District Office within 30 days following completion of the test(s).

4. Emission Limitation for PE : 0.010 gr/dscf and 0.5 pound per hour from the baghouse

Applicable Compliance Method: Compliance shall be demonstrated by the emissions testing and procedures specified in section A.V.3. of these terms and conditions.

V. Testing Requirements (continued)

5. Emission Limitation for PE : 2.2 tons per year from stack

Applicable Compliance Method: As this limit was established by multiplying the hourly limit of 0.5 lb/hr by 8760 hrs/yr of operation and dividing by 2000, compliance with this limit shall be assumed provided that compliance with the hourly limit is maintained.

6. Emission Limitation for fugitive PE emissions: 3.1 tons per year

Applicable Compliance Method: Compliance with this limit shall be based on the following equation:

$$E = T_i \times 7 \text{ lbs PE/ton iron} \times (1 - 0.98) \times 1 \text{ tn}/2000 \text{ lbs}$$

where

E = tons PE per year

T_i = tons of iron processed per year

The emission factor (7 lbs PE/ton iron) is specified in US EPA reference document AP-42, Compilation of Emission Factors, Section 12.10, Table 12.10-7 (1/95).

0.98 = the assumed collection efficiency of the air pollution capture hoods.

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: Simpson Muller (P027)

Activity Description: Green sand muller which makes mold sand for the Osborn Inliner molding 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>
green sand muller which makes mold sand for the Osborn Inliner molding system, equipped with a mechanically aided wet scrubber	OAC rule 3745-17-11 (B)	Particulate emissions (PE) shall not exceed 13.0 pounds per hour. See A.I.2.a. and A.I.2.b.
	OAC rule 3745-17-07(A)	Visible particulate emissions from the stack shall not exceed twenty percent opacity as a six-minute average, except as provided by rule.
	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.

2. Additional Terms and Conditions

- 2.a. The allowable PE rate is from Figure II and is based upon the uncontrolled mass rate of emissions calculated by using data from the emissions test conducted on April 2, 1996 and the maximum capacity of the equipment.
- 2.b. PE from the muller and associated sand handling equipment shall be vented to the scrubber.

II. Operational Restrictions

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

The scrubber water flow rate shall be continuously maintained at a value of not less than 122 gallons per minute at all times while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

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

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

- a. The pressure drop across the scrubber, in inches of water, on a continuous basis.
- b. The scrubber water flow rate, in gallons per minute, once per 8-hour period.
- c. 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 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.
 - b. The scrubber water flow rate.

The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c. of this permit.

V. Testing Requirements

1. Emission Limitation: Visible particulate emissions shall not exceed 20% opacity as a six-minute average.

Applicable Compliance Method: Reference Method 9, if requested, 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.

2. Compliance with the PE limitation of 13.0 pounds/hour shall be determined in accordance with OAC rule 3745-17-03(B)(10).
3. 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 12 months after this permit is issued and within 12 months prior to permit expiration.
 - b. The emission testing shall be conducted to demonstrate compliance with the mass emission limit for particulate emissions, to determine the pressure differential across the scrubber and the scrubber water flow rate, and to determine the air flow from this emissions unit.
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate: Methods 1-5 and 9 of 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 Northeast District Office.

A particulate emissions test also shall be conducted at the inlet of the control device to determine the uncontrolled mass rate of emissions for the emissions unit, for purposes of applying Figure II of OAC Rule 3745-17-11. For this testing, Method 5 of 40 CFR Part 60, Appendix A shall be employed.

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 Ohio EPA Northeast 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 Northeast District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA Northeast 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 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 Northeast District Office within 30 days following completion of the test(s).

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<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 #6 (P029)
Activity Description: 20 ton graphite rod "holding furnace"

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>
20-ton graphite rod holding furnace	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.
	OAC rule 3745-31-05 (A)(3) (PTI No. 02-9649)	Fugitive particulate emissions (PE) shall not exceed 4.26 pounds per hour. Visible PE shall not exceed 20% opacity as a three-minute average.

2. Additional Terms and Conditions

None

II. Operational Restrictions

- This furnace shall not be used as a melting furnace. Prior to modifying this furnace in order to melt scrap, the permittee shall apply for and obtain a permit to install.

III. Monitoring and/or Record Keeping Requirements

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

IV. Reporting Requirements

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

V. Testing Requirements

1. Emission Limitation: Visible particulate emissions shall not exceed 20% opacity as a three-minute average.

Applicable Compliance Method: Reference Method 9, if requested, 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.

2. Emission Limitation:
4.26 lbs PE per hour

Applicable Compliance Method:

To determine the actual emission rate for fugitive particulates, the following equation may be used:

$$E = \text{maximum iron throughput (in tons per hour)} \times 0.19 \text{ (lbs/ton)}$$

where

$$E = \text{PE (lbs/hr)}$$

The emission factor (0.19 lbs PE/ton iron) is specified in US EPA reference document AP-42, Compilation of Emission Factors, Section 12.5, Table 12.5-1 (1/95).

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: Leampe LL-5 (P030)

Activity Description: Resin based core making operation controlled with an acid scrubber.

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
resin based core mixing and core making operation controlled with a bin vent and an acid scrubber (phenolic urethane cold box)	OAC rule 3745-17-11 (B)	See A.I.2.a.
	OAC rule 3745-17-07(A)	In accordance with paragraph (A)(3)(h) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(A) shall not apply to this emissions unit.
	OAC rule 3745-21-07(G)(9)(h)	exempt (See A.I.2.c.)
	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.

<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 No. 02-9654)	Total particulate emissions (PE), from the fugitives and the bin vent stack, shall not exceed 0.22 lb/hr. (See A.1.2.b.) Visible particulate emissions, from the fugitives and the bin vent stack, shall not exceed 5% opacity as a six-minute average. Emissions of organic compounds (OC) from the scrubber stack shall not exceed 1.5 lbs/hr. Emissions of triethylamine (TEA) from the scrubber stack shall not exceed 0.1 lb/hr. The requirements of OAC rule 3745-31-05 (A)(3) also include compliance with the requirements of OAC rule 3745-21-07 (G).

2. Additional Terms and Conditions

- 2.a** In accordance with OAC 3745-17-11(A)(2)(a)(ii), "Figure II" of OAC rule 3745-17-11 shall not apply to this emissions unit because the uncontrolled particulate emissions are less than 10 pounds per hour. In accordance with OAC 3745-17-11(A)(2)(b)(ii), "Table I" of OAC rule 3745-17-11 shall not apply to this emissions unit because it is located in Wayne County.
- 2.b** The sand transfer equipment shall be vented back through the silo and the bin vent. The cold box shall be hooded and vented to the acid scrubber.
- 2.c** The provisions of OAC rule 3745-21-07(G) shall not apply to this emissions unit, provided that the catalyst gas emissions are vented to a sulfuric acid scrubber that is designed and operated to remove at least 98% by weight of the catalyst gas emissions.

Although OAC rule 3745-21-07 (G)(9)(h) specifies an exemption for the use of a phenolic urethane cold box resin binder system in foundry core-making and mold-making operations, provided the catalyst gas emissions are vented to a sulfuric acid scrubber that is designed and operated to remove at least ninety-eight per cent, by weight, of the catalyst gas emissions, the exemption is not yet part of the federally approved SIP. This new exemption was promulgated by the Ohio EPA and became effective on June 15, 1999. The Ohio EPA has received confirmation from the USEPA concerning the acceptability of this exemption, and the permittee has agreed to consider the exemption as federally enforceable during the time from the effective date of this permit to the effective date of USEPA approval of the exemption as a revision to the Ohio SIP for ozone.

II. Operational Restrictions

1. The pH of the scrubbing liquor shall be maintained at or below 4.5.
2. The permittee shall maintain sufficient capture hooding, in good operating condition, on all process areas where TEA may be emitted. Additional capture hooding or enclosures shall be installed if required by the Ohio EPA.

III. Monitoring and/or Record Keeping Requirements

1. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install # 02-9654, issued on November 15, 1995: A.III.2., A.III.3., A.III.4., A.III.5., and A.III.6. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.
2. The permittee shall properly operate and maintain equipment to continuously monitor the pH of the scrubber liquor while the emissions unit is in operation. The pH monitor shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

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

- a. The pH of the scrubber liquor, once every four hours of operation.
 - b. A log or record of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.
3. The permittee shall keep the following records each day this emissions unit operates:
 - a. The company identification of the liquid organic materials used.
 - b. The amount of sand mixed, in pounds.
 - c. The number of hours of operation.
 - d. An estimate of the daily OC emission rate, in pounds, using an emission factor of 0.65 lb of OC per ton of sand mixed.
 - e. An estimate of the average hourly OC emission rate, in pounds, calculated as (d/c).
 4. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the bin vent serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. the total duration of any visible emission incident; and
 - c. any corrective actions taken to eliminate the visible emissions.
 5. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the scrubber serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. the total duration of any visible emission incident; and
 - c. any corrective actions taken to eliminate the visible emissions.

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

6. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. the total duration of any visible emission incident; and
 - c. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

1. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install # 02-9654, issued on November 15, 1995: A.IV.2., A.IV.3., A.IV.4., A.IV.5., A.IV.6., and A.IV.7. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.
2. The permittee shall submit quarterly pH deviation (excursion) reports that identify all periods of time during which the scrubber liquor pH did not comply with the pH requirement specified above.
3. The permittee shall submit quarterly deviation (excursion) reports that identify each day during which the average hourly OC emissions exceeded 1.5 pounds per hour, and the actual average hourly OC emissions for each such day.
4. The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c. of this permit.
5. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the bin vent serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.
6. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the scrubber serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.
7. The permittee shall submit semiannual written reports that (a) identify all days during which any visible fugitive particulate emissions were observed from this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the PE limit of 0.22 lb/hr may be determined in accordance with the following equation:

$$E = Ts \times (0.27 \text{ lb PE/ton sand} \times (1 - 0.99)) + 0.35 \text{ lb PE/ton sand}$$

where

E = lbs PE per hour

Ts = maximum amount of sand processed per hour (tons)

The emission factor (0.27 lbs PE/ton sand) is specified in US EPA reference document AP-42, Compilation of Emission Factors, Section 11.12, Table 11.12-2 (1/95).

0.99 (99%) is the estimated control efficiency for the silo bin vent.

0.35 lb PE/ton sand is an emission factor from the Ohio EPA's RACM document, Table 2.8-1 for core making.

Compliance with the PE limitation of 0.22 pound per hour shall be determined in accordance with OAC rule 3745-17-03(B)(10), if required.

2. Emission Limitation: Visible particulate emissions shall not exceed 5% opacity as a six-minute average.

Applicable Compliance Method: Reference Method 9, if requested, 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.

3. Compliance with the OC emission limit of 1.5 lbs/hr shall be determined based upon the record keeping specified in A.III.3.e.

Compliance with the OC limitation of 1.5 pounds per hour shall be determined in accordance with OAC rule 3745-21-10(C), if required.

4. Compliance with the TEA emission limit of 0.1 lb/hr may be determined using the following equation:

$$E_t = TEA \times (1 - 0.98)$$

E_t = emissions of TEA, lbs/hr

TEA = maximum hourly TEA usage rate

0.98 = estimated removal efficiency of TEA in the sulfuric acid scrubber

Compliance with the TEA limitation of 0.1 pound per hour shall be determined in accordance with OAC rule 3745-21-10(C), if required.

V. Testing Requirements (continued)

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

The emission testing shall be conducted within one year of the effective date of this permit and within one year prior to the expiration of this permit.

The emission testing shall be conducted to determine the overall control efficiency for TEA, to measure the scrubber liquid pH, and to demonstrate compliance with the emission limitation of 1.5 lbs OC per hour and 0.1 lb TEA per hour.

The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): Method 24, Method 25, Method 25A, and/or Method 18, as determined appropriate by Ohio EPA and Method 204, if applicable. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

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

The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.) The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified above. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified above. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present.

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 Northeast 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 Northeast District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA Northeast 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 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 Northeast 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 Northeast District Office.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Laempe L-40 (P032)

Activity Description: Sand cores are made using an L-40 size Laempe core 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>
L-40 size Laempe core machine, used to make sand cores with bin vent on sand silo	OAC rule 3745-17-11 (B)	The limit from this rule is less stringent than the limit established by OAC rule 3745-31-05.
	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(A)	The limit from this rule is less stringent than the limit established by OAC rule 3745-31-05.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.
	OAC rule 3745-21-07(G)(2)	exempt (See A.I.2.a.)

<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 No. 02-11420)	Total particulate emissions (PE), from the fugitives and the bin vent stack, summed together, shall not exceed 0.64 lb/hr and 2.8 tons/yr. (See A.I.2.b.) Visible particulate emissions, from the fugitives and the bin vent stack, shall not exceed 5% opacity as a six-minute average. Emissions of fugitive organic compounds (OC) shall not exceed 12.4 lbs/hr and 38.46 tons/yr, as a rolling 12-month summation. Emissions of fugitive methyl formate shall not exceed 12.1 lbs/hr and 37.7 tons/yr, as a rolling 12-month summation. The requirements of OAC rule 3745-31-05 (A)(3) shall include compliance with the requirements of OAC rule 3745-21-07 (G)(2).

2. Additional Terms and Conditions

- 2.a Resins and other liquid organic materials used in this emissions unit shall not be photochemically reactive materials, as defined in OAC rule 3745-21-01.
- 2.b Sand conveying operations and the weigh hopper for the mixer shall be vented through the silo and bin vent.

II. Operational Restrictions

- 1. The maximum annual production rate for this emissions unit shall not exceed 8550 tons of cores produced, based upon a rolling, 12-month summation of the monthly production rates.

III. Monitoring and/or Record Keeping Requirements

- 1. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install # 02-11420, issued on February 11, 1998: A.III.2., A.III.3., A.III.4., A.III.5., and A.III.6. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.
- 2. The permittee shall keep the following daily records for each material employed in this emissions unit:
 - a. The identification of the chemical compound and its physical state at standard conditions.
 - b. For each liquid organic material, documentation as to whether or not the material is a photochemically reactive material as defined in OAC rule 3745-21-01(C)(5).

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

3. The permittee shall keep the following records each day this emissions unit operates:
 - a. The company identification of each liquid organic material employed.
 - b. The amount of sand mixed, in tons.
 - c. The number of hours of operation.
 - d. An estimate of the daily OC emission rate, in pounds, using an emission factor of 5.34 lbs OC per ton of sand mixed.
 - e. An estimate of the average hourly OC emission rate, in pounds, calculated as (d/c).
 - f. An estimate of the daily methyl formate emission rate, in pounds, using an emission factor of 5.2 lbs methyl formate per ton of sand mixed (5.2 lbs methyl formate per ton of sand mixed is the emission factor supplied by vender).
 - g. An estimate of the average hourly methyl formate emission rate, in pounds, calculated as (f/c).
4. The permittee shall maintain monthly records which list the following information:
 - a. The tons of cores produced.
 - b. The rolling 12-month summation of the monthly core production rates.
 - c. The total OC emissions (tons).
 - d. The rolling 12-month summation of the monthly OC emissions (tons).
5. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the bin vent serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.
6. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. the total duration of any visible emission incident; and
 - c. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

1. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install # 02-11420, issued on February 11, 1998: A.IV.2., A.IV.3., A.IV.4., A.IV.5., A.IV.6., and A.IV.7. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.
2. The permittee shall submit quarterly deviation (excursion) reports that identify each day during which any photochemically reactive material was employed.
3. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling 12-month core production rate limitation and the rolling 12-month OC emission limitation.
4. The permittee shall submit quarterly deviation (excursion) reports that identify each day during which the average hourly OC emissions exceeded 12.4 pounds per hour, and the actual average hourly OC emissions for each such day.
5. The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c. of this permit.
6. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the bin vent serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.
7. The permittee shall submit semiannual written reports that (a) identify all days during which any visible fugitive particulate emissions were observed from this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the PE limit of 0.64 lb/hr, from both stack and fugitive egress points summed, shall be determined in accordance with the following equation:

$$E = Ts \times (0.27 \text{ lb PE/ton sand} \times (1 - 0.99) + 0.35 \text{ lb PE/ton sand})$$

where

E = lbs PE per hour

Ts = maximum amount of sand processed per hour (tons)

The emission factor (0.27 lbs PE/ton sand) is specified in US EPA reference document AP-42, Compilation of Emission Factors, Section 11.12, Table 11.12-2 (1/95).

0.99 (99%) is the estimated control efficiency for the bin vent.

0.35 lb PE/ton sand is an emission factor from the Ohio EPA's RACM document, Table 2.7-1 for core making.

Compliance with the PE limitation of 0.64 pound per hour shall be determined in accordance with OAC rule 3745-17-03(B)(10), if required.

V. Testing Requirements (continued)

2. Compliance with the PE limit of 2.8 tons per year shall be determined in accordance with the following equation:

$$E = Ts \times (0.27 \text{ lb PE/ton sand} \times (1 - 0.99) + 0.35 \text{ lb PE/ton sand})$$

where

E = lbs PE emitted per year

Ts = annual amount of sand processed (tons)

0.27 lb PE/ton sand is the emission factor from AP-42 Table 11.12-2 (1995 update) for pneumatic loading to storage silo.

0.99 (99%) is the estimated control efficiency for the silo filter.

0.35 lb PE/ton sand is an emission factor from the Ohio EPA's RACM document, Table 2.7-1 for core making.

3. Emission Limitation: Visible particulate emissions shall not exceed 5% opacity as a six-minute average.

Applicable Compliance Method: Reference Method 9, if requested, 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.

4. Compliance with the OC emission limit of 12.4 lbs/hr shall be determined based upon the record keeping specified in Section A.III.4. of these terms and conditions

To determine the actual daily emission rate for OC, the following equation shall be used:

$$Ed = \text{sand usage rate (in tons per day)} \times 5.38$$

where

Ed = OC emission rate (lbs/day)

5.38 = emission factor (lb OC per ton of sand) for ester-cured phenolic urethane cold box binder system (based on emissions testing by resin manufacturers) + 0.033 (core release) = 5.376 lb OC/ton core

5. Compliance with the OC emission limit of 38.46 tons per year shall be based on the record keeping specified in Section A.III.3 of these terms and conditions, and shall be calculated as the summation of the daily emission rates divided by 2000.

6. Compliance with the methyl formate emission limit of 12.1 lbs/hr shall be determined based upon the record keeping specified in Section A.III.4. of these terms and conditions

To determine the actual daily emission rate for methyl formate, the following equation shall be used:

$$Ed = \text{sand usage rate (in tons per day)} \times 5.2$$

where

Ed = methyl formate emission rate (lbs/day)

5.2 = emission factor (lb methyl formate per ton of sand from vender)

V. Testing Requirements (continued)

7. Compliance with the methyl formate emission limit of 37.7 tons per year shall be based on the record keeping specified in Section A.III.4 of these terms and conditions, and shall be calculated as the summation of the daily emission rates divided by 2000.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

- The permit to install for this emissions unit (P032) was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: methyl formate

TLV (ug/m3): 246000

Maximum Hourly Emission Rate (lbs/hr): 12.1

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 5800 (combined with P033 and P034)

MAGLC (ug/m3): 5800

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:

III. Monitoring and/or Record Keeping 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 value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

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

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

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

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: East Laempe L-20 (P033)

Activity Description: Sand cores are made using an L-20 size Laempe core 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>
L-20 size Laempe core machine, used to make sand cores with bin vent on sand silo	OAC rule 3745-17-11 (B)	See A.I.2.a.
	OAC rule 3745-17-07(A)	In accordance with paragraph (A)(3)(h) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(A) shall not apply to this emissions unit.
	OAC rule 3745-21-07(G)(2)	exempt (See A.I.2.c.)
	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.

<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 No. 02-11952)	Visible particulate emissions, from the fugitives and bin vent stack, shall not exceed 5% opacity as a six-minute average. Emissions of fugitive organic compounds (OC) shall not exceed 8 lbs/hr and 35.0 tons/year. Emissions of fugitive methyl formate shall not exceed 7.1 lbs/hr and 31.1 tons/year. Total particulate emissions (PE), from the fugitives and the bin vent stack summed together, shall not exceed 0.35 lb/hr and 1.53 tons/year. (See A.I.2.b.) The requirements of OAC rule 3745-31-05 (A)(3) shall include compliance with the requirements of OAC rule 3745-21-07 (G)(2).

2. Additional Terms and Conditions

- 2.a In accordance with OAC 3745-17-11(A)(2)(a)(ii), "Figure II" of OAC rule 3745-17-11 shall not apply to this emissions unit because the uncontrolled particulate emissions are less than 10 pounds per hour. In accordance with OAC 3745-17-11(A)(2)(b)(ii), "Table I" of OAC rule 3745-17-11 shall not apply to this emissions unit because it is located in Wayne County.
- 2.b Sand conveying operations and the weigh hopper for the mixer shall be vented through the silo and bin vent.
- 2.c Any liquid organic materials used in this emissions unit shall not be photochemically reactive materials, as defined in OAC rule 3745-21-01.

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

- 1. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install # 02-11952, issued on May 28, 1998: A.III.2., A.III.3., A.III.4., and A.III.5. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

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

2. The permittee shall keep the following daily records for each material used in this emissions unit:
 - a. The identification of the chemical compound and its physical state at standard conditions.
 - b. For each liquid organic material, documentation as to whether or not the material is a photochemically reactive material as defined in OAC rule 3745-21-01(C)(5).
3. The permittee shall keep the following records each day this emissions unit operates:
 - a. The company identification of the the organic materials used.
 - b. The amount of organic materials, curing agent and sand employed, in pounds.
 - c. The number of hours of operation.
 - d. An estimate of the daily OC emission rate, in pounds, using an emission factor of 5.32 lbs OC per ton of sand mixed.
 - e. An estimate of the average hourly OC emission rate, calculated as (d/c).
 - f. An estimate of the daily methyl formate emission rate, in pounds, using an emission factor of 5.2 lbs methyl formate per ton of sand mixed. (5.2 lbs methyl formate per ton of sand mixed is information supplied by vender.)
 - g. An estimate of the average hourly methyl formate emission rate, in pounds, calculated as (f/c).
4. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the bin vent serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. the total duration of any visible emission incident; and
 - c. any corrective actions taken to eliminate the visible emissions.
5. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. the total duration of any visible emission incident; and
 - c. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

1. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install # 02-11952, issued on May 28, 1998: A.IV.2., A.IV.3., A.IV.4., A.IV.5., A.IV.6., and A.IV.7. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.
2. The permittee shall submit quarterly deviation (excursion) reports that identify each day during which any photochemically reactive material was employed.

IV. Reporting Requirements (continued)

3. The permittee shall submit quarterly deviation (excursion) reports that include an identification of each day during which the average hourly OC emissions exceeded 8 pounds per hour, and the actual average hourly OC emissions for each such day.
4. The permittee shall submit annual reports that specify the total PE and the total OC emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.
5. The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c. of this permit.
6. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the bin vent serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.
7. The permittee shall submit semiannual written reports that (a) identify all days during which any visible fugitive particulate emissions were observed from this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the PE limit of 0.35 lb/hr shall be determined in accordance with the following equation:

$$E = Ts \times (0.27 \text{ lb PE/ton sand} \times (1 - 0.99) + 0.35 \text{ lb PE/ton sand})$$

where

E = lbs PE per hour

Ts = maximum amount of sand processed per hour (tons)

The emission factor (0.27 lbs PE/ton sand) is specified in US EPA reference document AP-42, Compilation of Emission Factors, Section 11.12, Table 11.12-2 (1/95).

0.99 (99%) is the estimated control efficiency for the bin vent.

0.35 lb PE/ton sand is an emission factor from the Ohio EPA's RACM document, Table 2.7-1 for core making.

Compliance with the PE limitation of 0.35 pound per hour shall be determined in accordance with OAC rule 3745-17-03(B)(10), if required.

2. Compliance with the PE limit of 1.53 tons/yr shall be determined by using the information recorded in accordance with Section A.III.2. and shall be calculated as the summation of the daily emission rates divided by 2000.
3. Emission Limitation: Visible particulate emissions shall not exceed 5% opacity as a six-minute average.

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

V. Testing Requirements (continued)

4. Compliance with the OC emission limit of 8 lbs/hr shall be determined by using the information recorded in accordance with Section A.III.1 of these terms and conditions.

To determine the actual daily emission rate for OC, the following equation shall be used:

$$Ed = \text{sand usage rate (in tons per day)} \times 5.38$$

where

$$Ed = \text{OC emission rate (lbs/day)}$$

5.38 = emission factor (lb OC per ton of sand) for ester-cured phenolic urethane cold box binder system (based on emissions testing by resin manufacturers) + 0.033 (core release) = 5.376 lb OC/ton core

Compliance with the OC limitation of 8 pounds per hour shall be determined in accordance with OAC rule 3745-21-10(C), if required.

5. Compliance with the OC limit of 35.0 tons/yr shall be determined by using the information recorded in accordance with Section A.III.3. and shall be calculated as the summation of the daily emission rates divided by 2000.
6. Compliance with the methyl formate emission limit of 7.1 lbs/hr shall be determined by using the information recorded in accordance with Section A.III.4. of these terms and conditions

To determine the hourly emission rate for methyl formate, the following equation shall be used:

$$Ed = \text{sand usage rate (in tons per day)} \times 5.2$$

where

$$Ed = \text{methyl formate emission rate (lbs/hour)}$$

5.2 = emission factor (lb methyl formate per ton of sand from vender)

The permittee shall demonstrate compliance with the methyl formate limitation by emissions testing, if required.

7. Compliance with the methyl formate emission limit of 31.1 tons per year shall be determined by using the information recorded in accordance with Section A.III.4. and shall be calculated as the summation of the daily emission rates divided by 2000.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

- The permit to install for this emissions unit (P033) was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: methyl formate

TLV (ug/m3): 246000

Maximum Hourly Emission Rate (lbs/hr): 12.1

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 5800 (combined with P032 and P034)

MAGLC (ug/m3): 5800

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:

III. Monitoring and/or Record Keeping 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 value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

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

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

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

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: West Laempe L-20 (P034)

Activity Description: Sand cores are made using an L-20 size Laempe core 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>
L-20 size Laempe core machine, used to make sand cores with bin vent on sand silo	OAC rule 3745-17-11 (B)	See A.I.2.a.
	OAC rule 3745-17-07(A)	In accordance with paragraph (A)(3)(h) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(A) shall not apply to this emissions unit.
	OAC rule 3745-21-07(G)(2)	exempt (See A.I.2.c.)
	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.

<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 No. 02-11952)	Total particulate emissions (PE), from the fugitives and the bin vent summed together, shall not exceed 0.35 lb/hr and 1.53 tons/year. (See A.1.2.b.) Visible particulate emissions, from the fugitives and the bin vent, shall not exceed 5% opacity as a six-minute average. Emissions of fugitive organic compounds (OC) shall not exceed 8 lbs/hr and 35.0 tons/year. Emissions of fugitive methyl formate shall not exceed 7.1 lbs/hr and 31.1 tons/year. The requirements of OAC rule 3745-31-05 (A)(3) shall include compliance with the requirements of OAC rule 3745-21-07 (G)(2).

2. Additional Terms and Conditions

- 2.a In accordance with OAC 3745-17-11(A)(2)(a)(ii), "Figure II" of OAC rule 3745-17-11 shall not apply to this emissions unit because the uncontrolled particulate emissions are less than 10 pounds per hour. In accordance with OAC 3745-17-11(A)(2)(b)(ii), "Table I" of OAC rule 3745-17-11 shall not apply to this emissions unit because it is located in Wayne County.
- 2.b Sand conveying operations and the weigh hopper for the mixer shall be vented through the silo and bin vent.
- 2.c Liquid organic materials used in this emissions unit shall not be photochemically reactive materials, as defined in OAC rule 3745-21-01.

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

- 1. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install # 02-11952, issued on May 28, 1998: A.III.2. A.III.3., A.III.4., and A.III.5. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

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

2. The permittee shall keep the following daily records for each material used in this emissions unit:
 - a. The identification of the chemical compound and its physical state at standard conditions.
 - b. For each liquid organic material, documentation as to whether or not the material is a photochemically reactive material as defined in OAC rule 3745-21-01(C)(5).
3. The permittee shall keep the following records each day this emissions unit operates:
 - a. The company identification of the the organic materials used.
 - b. The amount of organic materials, curing agent and sand employed, in pounds.
 - c. The number of hours of operation.
 - d. An estimate of the daily OC emission rate, in pounds, using an emission factor of 5.32 lbs OC per ton of sand mixed.
 - e. An estimate of the average hourly OC emission rate, calculated as (d/c).
 - f. An estimate of the daily methyl formate emission rate, in pounds, using an emission factor of 5.2 lbs methyl formate per ton of sand mixed. (5.2 lbs methyl formate per ton of sand mixed is information supplied by vender.)
 - g. An estimate of the average hourly methyl formate emission rate, in pounds, calculated as (f/c).
4. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the bin vent serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. the total duration of any visible emission incident; and
 - c. any corrective actions taken to eliminate the visible emissions.
5. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. the total duration of any visible emission incident; and
 - c. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

1. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install # 02-11952, issued on May 28, 1998: A.IV.2., A.IV.3., A.IV.4., A.IV.5., A.IV.6., and A.IV.7. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.
2. The permittee shall submit quarterly deviation (excursion) reports that identify each day during which any photochemically reactive material was employed.

IV. Reporting Requirements (continued)

3. The permittee shall submit quarterly deviation (excursion) reports that include an identification of each day during which the average hourly OC emissions exceeded 8 pounds per hour, and the actual average hourly OC emissions for each such day.
4. The permittee shall submit annual reports that specify the total PE and the total OC emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.
5. The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c. of this permit.
6. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the bin vent serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.
7. The permittee shall submit semiannual written reports that (a) identify all days during which any visible fugitive particulate emissions were observed from this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the PE limit of 0.35 lb/hr shall be determined in accordance with the following equation:

$$E = Ts \times (0.27 \text{ lb PE/ton sand} \times (1 - 0.99) + 0.35 \text{ lb PE/ton sand})$$

where

E = lbs PE per hour

Ts = maximum amount of sand processed per hour (tons)

The emission factor (0.27 lbs PE/ton sand) is specified in US EPA reference document AP-42, Compilation of Emission Factors, Section 11.12, Table 11.12-2 (1/95).

0.99 (99%) is the estimated control efficiency for the bin vent.

0.35 lb PE/ton sand is an emission factor from the Ohio EPA's RACM document, Table 2.7-1 for core making.

Compliance with the PE limitation of 0.35 pound per hour shall be determined in accordance with OAC rule 3745-17-03(B)(10), if required.

2. Compliance with the PE limit of 1.53 tons/yr shall be determined by using the information recorded in accordance with Section A.III.2. and shall be calculated as the summation of the daily emission rates divided by 2000.
3. Emission Limitation: Visible particulate emissions shall not exceed 5% opacity as a six-minute average.

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

V. Testing Requirements (continued)

4. Compliance with the OC emission limit of 8 lbs/hr shall be determined by using the information recorded in accordance with Section B.III.1 of these terms and conditions.

To determine the actual daily emission rate for OC, the following equation shall be used:

$$Ed = \text{sand usage rate (in tons per day)} \times 5.38$$

where

$$Ed = \text{OC emission rate (lbs/day)}$$

5.38 = emission factor (lb OC per ton of sand) for ester-cured phenolic urethane cold box binder system (based on emissions testing by resin manufacturers) + 0.033 (core release) = 5.376 lb OC/ton core

Compliance with the OC limitation of 8 pounds per hour shall be determined in accordance with OAC rule 3745-21-10(C), if required.

5. Compliance with the OC limit of 35.0 tons/yr shall be determined by using the information recorded in accordance with Section A.III.3. and shall be calculated as the summation of the daily emission rates divided by 2000.
6. Compliance with the methyl formate emission limit of 7.1 lbs/hr shall be determined by using the information recorded in accordance with Section A.III.4. of these terms and conditions

To determine the hourly emission rate for methyl formate, the following equation shall be used:

$$Ed = \text{sand usage rate (in tons per day)} \times 5.2$$

where

$$Ed = \text{methyl formate emission rate (lbs/hour)}$$

5.2 = emission factor (lb methyl formate per ton of sand from vender)

The permittee shall demonstrate compliance with the methyl formate limitation by emissions testing, if required.

7. Compliance with the methyl formate emission limit of 31.1 tons per year shall be determined by using the information recorded in accordance with Section A.III.4. and shall be calculated as the summation of the daily emission rates divided by 2000.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

- The permit to install for this emissions unit (P034) was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: methyl formate

TLV (ug/m3): 246000

Maximum Hourly Emission Rate (lbs/hr): 12.1

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 5800 (combined with P032 and P033)

MAGLC (ug/m3): 5800

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:

III. Monitoring and/or Record Keeping 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 value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

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

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

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

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Inliner Pour/cool line (P036)

Activity Description: Pouring and cooling area for the molds made on the Osborn Inliner automatic molding 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>
pouring and cooling area for the molds made on the Osborn Inliner automatic molding machine	OAC rule 3745-18-06 (E)(2)	Emissions of sulfur dioxide (SO ₂) shall not exceed 782 pounds per hour. (See A.I.2.c.)
	OAC rule 3745-17-07(A)	In accordance with paragraph (A)(3)(h) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(A) shall not apply to this emissions unit.
	OAC rule 3745-17-11(B)(1)	See A.I.2.a.
	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.

<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 No. 02-9754)	Fugitive and stack particulate emissions (PE), combined, shall not exceed 9.9 pounds per hour. Visible fugitive and/or stack particulate emissions shall not exceed 20% opacity as a six-minute average. Fugitive and stack organic compound (OC) emissions, combined, shall not exceed 2.8 pounds per hour. See A.I.2.b. The requirements of OAC rule 3745-31-05 (A)(3) also include compliance with the requirements of OAC rule 3745-18-06 (E)(2).

2. Additional Terms and Conditions

- 2.a** In accordance with OAC 3745-17-11(A)(2)(a)(ii), "Figure II" of OAC rule 3745-17-11 shall not apply to this emissions unit because the uncontrolled particulate emissions are less than 10 pounds per hour. Based on the results of emissions testing conducted on January 18, 1996 and a maximum iron pour rate of 20 tons per hour, the maximum uncontrolled particulate matter emission rate is 9 pounds per hour. In accordance with OAC 3745-17-11(A)(2)(b)(ii), "Table I" of OAC rule 3745-17-11 shall not apply to this emissions unit because it is located in Wayne County.
- 2.b** The pouring and cooling emissions are fugitive. These emissions are captured in hooding and vented outside the building through 6 stacks. The collection efficiency of the capture hoods shall be sufficient to minimize or eliminate visible particulate emissions of fugitive dust at all points of capture. The permittee shall maintain all hood and enclosures in good operating condition. Additional capture hooding or enclosures shall be installed if required by the Ohio EPA.
- 2.c** No record keeping and monitoring is required for the SO₂ emission limit because the maximum uncontrolled emission rate of SO₂ cannot exceed the limit.

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall keep the following records each day this emissions unit operates:
 - a. The company identification of each liquid organic material employed.
 - b. The amount of sand mixed, in tons.
 - c. The number of hours of operation.
 - d. An estimate of the daily OC emission rate, in pounds, using an emission factor of 5.34 lbs OC per ton of sand mixed.
 - e. An estimate of the average hourly OC emission rate, in pounds, calculated as (d/c).
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stacks serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to minimize or eliminate the visible emissions.

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

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

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

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify each day during which the average hourly OC emissions exceeded 2.8 pounds per hour, and the actual average hourly OC emissions for each such day.
2. The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c. of this permit.
3. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stacks serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.
4. The permittee shall submit semiannual written reports that (a) identify all days during which any visible fugitive particulate emissions were observed from this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the SO₂ emission limitation is Section A.1 of these terms and conditions shall be determined in accordance with the following methods:

Compliance shall be demonstrated by multiplying the maximum production rate (tons iron/hour) by 0.02 lb SO₂/ton iron.

The emission factor (0.02 lb SO₂/ton iron) is specified in US EPA reference document Factor Information Retrieval Data System, Version 6.22, SCC 30400320.

2. Compliance with the PE emission limitation of 9.9 pounds per hour shall be determined in accordance with OAC rule 3745-17-03(B)(10). No testing of the stacks is specifically required by this permit but, if appropriate, may be required pursuant to OAC rule 3745-15-04(A).
3. Emission Limitation: Visible particulate emissions shall not exceed 20% opacity as a six-minute average.

Applicable Compliance Method: Reference Method 9, if requested, 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.

4. Compliance with the OC emission limit of 2.8 lbs/hr shall be determined based upon the record keepint specified in Section A.III.1.

To determine the actual daily emission rate for OC, the following equation shall be used:

$Ed = \text{daily iron production rate (in tons per day)} \times 0.02 \text{ lb OC/ton iron}$

where

$Ed = \text{OC emission rate (lbs/day)}$

0.02 lb OC/ton iron is an emission factor specified in US EPA reference document Factor Information Retrieval Data System, Version 6.22, SCC 30400320.

V. Testing Requirements (continued)

5. Compliance with the PE emission limitation of 9.9 lbs/hour shall be determined in accordance with the following methods:

Compliance may be demonstrated by multiplying the maximum production rate (tons iron/hour) by .45 lb PE/ton iron

The emission factor (.45 lb PE/ton iron) was determined during a January 18, 1996, emissions test of 5 of the 6 stacks at the facility.

Compliance with the PE limitation of 9.9 pounds per hour shall be determined in accordance with OAC rule 3745-17-03(B)(10), if required.

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: Pipe End Grinder (P038)
Activity Description: Surface grinder used to remove metal from castings

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>
surface grinder used to remove metal from castings, equipped with a baghouse	OAC rule 3745-17-11(B)(1)	The requirements established pursuant to OAC rule 3745-17-11 (B) are less restrictive than the requirements established pursuant to OAC rule 3745-31-05 (A) for emissions unit P002.
	OAC rule 3745-17-07(A)	See A.I.2.a. The requirements established pursuant to OAC rule 3745-17-07 (A) are less restrictive than the requirements established pursuant to OAC rule 3745-31-05 (A)(3).
	OAC rule 3745-31-05 (A)(3) (PTI No. 02-10315)	Particulate emissions (PE) shall not exceed 0.01 gr/dscf of fabric filter exhaust gases and 0.86 pound per hour. Visible particulate emissions shall not exceed 5% opacity as a six-minute average.

2. Additional Terms and Conditions

- 2.a. This emissions unit is operationally united with P002 (twelve snag grinders), P012, (two Pangborn Tumblast machines), P013 (South Wheelabrator shotblast machine), and P026 (North Wheelabrator shotblast machine), and all these emissions units are controlled by a common baghouse.
- 2.b PE from the surface grinder shall be vented to the baghouse serving P002.

II. Operational Restrictions

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

II. Operational Restrictions (continued)

2. The collection efficiency of the air pollution capture hoods shall be sufficient to minimize or eliminate visible particulate emissions of fugitive dust at the point(s) of capture. The collection efficiency shall be considered adequate if visible particulate emissions of fugitive dust do not exceed 20% opacity as a three-minute average.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse on daily basis.
2. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the baghouse serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. the total duration of any visible emission incident; and
 - c. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

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

The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c. of this permit.

2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the baghouse serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following testing requirements are as stringent as or more stringent than the testing requirements contained in Permit to Install # 02-10315, issued on July 24, 1996: A.V.2., A.V.3., A.V.4., A.V.5., and A.V.6. The testing requirements contained in the above-referenced Permit to Install are subsumed into the testing requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying testing requirements in the Permit to Install.
2. Emission Limitation: Visible particulate emissions shall not exceed 5% opacity as a six-minute average.

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

V. Testing Requirements (continued)

3.a Emission testing requirements

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

- i. The emission testing shall be conducted within 12 months after issuance of the permit and within 12 months prior to permit expiration.
- ii. The emission testing shall be conducted to demonstrate compliance with the mass emission limit for particulate emissions, to determine the uncontrolled mass rate of emissions, to establish the pressure drop across the baghouse, to establish the flow rate from this emissions unit, and to determine the visible particulate emissions.
- iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): Methods 1-5 and 9 of 40 CFR Part 60, Appendix A.
- iv. The test(s) shall be conducted while this emissions unit and P012, P013, P026, and P002 are operating at or near their maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office.

A particulate emissions test also shall be conducted at the inlet of the control device to determine the uncontrolled mass rate of emissions for the emissions unit, for purposes of applying Figure II of OAC Rule 3745-17-11. For this testing, Method 5 of 40 CFR Part 60, Appendix A shall be employed.

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

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

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

- 4.** Emission Limitation for PE : 0.01 gr/dscf and 0.86 pound per hour from the baghouse

Applicable Compliance Method: Compliance shall be demonstrated by the emissions testing and procedures specified in section A.V.3 of these terms and conditions.

- 5.** Compliance with the fugitive visible emission limitation shall be determined in accordance with OAC rule 3745-17-03(B)(3).

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
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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: Fischer Pushup/Punchout (P039)

Activity Description: Removing sand and raw castings from mold by first a pushup action followed by a punchout action into shakeout

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>
Georg Fischer pushup/punchout, equipped with a baghouse	OAC rule 3745-17-07 (A)	The requirements established pursuant to OAC rule 3745-17-07 (A) are less restrictive than the requirements established pursuant to OAC rule 3745-31-05 (A)(3).
	OAC rule 3745-17-11 (A)	The requirements established pursuant to OAC rule 3745-17-11 (B) are less restrictive than the requirements established pursuant to OAC rule 3745-31 05 (A)(3).
	OAC rule 3745-31-05 (A)(3) (PTI No. 02-2565)	0.010 grain of particulate emissions (PE/PM10) per dry standard cubic foot of exhaust air from the baghouse
		1.29 lbs PE per hour and 2.6 tons per year from the baghouse
		Fugitive PE shall not exceed 0.39 ton per year.
		Visible emissions from the baghouse not to exceed 5 % opacity as a six-minute average.
		12 lbs organic compounds (OC) per hour and 4.92 tons per year from the baghouse.
		See A.II.1.
	OAC rule 3745-17-07 (B)	In accordance with paragraph (B)(11)(d) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.

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

**Applicable Rules/
Requirements**

**Applicable Emissions
Limitations/Control
Measures**

OAC rule 3745-17-08 (B)

In accordance with paragraph (A)(1) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.

2. Additional Terms and Conditions

2.a PE from the enclosed pushup/punchout shall be vented to the baghouse.

II. Operational Restrictions

1. The maximum annual production rate for this emissions unit shall not exceed 8,200 tons of metal, based upon a rolling, 12-month summation of the production rates.
2. The pressure drop across the baghouse shall be maintained within the range of 2 to 6 inches of water while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

1. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in Permit to Install # 02-2565, issued on March 31, 1999: A.III.2., A.III.3., A.III.4., and A.III.5. The monitoring and record keeping requirements contained in the above-referenced Permit to Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.
2. The permittee shall maintain monthly records of the following information:
 - a. the metal production rate in tons and
 - b. the rolling, 12-month summation of the metal production rate.
3. In order to determine the hourly emission rates of PE and OC, the permittee shall maintain the following daily records:
 - a. the metal production rate, in tons;
 - b. the hours of operation;
 - c. an estimate of the daily PE emissions, in pounds, using an emission factor of 3.2 lbs PE/ton metal (the emission factor is taken from AP-42, Table 12.10-7.
4. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse on daily basis.

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

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

IV. Reporting Requirements

1. Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install # 02-2565, issued on March 31, 1999: A.IV.2., A.IV.3., A.IV.4., A.IV.5., and A.IV.6. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.
2. The permittee shall submit quarterly deviation (excursion) reports that identify each day during which the average hourly OC exceeded the emissions limitation of 12 pounds, and the actual average hourly OC.
3. The permittee shall submit quarterly deviation (excursion) reports that identify each month during which the rolling, 12-month iron production rate exceeded the operational restriction of 8,200 tons iron, and the actual rolling 12-month production rate.
4. The permittee shall submit quarterly pressure drop deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above.
5. The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c. of this permit.
6. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the baghouse serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):
 - 1.a Emission Limitation:
1.29 lbs PE per hour

Applicable Compliance Method:

To determine compliance with the hourly PE limitation, the following equation may be used:

$$E = [\text{iron poured (tons per hour)} \times 3.2 (\text{lb/tn})]$$

where:

$$E = \text{PE (lbs/hour)}$$

3.2 = emissions factor in pounds PE per ton iron produced, from AP-42, Table 12.10-7

Compliance with the PE limitation of 1.29 pounds per hour shall be determined in accordance with OAC rule 3745-17-03(B)(10), if required.

V. Testing Requirements (continued)

- 1.b** Emission Limitation:
2.6 tons PE per year

Applicable Compliance Method:

To determine compliance with the annual PE limitation, the following equation shall be used:

$$E = [\text{iron poured (tons per year)} \times 3.2 \text{ (lb/tn)}] / 2000 \text{ lbs per ton}$$

where:

E = PE (tons/year)

3.2 = emissions factor in pounds PE per ton iron produced, from AP-42, Table 12.10-7

- 1.c** Emission Limitation:
12 lbs OC per hour

Applicable Compliance Method:

Compliance shall be determined by the record keeping specified in A.III.3. To determine compliance with the hourly OC limitation, the following equation shall be used:

$$E = [\text{maximum iron poured (tons per hour)} \times 1.2 \text{ (lb/tn)}]$$

where:

E = OC (lbs/hour)

1.2 = emissions factor in pounds OC per ton iron produced from US EPA reference document Factor Information Retrieval Data System, Version 6.22, SCC 3-04003-31.

Compliance with the OC limitation of 12 pounds per hour shall be determined in accordance with OAC rule 3745-21-10(C), if required.

- 1.d** Emission Limitation:
4.92 tons OC per year

Applicable Compliance Method:

Compliance shall be determined based upon the record keeping specified in A.III.3. Compliance shall be calculated by the summation of the daily emission rates divided by 2000.

- 1.e** Emission Limitation:
Fugitive particulate emissions shall not exceed 0.39 ton per year.

Applicable Compliance Method:

To determine compliance with the limitation, the following equation shall be used:

$$E = [\text{iron processed (tons per year)} \times 3.2 \text{ (lbs/ton)} \times 1/2000 \text{ (ton/lbs)}] \times (1 - 0.9) \times (1 - 0.7)$$

where:

E = PE emissions (tons/year)

3.2 = emission factor in lbs particulate matter per ton iron processed (from AP-42, Table 12.10-7)

0.9 = capture efficiency for particulate matter

0.7 = estimated capture efficiency for building enclosure

V. Testing Requirements (continued)

1.f Emission Limitation:
Visible emissions from the baghouse shall not exceed 5 % opacity as a six-minute average.

Applicable Compliance Method:
Compliance shall be determined by using the procedures from US EPA reference 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: Inliner Shakeout (P901)

Activity Description: Shakeout for the Osborn Inliner automatic molding machine

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
shakeout for the Osborn Inliner automatic molding machine;	OAC rule 3745-17-11(B) (1)	Particulate emissions (PE) from the wet scrubber and the stack serving the cooling conveyor combined shall not exceed 45.2 pounds per hour. (See A.I.2.a., A.I.2.b., and A.I.2.c.)
	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.
	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.

2. Additional Terms and Conditions

- 2.a This emissions unit is operationally united with P903 (Inliner shakeout sand recycle system) and is controlled by a common wet scrubber. The allowable emission rate from the wet scrubber was determined by using Figure II and an uncontrolled emission rate of 523.5 pounds per hour of particulate emissions, as determined in an April 2, 1996, emissions test.
- 2.b If the emissions testing required for this emissions unit demonstrates that the allowable emissions rate from Figure II is more stringent than 45.2 lbs/hour, the permittee shall comply with the more stringent limitation.
- 2.c PE from the punchout, scalping conveyor, and shakeout deck shall be vented to the mechanically aided wet scrubber. (The cooling conveyor exhaust stack is not controlled.)

II. Operational Restrictions

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

The scrubber water flow rate shall be continuously maintained at a value of not less than 122 gallons per minute at all times while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

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

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

- a. The pressure drop across the scrubber, in inches of water, on a continuous basis.
 - b. The scrubber water flow rate, in gallons per minute, once per 8 hours.
 - c. The operating times for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stacks serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to minimize or eliminate the visible emissions.

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

IV. Reporting Requirements

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

The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c. of this permit.

IV. Reporting Requirements (continued)

2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stacks serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Emission Limitation: Visible particulate emissions shall not exceed 20% opacity as a six-minute average.

Applicable Compliance Method: Reference Method 9, if requested, 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.

2. Compliance with the PE limitation of 45.19 pounds per hour shall be determined in accordance with OAC rule 3745-17-03(B)(10).
3. 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 12 months after issuance of the permit and within 12 months prior to permit expiration.
 - b. The emission testing shall be conducted to demonstrate compliance with the mass emission limit for particulate emissions, to determine the pressure drop across the scrubber and the scrubber water flow rate, and to determine the air flow from this emissions unit.
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): Methods 1-5 of 40 CFR Part 60, Appendix A and US EPA Method 9 readings of the stacks during each testing run.
 - 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 Northeast District Office.

A particulate emissions test also shall be conducted at the inlet of the control device to determine the uncontrolled mass rate of emissions for the emissions unit, for purposes of applying Figure II of OAC rule 3745-17-11. For this testing, Method 5 of 40 CFR Part 60, Appendix A shall be employed.

4. 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 Northeast 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 Northeast District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA Northeast 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 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 Northeast District Office within 30 days following completion of the test(s).

Facility Name: **The Quality Castings Company**
Facility ID: **02-85-01-0001**
Emissions Unit: **Inliner Shakeout (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: Back Floor Mold Sand Handling System (P902)

Activity Description: Moves sand from P017 Shakeout through screening, cooling, preparation and mixing operations at East End Muller (previously P023) out to Hunter and 722 Mold Lines.

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 sand handling system back floor, equipped with a baghouse	OAC rule 3745-17-11 (B)	The requirements of OAC rule 3745-17-11 (B) are less restrictive than the requirements of OAC rule 3745-31-05 (A)(3).
	OAC rule 3745-17-07(A)	The requirements established pursuant to OAC rule 3745-17-07 (A) are less restrictive than the requirements established pursuant to OAC rule 3745-31-05 (A) (3).
	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.

<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 No. 02-2565)	Particulate emissions (PE) shall not exceed 0.010 gr/dscf of exhaust gases and 3.49 pounds per hour and 6.99 tons per year from the baghouse. Fugitive emissions shall not exceed 6.48 tons per year of PM and 0.97 tons per year of PM-10. Visible particulate emissions shall not exceed 5% opacity as a six-minute average from the baghouse. See A.I.2.a, A.I.2.b, and A.I.2.c.

2. Additional Terms and Conditions

- 2.a All sand processing equipment shall be fully enclosed and shall be exhausted to the baghouse. This shall include the rotary screen, the sand cooler and cyclone, and the return sand storage silo.
- 2.b All material handling equipment, except the final belt conveyor, shall be covered and shall be exhausted to the baghouse. This shall include the belt conveyor from the existing shakeout, the transfer point at the cross magnetic belt conveyor, the belt conveyors to the sand cooler, and the vibrating feed conveyor. The final belt conveyor to the existing sand miller shall be enclosed at the head and tail end and shall be exhausted to the baghouse.
- 2.c The collection efficiency of the air pollution capture hoods shall be sufficient to minimize or eliminate visible particulate emissions of fugitive dust at all points of capture. The visible emissions of fugitive dust from the building that encloses this emissions unit shall not exceed 5% opacity as a six-minute average.

II. Operational Restrictions

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

III. Monitoring and/or Record Keeping Requirements

- 1. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse on daily basis.
- 2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the baghouse serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.

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

3. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. the total duration of any visible emission incident; and
 - c. any corrective actions taken to eliminate the visible emissions.
4. The permittee shall maintain daily records of the hours of operation.
5. To determine compliance with the annual fugitive PE and PM-10 limitations, the permittee shall record the amount of sand handled by this emissions unit, in tons, on a monthly basis.

IV. Reporting Requirements

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

The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c. of this permit.

2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the baghouse serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.
3. **None**
4. The permittee shall submit semiannual written reports that (a) identify all days during which any visible fugitive particulate emissions were observed from this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Emission Limitation: Visible particulate emissions shall not exceed 5% opacity as a six-minute average.

Applicable Compliance Method: Reference Method 9, if requested, 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.

- 2.a Emission Limitation: 0.01 gr/dscf and 3.49 pounds PE per hour from the baghouse stack

Applicable Compliance Method: Compliance shall be demonstrated by the emissions testing and procedures specified in section A.V.3. of these terms and conditions.

The hourly limit of 3.49 pounds per hour is based on a grain loading limit of 0.01 gr/dscf and the anticipated gas flow rate from this emissions unit of 37,000 SCFM.

- 2.b Emission Limitation: 6.99 tons per year from baghouse stack

Applicable Compliance Method: Compliance shall be demonstrated by multiplying the hourly emission rate (in lbs/hour) by the annual hours of operation (in hours/year) and by 1 ton/2000 lbs.

V. Testing Requirements (continued)

- 2.c** Compliance with the fugitive PE emission limit of 6.48 tons/yr shall be determined in accordance with the following equation:

$$E = Ts \times 3.6 \text{ (lbs PM/ton sand)} \times (1-.99) \times 1/2000 \text{ (ton/pounds)}$$

where

E = tons PM emitted per year

Ts = actual amount of sand processed per year (tons)

3.6 lbs PE/ton sand is the emission factor from AP-42 Table 12.10-7 (1/95 update), for sand handling.

0.99 (99%) is the assumed collection efficiency of the air pollution capture hoods.

- 2.d** Compliance with the fugitive PM-10 emission limit of 0.97 ton/yr shall be determined in accordance with the following equation:

$$E = Ts \times 0.54 \text{ (lbs PM-10/ton sand)} \times (1-.99) \times 1/2000 \text{ (ton/pounds)}$$

where

E = tons PM-10 emitted per year

Ts = actual amount of sand processed per year (tons)

0.54 lbs PM-10/ton sand is an emission factor submitted in the application for PTI 02-11040 and is based on U.S. EPA document "PM-10 Emission Factor Listing Developed by Technology Transfer, 3-04-003-50".

0.99 (99%) is the assumed collection efficiency of the air pollution capture hoods.

- 3.** 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 12 months prior to permit expiration. (The last emissions testing on this emissions unit which demonstrated compliance was last conducted on April 4, 2001.)
- b. The emission testing shall be conducted to demonstrate compliance with the mass emission limit for particulate emissions, to determine the air flow rate from this emissions unit, and to determine the pressure drop across the baghouse.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): Methods 1-5 of 40 CFR Part 60, Appendix A and US EPA Method 9 reading for each sampling run.
- 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 Northeast District Office.

A particulate emissions test also shall be conducted at the inlet of the control device to determine the uncontrolled mass rate of emissions for the emissions unit, for purposes of applying Figure II of OAC Rule 3745-17-11. For this testing, Method 5 of 40 CFR Part 60, Appendix A shall be employed.

V. Testing Requirements (continued)

4. 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 Northeast 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 Northeast District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA Northeast 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 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 Northeast District Office within 30 days following completion of the test(s).

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<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: Inliner Shakeout Sand Recycle System (P903)
Activity Description: Sand system used to return sand from shakeout to recycle silos.

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 system which is used to return sand from shakeout to recycle silos.	OAC rule 3745-17-11(B)(1)	Particulate emissions (PE) shall not exceed 45.2 pounds per hour from both the scrubber stack and the fugitive stack. (See A.I.2.a., A.I.2.b., and A.I.2.c.)
	OAC rule 3745-17-07(A)	Visible particulate matter emissions from any stack shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.
	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.

2. Additional Terms and Conditions

- 2.a. This emissions unit is operationally united with P901 (Inliner shakeout) and is controlled by a common wet scrubber. The allowable emission rate from the wet scrubber was determined by using Figure II and an uncontrolled emission rate of 523.5 pounds per hour of particulate emissions, as documented in an April 2, 1996, emissions test.
- 2.b. If the emissions testing required for this emissions unit demonstrates that the allowable emissions rate from Figure II is more stringent than 45.2 lbs/hour, the permittee shall comply with the more stringent limitation.
- 2.c. PE from the belt transfer 7 to 8, belt transfer 8 to 8A, belt transfer 8A to rotary screen, and the rotary screen shall be vented to the mechanically aided wet scrubber.

II. Operational Restrictions

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

The scrubber water flow rate shall be continuously maintained at a value of not less than 122 gallons per minute at all times while the emissions unit is in operation.

III. Monitoring and/or Record Keeping Requirements

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

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

- a. The pressure drop across the scrubber, in inches of water, on a continuous basis.
 - b. The scrubber water flow rate, in gallons per minute, once per 8 hours.
 - c. The operating times for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stacks serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to minimize or eliminate the visible emissions.

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

IV. Reporting Requirements

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

The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c. of this permit.

IV. Reporting Requirements (continued)

2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stacks serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

1. Emission Limitation: Visible particulate emissions shall not exceed 20% opacity as a six-minute average.

Applicable Compliance Method: Reference Method 9, if requested, 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.

2. Compliance with the PE limitation of 45.19 pounds per hour shall be determined in accordance with OAC rule 3745-17-03(B)(10).
3. 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 12 months after issuance of the permit and within 12 months prior to permit expiration.
 - b. The emission testing shall be conducted to demonstrate compliance with the mass emission limit for particulate emissions, to determine the pressure drop across the scrubber and the scrubber water flow rate, and to determine the air flow from this emissions unit.
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): Methods 1-5 of 40 CFR Part 60, Appendix A and US EPA Method 9 readings of the stacks during each run.
 - 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 Northeast District Office.

A particulate emissions test also shall be conducted at the inlet of the control device to determine the uncontrolled mass rate of emissions for the emissions unit, for purposes of applying Figure II of OAC Rule 3745-17-11. For this testing, Method 5 of 40 CFR Part 60, Appendix A shall be employed.

4. 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 Northeast 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 Northeast District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA Northeast 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 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 Northeast District Office within 30 days following completion of the test(s).

Facility Name: **The Quality Castings Company**
Facility ID: **02-85-01-0001**
Emissions Unit: **Inliner Shakeout Sand Recycle System (P903)**

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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