



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

04/13/04

**RE: Proposed Title V Chapter 3745-77 Permit
15-76-05-0200
Ohio Cast Products**

Attn: Genevieve Damico AR-18J
United States Environmental Protection Agency
Region V
77 West Jackson Blvd.
Chicago, IL 60604-3590

Dear Ms. Damico:

The proposed issuance of the Title V permit for Ohio Cast Products, has been created in Ohio EPA's State Air Resources System (STARS) on 04/13/04, for review by USEPA. This proposed action is identified in STARS as  3-Title V Proposed Permit T+C covering the facility specific terms and conditions, and  Title V Proposed Permit covering the general terms and conditions. This proposed permit will be processed for issuance as a final action after forty-five (45) days from USEPA's receipt of this certified letter if USEPA does not object to the proposed permit. Please contact me at (614) 644-3631 by the end of the forty-five (45) day review period if you wish to object to the proposed permit.

Very truly yours,


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

cc: Canton Division of Air Pollution Control
File, DAPC PMU



State of Ohio Environmental Protection Agency

PROPOSED TITLE V PERMIT

Issue Date: 04/13/04

Effective Date: To be entered upon final issuance

Expiration Date: To be entered upon final issuance

This document constitutes issuance of a Title V permit for Facility ID: 15-76-05-0200 to:
Ohio Cast Products
2408 13th. Street N.E.
Canton, OH 44705

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

Table with 3 columns: Emissions Unit ID (Company ID), Emissions Unit Activity Description, and Emissions Unit Activity Description. Rows include units like F001 (Charge Handling), P001 (Shotblast #1), P002 (Grinding Shop), P003 (Hunter Shakeout), P004 (Continuous Annealing Furnace), P011 (Induction Furnace No. 1), P012 (Hunter Pouring and Cooling Line), P015 (Internal Quench and Draw Furnaces #2), furnace, P016 (Internal Quench and Draw Furnaces #3), P017 (Shotblast #2), P018 (Laempe (L-20) Coremaking Machine #1), P022 (Induction Furnace No. 2), P023 (Ductile Inoculation), P024 (Laempe (L-5) Isocure Coremaking Machine), P025 (Laempe (L-20) Coremaking Machine #2), P026 (Internal Quench and Draw Furnaces #1), P027 (Laempe (L-20) Coremaking Machine #3), P030 (Laempe (L-20) Coremaking Machine #5), P901 (Didion Drum and Sprue Conveyor), P902 (Hunter Sand System and Moldmaking), and Z015 (Core Wash Operations).

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 3745-77-08(E) 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:

Canton Division of Air Pollution Control
420 Market Avnue N.
Canton, OH 44702-1544
(330) 489-3385

OHIO ENVIRONMENTAL PROTECTION AGENCY

Christopher Jones
Director

PART I - GENERAL TERMS AND CONDITIONS

A. *State and Federally Enforceable Section*

1. **Monitoring and Related Record Keeping and Reporting Requirements**

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Written reports that identify all other deviations of the federally enforceable requirements contained in this permit, including the monitoring, record keeping, and reporting requirements, which are not reported in accordance with General Term and Condition A.1.c.ii above shall be

submitted to the appropriate Ohio EPA District Office or local air agency by January 31 and July 31 of each year; and each report shall cover the previous six calendar months.

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

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

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

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

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

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

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

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

2. **Scheduled Maintenance**

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

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

3. **Risk Management Plans**

If applicable, the permittee shall develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq. ("Act"); and, pursuant to 40 C.F.R. 68.215(a), the permittee shall submit either of the following:

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

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

4. **Title IV Provisions**

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

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

5. Severability Clause

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

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

6. General Requirements

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

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

7. Fees

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

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

8. Marketable Permit Programs

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

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

9. Reasonably Anticipated Operating Scenarios

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

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

10. Reopening for Cause

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

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

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

11. Federal and State Enforceability

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

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

12. Compliance Requirements

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

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

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

13. Permit Shield

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

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

14. Operational Flexibility

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

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

15. Emergencies

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

16. Off-Permit Changes

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

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

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

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

17. Compliance Method Requirements

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

(This term is provided for informational purposes only.)

18. Insignificant Activities

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

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

19. Permit to Install Requirement

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

20. Air Pollution Nuisance

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

21. Permanent Shutdown of an Emissions Unit

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

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

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

B. State Only Enforceable Section

1. Reporting Requirements Related to Monitoring and Record Keeping Requirements

The permittee shall submit required reports in the following manner:

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

2. Records Retention Requirements

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

3. Inspections and Information Requests

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

4. Scheduled Maintenance/Malfunction Reporting

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

5. Permit Transfers

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

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

If no emission limitation (or control requirement), operational restriction and/or control device parameter limitation deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

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

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

Part II - Specific Facility Terms and Conditions

A. State and Federally Enforceable Section

1. This facility is 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 the Ohio EPA.
2. The following insignificant emissions units are located at this facility:

F002 - plant roadways and parking lots;
F004 - storage piles (PTI 15-1182); and
P028 - 35-ton holding furnace (PTI 15-1360).

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

B. State Only Enforceable Section

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

B002 - boiler;
B003 - gas-fired heater;
B004 - Dravo gas heater;
P009 - shell coremaking operations;
Z004 - machine shop;
Z005 - parts cleaner #1 (machine shop);
Z006 - parts cleaner #2 (tool and die);
Z007 - parts cleaner #3 (maint. #1);
Z008 - parts cleaner #4 (maint. #2);
Z009 - parts cleaner #5 (QC lab);
Z010 - sandblaster;
Z011 - pattern shop;
Z012 - 3.0 MMBtu/hr makeup air unit;
Z013 - detergent parts washer #1;
Z014 - hot metal transfer; and
Z016 - core sand storage silo and two day bins w/heaters.

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Charge Handling (F001)

Activity Description: Truck unloading and raw material transfer by overhead magnetic crane to rotating charge bucket

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Truck unloading and raw material transfer by overhead magnetic crane to rotating charge bucket.	OAC rule 3745-17-08(B)	See A.1.2.a below.
	OAC rule 3745-17-07(B)	Visible fugitive particulate emissions shall not exceed 20% opacity as a 3-minute average.

2. Additional Terms and Conditions

- 2.a RACM shall include the installation and use of hoods, fans, and other equipment to adequately enclose, contain, capture, vent and control the fugitive dust. Such equipment shall meet the following requirement:

The capture efficiency shall be sufficient to minimize or eliminate visible particulate emissions of fugitive dust at the point(s) of capture to the extent possible with good engineering design.

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions 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 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.

2. Persons responsible for making the visible emission observations required in section A.III.1 shall be familiar with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

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 minimize or eliminate the visible fugitive particulate emissions. These reports shall be submitted to the Canton City Health Department, Air Pollution Control Division by January 31 and July 31 of each year and shall cover the previous 6-month period.

V. Testing Requirements

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

1.a Emission Limitation:

Visible fugitive particulate emissions shall not exceed 20% opacity as a 3-minute average.

Applicable Compliance Method:

If required, compliance shall be demonstrated by performing visible particulate emission observations in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in 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: Shotblast #1 (P001)

Activity Description: Blast cleaning of castings in a rotoblast using steel shot

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Shotblasting operation using steel shot and controlled by a fabric filter (Pangborn fabric filter - Collector #2).	OAC rule 3745-17-11(B)	Particulate emissions shall not exceed 5.77 lbs/hr.
		See A.I.2.a below.
	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack serving this emissions unit shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
	OAC rule 3745-17-07(B)	Visible fugitive particulate emissions from this emissions unit shall not exceed 20% opacity as a 3-minute average.
	OAC rule 3745-17-08(B)	See A.I.2.b below.

2. Additional Terms and Conditions

2.a Three emissions units have been grouped together because they are served by a common control device. The group contains emissions unit P001 (Shotblast #1), and four grinders from emissions unit P002 and emissions unit P017 (Shotblast #2), which are all controlled by the Pangborn fabric filter (Collector #2). The allowable PE rate was calculated from the uncontrolled mass rate of emissions (UMRE) determined during emission tests conducted on April 11, 1996 (35.35 lbs/hr UMRE) and applying Curve P-I of Figure II from OAC rule 3745-17-11.

2.b The permittee shall minimize or eliminate visible fugitive particulate emissions through the employment of reasonably available control measures (RACM).

At a minimum, the permittee's employment of RACM shall include the following: local hooding over the emissions unit.

The collection efficiency shall be sufficient to minimize or eliminate visible particulate emissions of fugitive dust at the point(s) of capture to the extent possible with good engineering design.

II. Operational Restrictions

1. Except during start-up and initial loading of the filters following a filter change, the pressure drop across the fabric filter serving this emissions unit shall be maintained within the range of 2.0 to 7.0 inches of water while the emissions unit is in operation.

The manufacturer's recommended pressure drop range may be revised to more accurately reflect the fabric filter pressure drop range encountered during actual emissions unit(s) operating conditions that are in compliance with the applicable emission limitations. Any request to revise the pressure drop range shall be submitted in writing to the Canton City Health Department, Air Pollution Control Division. The request shall be accompanied by technical data that justifies the revision to the pressure drop range.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the fabric filter 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 fabric filter on a once-per-shift 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 stack and 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 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. Persons responsible for making the visible emission observations required in section A.III.2 shall be familiar with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the pressure drop across the fabric filter did not comply with the allowable range specified above. The quarterly deviation reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition A.1.c.ii.
2. 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, (b) 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 (c) describe any corrective actions taken to minimize or eliminate the visible particulate and/or visible fugitive particulate emissions. These reports shall be submitted to the Canton City Health Department, Air Pollution Control Division 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.1 of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitation:

Particulate emissions shall not exceed 5.77 lbs/hr.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the emission testing requirements specified in section A.V.2.

1.b Emission Limitation:

Visible particulate emissions from any stack serving this emissions unit shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance shall be demonstrated by performing visible particulate emission observations in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9 and OAC rule 3745-17-03(B)(1).

1.c Emission Limitation:

Visible fugitive particulate emissions from this emissions unit shall not exceed 20% opacity as a 3-minute average.

Applicable Compliance Method:

If required, compliance shall be demonstrated by performing visible particulate emission observations in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9 and OAC rule 3745-17-03(B)(3).

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 2 1/2 years after issuance of this permit.

b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulate emissions.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for particulates, Methods 1 through 5 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

d. The fabric filter (Collector #2) shall be tested while collecting particulate emissions from the four bench and hand-held grinders (emissions unit P002), plus the particulate emissions from this emissions unit P001 and emissions unit P017. All the process equipment venting particulate emissions to the fabric filter shall be operating at or near their maximum production capacities or as close to the capacities as is physically possible, unless otherwise specified or approved by the Canton City Health Department, Air Pollution Control Division.

e. The following parameter shall also be monitored and recorded during the emission testing: the pressure differential across the fabric filter serving this emissions unit.

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 Canton City Health Department, Air Pollution Control Division. 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 Canton City Health Department, Air Pollution Control Division's refusal to accept the results of the emission test(s).

Personnel from the Canton City Health Department, Air Pollution Control Division 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 Canton City Health Department, Air Pollution Control Division within 30 days following completion of the test(s). The title page and the text of the report shall incorporate the Ohio EPA's identification (P001) for the emissions unit where applicable. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Canton City Health Department, Air Pollution Control Division.

VI. Miscellaneous Requirements

1. The permittee shall comply with the approved preventative maintenance and malfunction abatement plan developed for the fabric filter serving this emissions unit (the Pangborn fabric filter - Collector #2).

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: Grinding Shop (P002)

Activity Description: Cutoff saws for gates and risers removal; bench (wheel) and hand-held grinders for finishing of 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>
Bench and hand-held grinders (22) and cutoff saws (2) controlled by two fabric filters (see A.I.2.a)	OAC rule 3745-31-05(A)(3) (PTI 15-1268)	Particulate emissions from the fabric filter serving this emissions unit (the Wheelabrator fabric filter - Collector #1) shall not exceed 1.16 lbs/hr. Fugitive particulate emissions shall not exceed 1 lb/hr. Compliance with this rule also includes compliance with OAC rules 3745-17-07(A), 3745-17-07(B), and 3745-17-08(B)
	OAC rule 3745-17-11(B)	See A.I.2.a below.
	OAC rule 3745-17-07(A)	See A.I.2.b below.
	OAC rule 3745-17-07(B)	Visible particulate emissions from any stack serving this emissions unit shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
	OAC rule 3745-17-08(B)	Visible fugitive particulate emissions shall not exceed 20% opacity as a 3-minute average. See A.I.2.c below.

2. Additional Terms and Conditions

- 2.a In accordance with PTI 15-1268, best available technology (BAT) for this emissions unit was determined to be compliance with all applicable rules and expressed emission limitations and employment of fabric filters as control devices. Note: The Wheelabrator fabric filter (Collector #1) is the primary control device for this emissions unit. The Pangborn fabric filter (Collector #2), which is the primary control device for emissions units P001 and P017, also controls the particulate emissions generated by four of the grinders associated with this emissions unit. The particulate emissions generated by the four grinders associated with this emissions unit are accounted for in the emission limitations established for emissions units P001 and P017.

2. Additional Terms and Conditions (continued)

- 2.b** The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
- 2.c** The permittee shall minimize or eliminate visible fugitive particulate emissions through the employment of reasonably available control measures (RACM).

At a minimum, the permittee's employment of RACM shall include the following: local hooding over the emissions unit and the installation and operation of a well engineered fabric filter hopper evacuation system.

The collection efficiency shall be sufficient to minimize or eliminate visible particulate emissions of fugitive dust at the point(s) of capture to the extent possible with good engineering design.

II. Operational Restrictions

1. Except during start-up and initial loading of the filters following a filter change, the pressure drop across each fabric filter serving this emissions unit shall be maintained within the range of 2.0 to 7.0 inches of water while the emissions unit is in operation.

The manufacturer's recommended pressure drop range may be revised to more accurately reflect the fabric filter pressure drop range encountered during actual emissions unit(s) operating conditions that are in compliance with the applicable emission limitations. Any request to revise the pressure drop range shall be submitted in writing to the Canton City Health Department, Air Pollution Control Division. The request shall be accompanied by technical data that justifies the revision to the pressure drop range.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the primary fabric filter serving this emissions unit 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 fabric filter on a once-per-shift 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 stack and 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.
3. Persons responsible for making the visible emission observations required in section A.III.2 shall be familiar with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the pressure drop across the fabric filter serving this emissions unit did not comply with the allowable range specified above. The quarterly deviation reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition A.1.c.ii.

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 stack serving this emissions unit, (b) 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 (c) describe any corrective actions taken to eliminate the visible particulate and/or visible fugitive particulate emissions. These reports shall be submitted to the Canton City Health Department, Air Pollution Control Division 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.1 of these terms and conditions shall be determined in accordance with the following methods:

- 1.a Emission Limitation:

Particulate emissions from the fabric filter serving this emissions unit (the Wheelabrator fabric filter - Collector #1) shall not exceed 1.16 lbs/hr.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the emission testing requirements specified in section A.V.2.

- 1.b Emission Limitation:

Fugitive particulate emissions shall not exceed 1 lb/hr.

Applicable Compliance Method:

Compliance with this emission limitation may be assumed provided that all of the applicable requirements established pursuant to OAC rule 3745-31-05(A)(3) are satisfied.

- 1.c Emission Limitation:

Visible particulate emissions from any stack serving this emissions unit shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance shall be demonstrated by performing visible particulate emission observations in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9 and OAC rule 3745-17-03(B)(1).

- 1.d Emission Limitation:

Visible fugitive particulate emissions shall not exceed 20% opacity as a 3-minute average.

Applicable Compliance Method:

If required, compliance shall be demonstrated by performing visible particulate emission observations in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9 and OAC rule 3745-17-03(B)(3).

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 2 1/2 years after issuance of this permit.
 - b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulate emissions.
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for particulates, Methods 1 through 5 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.
 - d. The tests shall be conducted while the emissions from 18 grinders and 2 cutoff saws are being vented to the primary fabric filter serving this emissions unit. The grinders and saws shall be operating at or near their maximum production capacities or as close to the capacities as is physically possible, unless otherwise specified or approved by the Canton City Health Department, Air Pollution Control Division.
 - e. The following parameter shall also be monitored and recorded during the emission testing: the pressure differential across the fabric filter serving this emissions unit.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Canton City Health Department, Air Pollution Control Division. 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 Canton City Health Department, Air Pollution Control Division's refusal to accept the results of the emission test(s).

Personnel from the Canton City Health Department, Air Pollution Control Division 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 Canton City Health Department, Air Pollution Control Division within 30 days following completion of the test(s). The title page and the text of the report shall incorporate the Ohio EPA's identification (P002) for the emissions unit where applicable. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Canton City Health Department, Air Pollution Control Division.

VI. Miscellaneous Requirements

1. The permittee shall comply with the approved preventative maintenance and malfunction abatement plan developed for the fabric filter serving this emissions unit (the Wheelabrator fabric filter - Collector #1).

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 Shakeout (P003)

Activity Description: Separation of metal castings and sand via a dumping station and vibratory conveyor

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>
Hunter Shakeout includes a dump station and vibrating conveyors, controlled by a wet scrubber, (BACT wet scrubber - Collector #4).	OAC rule 3745-17-11(B)	Particulate emissions shall not exceed 14.94 lbs/hr.
	OAC rule 3745-17-07(A)	See A.I.2.a below. Visible particulate emissions from any stack serving this emissions unit shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
	OAC rule 3745-17-07(B)	Visible fugitive particulate emissions shall not exceed 20% opacity as a 3-minute average.
	OAC rule 3745-17-08(B)	See A.I.2.b below.

2. Additional Terms and Conditions

- 2.a This particulate emissions limitation was established by applying curve P-1 from Figure II and the UMRE of 154 lbs of particulate emissions per hour determined during the May 05,1996 emission tests.
- 2.b The permittee shall minimize or eliminate visible fugitive particulate emissions through the employment of reasonably available control measures (RACM).

At a minimum, the permittee's employment of RACM shall include the following: local hooding over the emissions unit.

The collection efficiency shall be sufficient to minimize or eliminate visible particulate emissions of fugitive dust at the point(s) of capture to the extent possible with good engineering design.

II. Operational Restrictions

1. Except during startup, the wet scrubber water supply pressure shall be maintained at a value not less than 30 pounds per square inch gauge (psig) while the emissions unit is in operation

Except during startup, the wet scrubber water flow rate shall be continuously maintained at a value of not less than 350 gallons per minute (gpm) while the emissions unit is in operation.

Except during startup, the differential pressure drop across the wet scrubber (flange to flange) shall be maintained within the range of 5.5 to 7.0 inches of water while the emissions unit is in operation.

The wet scrubber manufacturer's recommended minimum water supply pressure value, minimum water flow rate value, and pressure drop range across the wet scrubber may be revised to more accurately reflect the minimum water supply pressure, minimum water flow rate, and pressure drop range across the wet scrubber encountered during actual emissions unit(s) operating conditions that are in compliance with the applicable emission limitations. Any request to revise the minimum water supply pressure, minimum water flow rate, and/or pressure drop range across the wet scrubber shall be submitted in writing to the Canton City Health Department, Air Pollution Control Division. The request shall be accompanied by technical data that justifies the revision to the minimum water supply pressure, minimum water flow rate, and/or pressure drop range across the wet scrubber.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to monitor the wet scrubber water supply pressure, the pressure drop across the wet scrubber, and the wet scrubber water flow rate 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 wet scrubber water supply pressure, the pressure drop across the wet scrubber, and the wet scrubber water flow rate on a once-per-shift basis.
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions 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 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. Persons responsible for making the visible emission observations required in section A.III.2 shall be familiar with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the wet scrubber water supply pressure, the pressure drop across the wet scrubber, and/or the wet scrubber water flow rate did not comply with the allowable values or range specified above. The deviation reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition A.1.c.ii.
2. 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 minimize or eliminate the visible fugitive particulate emissions. These reports shall be submitted to the Canton City Health Department, Air Pollution Control Division 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.1 of these terms and conditions shall be determined in accordance with the following methods:

- 1.a Emission Limitation:

Particulate emissions shall not exceed 14.94 lbs/hr.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the emission testing requirements specified in section A.V.2.

- 1.b Emission Limitation:

Visible particulate emissions from any stack serving this emissions unit shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance shall be demonstrated by performing visible particulate emission observations in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9 and OAC rule 3745-17-03(B)(1).

- 1.c Emission Limitation:

Visible fugitive particulate emissions shall not exceed 20% opacity as a 3-minute average.

Applicable Compliance Method:

If required, compliance shall be demonstrated by performing visible particulate emission observations in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9 and OAC rule 3745-17-03(B)(3).

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 2 1/2 years after issuance of this permit.
 - b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulate emissions.
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for particulates, Methods 1 through 5 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.
 - d. The tests shall be conducted while the emissions unit is operating at or near its maximum production capacity or as close to the capacity as is physically possible, unless otherwise specified or approved by the Canton City Health Department, Air Pollution Control Division.
 - e. The following parameters shall also be monitored and recorded during the emission testing: the wet scrubber water supply pressure, the pressure drop across the wet scrubber, and the wet scrubber water flow rate.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Canton City Health Department, Air Pollution Control Division. 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 Canton City Health Department, Air Pollution Control Division's refusal to accept the results of the emission test(s).

Personnel from the Canton City Health Department, Air Pollution Control Division 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 Canton City Health Department, Air Pollution Control Division within 30 days following completion of the test(s). The title page and the text of the report shall incorporate the Ohio EPA's identification (P003) for the emissions unit where applicable. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Canton City Health Department, Air Pollution Control Division.

VI. Miscellaneous Requirements

1. The permittee shall comply with the approved preventative maintenance and malfunction abatement plan developed for the wet scrubber serving this emissions unit (the BACT wet scrubber - Collector #4).

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Continuous Annealing Furnace (P004)
Activity Description: Heat treatment of malleable 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>
15 MMBtu/hr Swindal Dressler FCC., natural gas-fired annealing furnace with no controls.	OAC rule 3745-17-11(B)	See A.I.2.a below.
	OAC rule 3745-17-07(A)	See A.I.2.b below.
	OAC rule 3745-17-08(B)	The permittee shall employ reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust.
		See A.I.2.c below.
	OAC rule 3745-17-07(B)	Visible fugitive particulate emissions shall not exceed 20% opacity, as a 3-minute average.
	OAC rule 3745-18-06(E)(1)	Sulfur dioxide emissions shall not exceed 31.8 lbs/hr.

2. Additional Terms and Conditions

- 2.a The uncontrolled mass rate of particulate emissions* from this emissions unit is less than 10 pounds/hour. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. In addition, Table I of OAC rule 3745-17-11 does not apply because the process weight rate is equal to zero. "Process weight" is defined in OAC rule 3745-17-01(B)(14).

* The burning of natural gas is the only source of particulate emissions from this emissions unit.

- 2.b This emissions unit is exempt from the visible particulate emission limitation specified in OAC rule 3745-17-07(A) pursuant to OAC rule 3745-17-07(A)(3)(h) because the emissions unit is not subject to the requirements of OAC rule 3745-17-11.
- 2.c At a minimum, RACM shall include the use of natural gas as fuel for the annealing furnace. No additional controls are necessary for this emissions unit to satisfy the reasonably available control measure requirements specified in OAC rule 3745-17-08(B) because the process materials employed in this emissions unit do not generate particulate emissions during the heating process.

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions 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 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.

2. Persons responsible for making the visible emission observations required in section A.III.1 shall be familiar with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

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 minimize or eliminate the visible fugitive particulate emissions. These reports shall be submitted to the Canton City Health Department, Air Pollution Control Division 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.1 of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitation:

Visible fugitive particulate emissions shall not exceed 20% opacity, as a 3-minute average.

Applicable Compliance Method:

If required, compliance shall be demonstrated by performing visible particulate emission observations in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9 and OAC rule 3745-17-03(B)(3).

V. Testing Requirements (continued)

1.b Emission Limitation:

Sulfur dioxide emissions shall not exceed 31.8 lbs/hr.

Applicable Compliance Method:

The sulfur dioxide emissions generated by this emissions unit are due solely to the combustion of natural gas. The process materials (iron castings) employed in this emissions unit do not generate sulfur dioxide emissions during the heating process.

Compliance with this limitation will be assumed due to the negligible percent sulfur, by weight, in the fuel.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6.

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: Induction Furnace No. 1 (P011)

Activity Description: Raw material charging and melting; tapping of molten metal at 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>
4.0 tons/hr coreless electric induction furnace controlled by a fabric filter (baghouse #6).	OAC rule 3745-31-05(A)(3) (PTI 15-01402)	Particulate emissions shall not exceed 1.3 lbs/hr and 5.69 tons/yr.
		Fugitive particulate emissions shall not exceed 0.68 lb/hr and 2.96 tons/yr.
		PM10 stack emissions shall not exceed 1.3 lbs/hr and 5.69 tons/yr.
		PM10 fugitive emissions shall not exceed 0.65 lb/hr and 2.83 tons/yr.
		Lead stack emissions shall not exceed 0.06 lb/hr and 0.27 ton/yr.
		Lead fugitive emissions shall not exceed 0.01 lb/hr and 0.04 ton/yr.
		Compliance with this rule also includes compliance with OAC rules 3745-17-07(A), 3745-17-07(B), and 3745-17-08(B).
	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
	OAC rule 3745-17-07(B)(1)	Visible fugitive particulate emissions shall not exceed 20% opacity as a 3-minute average.
	OAC rule 3745-17-08(B)	See section A.1.2.c below.

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

2. Additional Terms and Conditions

- 2.a** The particulate emissions and/or PM10 emissions from the outlet of the fabric filter serving this emissions unit shall not exceed a concentration of 0.006 grain per dry standard cubic foot (gr/dscf). This emission limitation is applicable to this emissions unit pursuant to a provision in a Consent Order entered in September of 1999 (Case No. 1998CV02342, State of Ohio, ex rel. Montgomery v. Ohio Cast Products, Inc., in the Court of Commons Pleas, Stark County, Ohio). Incorporation of this emission limitation in the terms for this emissions unit, in part, allows the permittee to terminate the Consent Order.
- 2.b** The emissions units vented to baghouse #6 (emissions units P011 [Induction Furnace #1], P022 [Induction Furnace #2], and P023 [ductile inoculation operation]) shall not be disconnected from baghouse #6 without prior written approval of the Director. This requirement is applicable to this emissions unit pursuant to a provision in a Consent Order entered in September of 1999 (Case No. 1998CV02342, State of Ohio, ex rel. Montgomery v. Ohio Cast Products, Inc., in the Court of Commons Pleas, Stark County, Ohio). Incorporation of this requirement in the terms for this emissions unit, in part, allows the permittee to terminate the Consent Order.
- 2.c** The permittee shall minimize or eliminate visible fugitive emissions through the employment of reasonably available control measures (RACM). These measures shall include, but not be limited to, the following:
- i. the installation and use of hoods, fans, and other equipment to adequately enclose, contain, capture, and vent the fugitive dust; and
 - ii. the collection efficiency shall be sufficient to minimize or eliminate visible particulate emissions of fugitive dust at the point(s) of capture to the extent possible with good engineering design.

II. Operational Restrictions

1. Except during startup and initial loading of filters following filter change, the pressure drop across the fabric filter shall be maintained within the manufacturer's recommended range of 2 to 8 inches of water, while the emissions unit is in operation.

The manufacturer's recommended pressure drop range may be revised to more accurately reflect the fabric filter pressure drop range encountered during actual emissions unit(s) operating conditions that are in compliance with the applicable emission limitations. Any request to revise the pressure drop range shall be submitted in writing to the Canton City Health Department, Air Pollution Control Division. The request shall be accompanied by technical data that justifies the revision to the pressure drop range.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the fabric filter serving this emissions unit 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 fabric filter on a once-per-shift basis.

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

2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack and 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.
3. Persons responsible for making the visible emission observations required in section A.III.2 shall be familiar with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the pressure drop across the fabric filter did not comply with the allowable range specified in section A.II.1. The deviation reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition A.1.c.ii.
2. 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, (b) 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 (c) describe any corrective actions taken to eliminate the visible particulate and/or visible fugitive particulate emissions. These reports shall be submitted to the Canton City Health Department, Air Pollution Control Division by January 31 and July 31 of each year and shall cover the previous 6-month period.
3. The permittee shall also submit annual reports that specify the total stack and fugitive particulate/PM10 and stack and fugitive lead emissions from this emissions unit for the previous calendar year. The reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.

V. Testing Requirements

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

1.a Emission Limitation:

Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance shall be demonstrated by performing visible particulate emission observations in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

V. Testing Requirements (continued)

1.b Emission Limitation:

Visible fugitive particulate emissions shall not exceed 20% opacity as a 3-minute average.

Applicable Compliance Method:

If required, compliance shall be demonstrated by performing visible particulate emission observations in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(3).

1.c Emission Limitations:

Particulate emissions/PM10 stack emissions shall not exceed 0.006 gr/dscf, 1.3 lbs/hr (based on an airflow rate of 35,000 ACFM), and 5.69 tons/yr.

Applicable Compliance Methods:

Compliance with the gr/dscf and hourly emission limitations shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5. See section A.V.2.

The annual emission limitation was established by multiplying the hourly emission limitation by 8,760 hours/yr and dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation will also be demonstrated.

1.d Emission Limitations:

Fugitive particulate emissions shall not exceed 0.68 lb/hr and 2.96 tons/yr.

Applicable Compliance Methods:

Compliance with this emission limitation may be determined by multiplying the AP-42 emission factor of 0.9 lb of particulate emissions/ton of iron melted by the emissions unit's maximum process weight rate of 7.5 tons/hr and by the efficiency of the capture system serving this emissions unit (1 - 0.90).

The annual emission limitation was established by multiplying the hourly emission limitation by 8,760 hours/yr and dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation will also be demonstrated.

1.e Emission Limitations:

PM10 fugitive emissions shall not exceed 0.65 lb/hr and 2.83 tons/yr.

Applicable Compliance Methods:

Compliance with this emission limitation may be determined by multiplying the AP-42 emission factor of 0.86 lb of PM10/ton of iron melted by the emissions unit's maximum process weight rate of 7.5 tons/hr and by the efficiency of the capture system serving this emissions unit (1 - 0.90).

The annual emission limitation was established by multiplying the hourly emission limitation by 8,760 hours/yr and dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation will also be demonstrated.

V. Testing Requirements (continued)

1.f Emission Limitations:

Lead stack emissions shall not exceed 0.06 lb/hr and 0.27 ton/yr.

Applicable Compliance Methods:

Compliance with the hourly emission limitation may be determined by multiplying the lead emission factor of 0.05 by the allowable PE limitation (1.3 lbs/hr). The uncontrolled emission factor of 5% (0.05) for lead was derived from FIRE 6.01 SCC 3-04-003-03. Compliance with this emission limitation may also be determined by multiplying the lead emission factor of 0.05 by the results of the particulate emission tests required pursuant to section A.V.2.

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

The annual emission limitation was established by multiplying the hourly emission limitation by 8,760 hours/yr and dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation will also be demonstrated.

1.g Emission Limitations:

Lead fugitive emissions shall not exceed 0.01 lb/hr and 0.04 ton/yr.

Applicable Compliance Methods:

Compliance with this emission limitation may be determined by multiplying the lead emission factor of 0.009 lb/ton by the emissions unit's maximum process weight rate of 7.5 tons/hr and by the efficiency of the capture system serving this emissions unit (1 - 0.90). The uncontrolled emission factor of 0.009 lb/ton for lead was derived from FIRE 6.01 SCC3-04-003-03.

The annual emission limitation was established by multiplying the hourly emission limitation by 8,760 hours/yr and dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation will also be demonstrated.

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 no later than 6 months prior to permit expiration.
- b. The emission testing shall be conducted to determine whether the outlet of baghouse #6 is in compliance with the allowable particulate emission limitations of 0.006 gr/dscf and 1.3 lbs/hr and to determine the exhaust gas flow rate [dry standard cubic feet per minute (dscf/min)] from the outlet of baghouse #6.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for particulates, Methods 1 through 5 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.
- d. The tests shall be conducted while the emissions from emissions units P011, P022, and P023 are being vented to baghouse #6. The tests shall be conducted while the emissions units are operating at or near their maximum production capacities or as close to those capacities as is physically possible, unless otherwise specified or approved by the Canton City Health Department, Air Pollution Control Division.
- e. The following parameter shall also be monitored and recorded during the emission testing: the pressure differential across the fabric filter serving this emissions unit.

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 Canton City Health Department, Air Pollution Control Division. 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 Canton City Health Department, Air Pollution Control Division's refusal to accept the results of the emission test(s).

Personnel from the Canton City Health Department, Air Pollution Control Division 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 Canton City Health Department, Air Pollution Control Division within 30 days following completion of the test(s). The title page and the text of the report shall incorporate the Ohio EPA's identification (P011) for the emissions unit where applicable. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Canton City Health Department, Air Pollution Control Division.

VI. Miscellaneous Requirements

1. The permittee shall comply with the approved preventative maintenance and malfunction abatement plan developed for the fabric filter serving this emissions unit (baghouse #6).

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 Pouring and Cooling Line (P012)

Activity Description: Pouring of molten metal from ladles into green sand molds (on a conveyor line), prior to cooling on rolling conveyors

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>
Pouring and cooling line controlled by a fabric filter (BACT fabric filter - Collector #5). The pouring line has full length side draft hoods and the cooling area has a series of hoods in place.	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
	OAC rule 3745-17-07(B)	Visible fugitive particulate emissions shall not exceed 20% opacity as a 3-minute average.
	OAC rule 3745-17-08(B)	See section A.1.2.c below.
	OAC rule 3745-17-11(B)	Particulate emissions shall not exceed 54.3 lbs/hr.

2. Additional Terms and Conditions

- 2.a The particulate emissions and/or PM10 emissions from the outlet of the fabric filter serving this emissions unit shall not exceed a concentration of 0.006 grain per dry standard cubic foot (gr/dscf). This emission limitation is applicable to this emissions unit pursuant to a provision in a Consent Order entered in September of 1999 (Case No. 1998CV02342, State of Ohio, ex rel. Montgomery v. Ohio Cast Products, Inc., in the Court of Commons Pleas, Stark County, Ohio). Incorporation of this emission limitation in the terms for this emissions unit, in part, allows the permittee to terminate the Consent Order.
- 2.b The emissions units vented to the BACT fabric filter - Collector #5 (emissions units P012 [Hunter pouring and cooling line], P901 [Didion drum and Sprue conveyor], and P902 [Hunter sand system and mold making]) shall not be disconnected from the BACT fabric filter - Collector #5 without prior written approval of the Director. This requirement is applicable to this emissions unit pursuant to a provision in a Consent Order entered in September of 1999 (Case No. 1998CV02342, State of Ohio, ex rel. Montgomery v. Ohio Cast Products, Inc., in the Court of Commons Pleas, Stark County, Ohio). Incorporation of this requirement in the terms for this emissions unit, in part, allows the permittee to terminate the Consent Order.

2. Additional Terms and Conditions (continued)

- 2.c** The permittee shall minimize or eliminate visible fugitive particulate emissions through the employment of reasonably available control measures (RACM).

At a minimum, the permittee's employment of RACM shall include the following:

- i. the installation and use of hoods, fans, and other equipment to adequately enclose, contain, and vent the fugitive dust; and
- ii. the collection efficiency shall be sufficient to minimize or eliminate visible particulate emissions of fugitive dust at the point(s) of capture to the extent possible with good engineering design.

II. Operational Restrictions

1. Except during startup and initial loading of filters following filter change, the pressure drop across the fabric filter shall be maintained within the range of 2 to 6 inches of water, while the emissions unit is in operation.

The manufacturer's recommended pressure drop range may be revised to more accurately reflect the fabric filter pressure drop range encountered during actual emissions unit(s) operating conditions that are in compliance with the applicable emission limitations. Any request to revise the pressure drop range shall be submitted in writing to the Canton City Health Department, Air Pollution Control Division. The request shall be accompanied by technical data that justifies the revision to the pressure drop range.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the fabric filter 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 fabric filter on a once-per-shift 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 stack and 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 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. Persons responsible for making the visible emission observations required in section A.III.2 shall be familiar with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the pressure drop across the fabric filter did not fall within the range specified above. The quarterly deviation reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition A.1.c.ii.
2. 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, (b) 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 (c) describe any corrective actions taken to minimize or eliminate the visible particulate and/or visible fugitive particulate emissions. These reports shall be submitted to the Canton City Health Department, Air Pollution Control Division 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 sections A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

- 1.a Emission Limitations:

Particulate emissions and/or PM10 emissions shall not exceed 0.006 gr/dscf.
Particulate emissions shall not exceed 54.3 lbs/hr.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the emission testing requirements specified in section A.V.2.

- 1.b Emission Limitation:

Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance shall be demonstrated by performing visible particulate emission observations in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

- 1.c Emission Limitation:

Visible fugitive particulate emissions shall not exceed 20% opacity as a 3-minute average.

Applicable Compliance Method:

If required, compliance shall be demonstrated by performing visible particulate emission observations in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(3).

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 2 1/2 years after issuance of this permit.
 - b. The emission testing shall be conducted to demonstrate compliance with the gr/dscf and hourly particulate emission limitations.
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for particulates, Methods 1 through 5 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.
 - d. The tests shall be conducted while emissions units P012, P901 and P902 are operating at or near their maximum production capacities or as close to those capacities as is physically possible, unless otherwise specified or approved by the Canton City Health Department, Air Pollution Control Division.
 - e. The following parameter shall also be monitored and recorded during the emission testing: the pressure differential across the fabric filter serving this emissions unit.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Canton City Health Department, Air Pollution Control Division. 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 Canton City Health Department, Air Pollution Control Division's refusal to accept the results of the emission test(s).

Personnel from the Canton City Health Department, Air Pollution Control Division 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 Canton City Health Department, Air Pollution Control Division within 30 days following completion of the test(s). The title page and the text of the report shall incorporate the Ohio EPA's identification (P012) for the emissions unit where applicable. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Canton City Health Department, Air Pollution Control Division.

VI. Miscellaneous Requirements

1. The permittee shall comply with the approved preventative maintenance and malfunction abatement plan developed for the fabric filter serving this emissions unit (the BACT fabric filter - Collector #5).

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: Internal Quench and Draw Furnaces #2 (P015)

Activity Description: Heating of castings in the heat treat furnace, heating and submersion of castings in oil in the quench 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>
1.2 MMBtu/hr natural gas-fired heat treat internal oil quench furnace	OAC rule 3745-31-05(A)(3) (PTI 15-1002)	Particulate emissions shall not exceed 0.02 lb/MMBtu of actual heat input, 0.024 lb/hr, and 0.10 ton/yr. Carbon monoxide (CO) emissions shall not exceed 0.02 lb/MMBtu of actual heat input, 0.024 lb/hr, and 0.10 ton/yr. Nitrogen oxides (NOx) emissions shall not exceed 0.10 lb/MMBtu of actual heat input, 0.12 lb/hr, and 0.53 ton/yr. Visible particulate emissions shall not exceed 5% opacity as a 3-minute average. Compliance with this rule also includes compliance with OAC rules 3745-18-06(E)(1), 3745-21-08(B), and 3745-23-06(B).
	OAC rule 3745-17-07(A)	See A.I.2.a below.
	OAC rule 3745 17-11(B)	See A.I.2.b below.
	OAC rule 3745-18-06(E)(1)	Sulfur dioxide (SO2) emissions shall not exceed 13.6 lbs/hr.
	OAC rule 3745-21-08(B)	See A.I.2.c below.
	OAC rule 3745-23-06(B)	See A.I.2.d below.

2. Additional Terms and Conditions

- 2.a** This emissions unit is exempt from the visible particulate emission limitations specified in OAC rule 3745-17-07(A) pursuant to OAC rule 3745-17-07(A)(3)(h) because the emissions unit is not subject to the requirements of OAC rule 3745-17-11.
- 2.b** The uncontrolled mass rate of particulate emissions* from this emissions unit is less than 10 pounds/hour. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. In addition, Table I of OAC rule 3745-17-11 does not apply because the process weight rate is equal to zero. "Process weight" is defined in OAC rule 3745-17-01(B)(14).
- * The burning of natural gas is the only source of PE from this emissions unit.
- 2.c** The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 15-1002.

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

- 2.d** The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 15-1002.

II. Operational Restrictions

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

III. Monitoring and/or Record Keeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
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.
3. Persons responsible for making the visible emission observations required in section A.III.2 shall be familiar with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day that a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from 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 Canton City Health Department, Air Pollution Control Division by January 31 and July 31 of each year and shall cover the previous 6-month period.

IV. Reporting Requirements (continued)

3. The permittee shall also submit annual reports that specify the total particulate, CO, and NO_x emissions from this emissions unit for the previous calendar year. The reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.

V. Testing Requirements

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

- 1.a Emission Limitations:

Particulate emissions shall not exceed 0.02 lb/MMBtu of actual heat input, 0.024 lb/hr, and 0.10 ton/yr.

Applicable Compliance Methods:

Until the emission testing in section A.V.2 is completed, the permittee may determine compliance with the lb/MMBtu emission limitation by dividing the emission factor of 1.9 lbs of PE/mm cu. ft by the heat content of 1,035 Btu/cu. ft for natural gas. The emission factor is specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

Until the emission testing in section A.V.2 is completed, the permittee may determine compliance with the lb/hr emission limitation by multiplying the emission factor of 1.9 lbs of PE/mm cu. ft. by the emissions unit's maximum hourly fuel consumption rate (1,787 cu. ft./hr). The emission factor is specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

Compliance with the lb/MMBtu and lb/hr emission limitations shall be determined through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5. (See section A.V.2.)

The ton/yr emission limitation was established by multiplying the lb/hr emission limitation by the emissions unit's maximum operating schedule of 8,760 hours/year and dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation will also be demonstrated.

Once the emission testing specified in section A.V.2 is completed, the permittee shall use the emissions unit-specific PE emission factor established during the emission testing in lieu of the PE emission factor specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors.

V. Testing Requirements (continued)

1.b Emission Limitations:

CO emissions shall not exceed 0.02 lb/MMBtu of actual heat input, 0.024 lb/hr, and 0.10 ton/yr.

Applicable Compliance Methods:

Until the emission testing in section A.V.2 is completed, the permittee may determine compliance with the lb/MMBtu emission limitation by dividing the emission factor of 84 lbs CO/MMCF by the heat content of 1,035 Btu/cu. ft for natural gas. The emission factor is specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-1 (7/98).

Until the emission testing in section A.V.2 is completed, the permittee may determine compliance with the lb/hr emission limitation by multiplying the emission factor of 84 lbs CO/MMCF by the emissions unit's maximum hourly fuel consumption rate (1,787 cu. ft./hr). The emission factor is specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-1 (7/98).

Compliance with the lb/MMBtu and lb/hr emission limitations shall be determined through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 10. (See section A.V.2.)

The ton/yr emission limitation was established by multiplying the lb/hr emission limitation by the emissions unit's maximum operating schedule of 8,760 hours/year and dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation will also be demonstrated.

Once the emission testing specified in section A.V.2 is completed, the permittee shall use the emissions unit-specific CO emission factor established during the emission testing in lieu of the CO emission factor specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors.

1.c Emission Limitations:

NOx emissions shall not exceed 0.10 lb/MMBtu of actual heat input, 0.12 lb/hr, and 0.53 ton/yr.

Applicable Compliance Methods:

Until the emission testing in section A.V.2 is completed, the permittee may determine compliance with the lb/MMBtu emission limitation by dividing the emission factor of 100 lbs NOx/MMCF by the heat content of 1,035 Btu/cu. ft for natural gas. The emission factor is specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-1 (7/98).

Until the emission testing in section A.V.2 is completed, the permittee may determine compliance with the lb/hr emission limitation by multiplying the emission factor of 100 lbs NOx/MMCF by the emissions unit's maximum hourly fuel consumption rate (1,787 cu. ft./hr). The emission factor is specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-1 (7/98).

Compliance with the lb/MMBtu and lb/hr emission limitations shall be determined through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 7. (See section A.V.2.)

The ton/yr emission limitation was established by multiplying the lb/hr emission limitation by the emissions unit's maximum operating schedule of 8,760 hours/year and dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation will also be demonstrated.

Once the emission testing specified in section A.V.2 is completed, the permittee shall use the emissions unit-specific NOx emission factor established during the emission testing in lieu of the NOx emission factor specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors.

V. Testing Requirements (continued)

1.d Emission Limitation:

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

Applicable Compliance Method:

If required, compliance shall be demonstrated by performing visible particulate emission observations in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

1.e Emission Limitation:

SO₂ emissions shall not exceed 13.6 lbs/hr.

Applicable Compliance Method:

The SO₂ emissions generated by this emissions unit are due solely to the combustion of natural gas. The process materials (iron castings) employed in this emissions unit do not generate SO₂ emissions during the heating process.

Compliance with this limitation will be assumed due to the negligible percent sulfur, by weight, in the fuel.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6.

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 2 1/2 years after issuance of this permit.

b. The emission testing shall be conducted to demonstrate compliance with the lb/MMBtu and hourly particulate, CO, and NO_x emission limitations.

c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate(s): for particulates, Methods 1 through 5 of 40 CFR Part 60, Appendix A; for NO_x, Methods 1 through 4 and Method 7 of 40 CFR Part 60, Appendix A; and for CO, Methods 1 through 4 and Method 10 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

d. The tests shall be conducted while this emissions unit is operating at or near it's maximum production capacity or as close to that capacity as is physically possible, unless otherwise specified or approved by the Canton City Health Department, Air Pollution Control Division.

e. The following parameter shall also be monitored and recorded during the emission testing: the emissions unit's natural gas firing rate.

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 Canton City Health Department, Air Pollution Control Division. 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 Canton City Health Department, Air Pollution Control Division's refusal to accept the results of the emission test(s).

Personnel from the Canton City Health Department, Air Pollution Control Division 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 Canton City Health Department, Air Pollution Control Division within 30 days following completion of the test(s). The title page and the text of the report shall incorporate the Ohio EPA's identification (P015) for the emissions unit where applicable. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Canton City Health Department, Air Pollution Control Division.

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: Internal Quench and Draw Furnaces #3 (P016)

Activity Description: Heating of castings in the heat treat furnace, heating and submersion of castings in oil in the quench furnace

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
1.1 MMBtu/hr natural gas-fired heat treat internal oil quench furnace	OAC rule 3745-31-05(A)(3) (PTI 15-1113)	Nitrogen oxides (NOx) emissions shall not exceed 0.0429 lb/hr and 0.18 ton/yr. There shall be no visible particulate emissions from this emissions unit. Compliance with this rule also includes compliance with OAC rules 3745-18-06(E)(1), 3745-21-08(B), and 3745-23-06(B).
	OAC rule 3745-17-07(A)	See A.I.2.a below.
	OAC rule 3745 17-11(B)	See A.I.2.b below.
	OAC rule 3745-18-06(E)(1)	Sulfur dioxide (SO2) emissions shall not exceed 13.6 lbs/hr.
	OAC rule 3745-21-08(B)	See A.I.2.c below.
	OAC rule 3745-23-06(B)	See A.I.2.d below.

2. Additional Terms and Conditions

- 2.a This emissions unit is exempt from the visible particulate emission limitations specified in OAC rule 3745-17-07(A) pursuant to OAC rule 3745-17-07(A)(3)(h) because the emissions unit is not subject to the requirements of OAC rule 3745-17-11.
- 2.b The uncontrolled mass rate of particulate emissions* from this emissions unit is less than 10 pounds/hour. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. In addition, Table I of OAC rule 3745-17-11 does not apply because the process weight rate is equal to zero. "Process weight" is defined in OAC rule 3745-17-01(B)(14).

* The burning of natural gas is the only source of PE from this emissions unit.

2. Additional Terms and Conditions (continued)

- 2.c** The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 15-1113.

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

- 2.d** The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 15-1113.

II. Operational Restrictions

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

III. Monitoring and/or Record Keeping Requirements

1. For each day which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
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. the total duration of any visible emission incident; and
 - c. any corrective actions taken to eliminate the visible emissions.
3. Persons responsible for making the visible emission observations required in section A.III.2 shall be familiar with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.
4. The permittee shall document the total number of operating hours for this emissions unit each month.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day that a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from 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 Canton City Health Department, Air Pollution Control Division by January 31 and July 31 of each year and shall cover the previous 6-month period.
3. The permittee shall also submit annual reports that specify the total operating hours for this emissions unit and the total NO_x emissions from this emissions unit for the previous calendar year. The reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.

V. Testing Requirements

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

V. Testing Requirements (continued)

1.a Emission Limitations:

NO_x emissions shall not exceed 0.0429 lb/hr and 0.18 ton/yr.

Applicable Compliance Methods:

Until the emission testing in section A.V.2 is completed, the permittee may determine compliance with the lb/hr emission limitation by multiplying the emission factor of 94 lbs of NO_x/mm cu. ft. by the emissions unit's maximum hourly fuel consumption rate (1,787 cu. ft./hr). The emission factor is specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-1 (2/98).

Compliance with the lb/hr emission limitation shall be determined through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 7. (See section A.V.2.)

The ton/yr emission limitation was established by multiplying the lb/hr emission limitation by the emissions unit's actual operating schedule and dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation and the annual operating hours submitted in the PTI application, compliance with the annual emission limitation will also be demonstrated.

Once the emission testing specified in section A.V.2 is completed, the permittee shall use the emissions unit-specific NO_x emission factor established during the emission testing in lieu of the NO_x emission factor specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors.

1.b Emission Limitation:

There shall be no visible particulate emissions from this emissions unit.

Applicable Compliance Method:

If required, compliance shall be demonstrated by performing visible particulate emission observations in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 22.

1.c Emission Limitation:

SO₂ emissions shall not exceed 13.6 lbs/hr.

Applicable Compliance Method:

The SO₂ emissions generated by this emissions unit are due solely to the combustion of natural gas. The process materials (iron castings) employed in this emissions unit do not generate SO₂ emissions during the heating process.

Compliance with this limitation will be assumed due to the negligible percent sulfur, by weight, in the fuel.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6.

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 2 1/2 years after issuance of this permit.
 - b. The emission testing shall be conducted to demonstrate compliance with hourly NOx emission limitation.
 - c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate(s): for NOx, Methods 1 through 4 and Method 7 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.
 - d. The tests shall be conducted while this emissions unit is operating at or near it's maximum production capacity or as close to that capacity as is physically possible, unless otherwise specified or approved by the Canton City Health Department, Air Pollution Control Division.
 - e. The following parameter shall also be monitored and recorded during the emission testing: the emissions unit's natural gas firing rate.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Canton City Health Department, Air Pollution Control Division. 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 Canton City Health Department, Air Pollution Control Division's refusal to accept the results of the emission test(s).

Personnel from the Canton City Health Department, Air Pollution Control Division 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 Canton City Health Department, Air Pollution Control Division within 30 days following completion of the test(s). The title page and the text of the report shall incorporate the Ohio EPA's identification (P016) for the emissions unit where applicable. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Canton City Health Department, Air Pollution Control Division.

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: Shotblast #2 (P017)

Activity Description: Blast cleaning of castings in a rotoblast using steel shot

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Shotblasting operation using steel shot and controlled by a fabric filter (Pangborn fabric filter - Collector #2)	OAC rule 3745-17-11(B)	Particulate emissions shall not exceed 5.77 lbs/hr.
		See A.I.2.a below.
	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack serving this emissions unit shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
	OAC rule 3745-17-07(B)	Visible fugitive particulate emissions from this emissions unit shall not exceed 20% opacity as a 3-minute average.
	OAC rule 3745-17-08(B)	See A.I.2.b below.

2. Additional Terms and Conditions

2.a Three emissions units have been grouped together because they are served by a common control device. The group contains emissions unit P001 (Shotblast #1), and four grinders from emissions unit P002 and emissions unit P017 (Shotblast #2), which are all controlled by the Pangborn fabric filter (Collector #2). The allowable particulate emissions rate was calculated from the uncontrolled mass rate of emissions (UMRE) determined during emission tests conducted on April 11, 1996 (35.35 lbs/hr UMRE) and applying Curve P-I of Figure II from OAC rule 3745-17-11.

2.b The permittee shall minimize or eliminate visible fugitive particulate emissions through the employment of reasonably available control measures (RACM).

At a minimum, the permittee's employment of RACM shall include the following: local hooding over the emissions unit.

The collection efficiency shall be sufficient to minimize or eliminate visible particulate emissions of fugitive dust at the point(s) of capture to the extent possible with good engineering design.

II. Operational Restrictions

1. Except during start-up and initial loading of the filters following a filter change, the pressure drop across the fabric filter serving this emissions unit shall be maintained within the range of 2.0 to 7.0 inches of water while the emissions unit is in operation.

The manufacturer's recommended pressure drop range may be revised to more accurately reflect the fabric filter pressure drop range encountered during actual emissions unit(s) operating conditions that are in compliance with the applicable emission limitations. Any request to revise the pressure drop range shall be submitted in writing to the Canton City Health Department, Air Pollution Control Division. The request shall be accompanied by technical data that justifies the revision to the pressure drop range.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the fabric filter 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 fabric filter on a once-per-shift 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 stack and 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 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. Persons responsible for making the visible emission observations required in section A.III.2 shall be familiar with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the pressure drop across the fabric filter did not comply with the allowable range specified above. The quarterly deviation reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition A.1.c.ii.
2. 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, (b) 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 (c) describe any corrective actions taken to minimize or eliminate the visible particulate and/or visible fugitive particulate emissions. These reports shall be submitted to the Canton City Health Department, Air Pollution Control Division 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.1 of these terms and conditions shall be determined in accordance with the following methods:

1.a Emission Limitation:

Particulate emissions shall not exceed 5.77 lbs/hr.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the emission testing requirements specified in section A.V.2.

1.b Emission Limitation:

Visible particulate emissions from any stack serving this emissions unit shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance shall be demonstrated by performing visible particulate emission observations in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

1.c Emission Limitation:

Visible fugitive particulate emissions from this emissions unit shall not exceed 20% opacity as a 3-minute average.

Applicable Compliance Method:

If required, compliance shall be demonstrated by performing visible particulate emission observations in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(3).

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 2 1/2 years after issuance of this permit.

b. The emission testing shall be conducted to demonstrate compliance with the hourly particulate emission limitation.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for particulates, Methods 1 through 5 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

d. The fabric filter (Collector #2) shall be tested while collecting particulate emissions from the four bench and hand-held grinders (emissions unit P002), plus the particulate emissions from this emissions unit (P017) and emissions unit P001. All the process equipment venting particulate emissions to the fabric filter must be operating at or near their maximum production capacities or as close to the capacities as is physically possible, unless otherwise specified or approved by the Canton City Health Department, Air Pollution Control Division.

e. The following parameter shall also be monitored and recorded during the emission testing: the pressure differential across the fabric filter serving this emissions unit.

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 Canton City Health Department, Air Pollution Control Division. 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 Canton City Health Department, Air Pollution Control Division's refusal to accept the results of the emission test(s).

Personnel from the Canton City Health Department, Air Pollution Control Division 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 Canton City Health Department, Air Pollution Control Division within 30 days following completion of the test(s). The title page and the text of the report shall incorporate the Ohio EPA's identification (P017) for the emissions unit where applicable. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Canton City Health Department, Air Pollution Control Division.

VI. Miscellaneous Requirements

1. The permittee shall comply with the approved preventative maintenance and malfunction abatement plan developed for the fabric filter serving this emissions unit (the Pangborn fabric filter - Collector #2).

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-20) Coremaking Machine #1 (P018)

Activity Description: Cold box coremaking using a binder and co-reactant system for the preparation of sand cores

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>	
One piece cold box coremaking process (Laempe L-20) using a two part binder and catalyst system for the preparation of sand cores. The particulate emissions from the sand mixer are controlled with a fabric filter. There are no controls for the organic or particulate emissions from the coremaking machine.	OAC rule 3745-31-05(A)(3) (PTI 15-1122)	Methyl formate emissions from this emissions unit shall not exceed 6.18 lbs/hr and 12.35 tons/yr.	
		Methyl formate usage in this emissions unit shall not exceed 16 lbs/hr, 2.6 tons/month, and 30.87 tons/yr.	
		Particulate emissions from the fabric filter controlling the sand mixer shall not exceed 0.01 lb/hr and 0.04 ton/yr.	
		See A.II.1 through A.II.3 below.	
		OAC rule 3745-17-07(A)	Compliance with this rule also includes compliance with OAC rules 3745-17-07(A), 3745-17-07(B), and 3745-17-08(B).
		OAC rule 3745-17-07(B)	Visible particulate emissions from any stack serving this emissions unit shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
		OAC rule 3745-17-08(B)	Visible fugitive particulate emissions from this emissions unit shall not exceed 20% opacity as a 3-minute average.
	OAC rule 3745-17-11(B)	See A.I.2.a below.	
	OAC rule 3745-21-07(G)(2)	See A.I.2.b below.	
		See A.I.2.c below.	

2. Additional Terms and Conditions

- 2.a** The permittee shall minimize or eliminate visible fugitive particulate emissions through the employment of reasonably available control measures (RACM).

At a minimum, the permittee's employment of RACM shall include the following: local hooding over the emissions unit.

The collection efficiency shall be sufficient to minimize or eliminate visible particulate emissions of fugitive dust at the point(s) of capture to the extent possible with good engineering design. (Also see A.II.1).

- 2.b** The particulate emissions limitation specified by OAC rule 3745-17-11 is less stringent than the particulate emissions limitation established pursuant to the best available technology determination under OAC rule 3745-31-05(A)(3).
- 2.c** The permittee shall not employ any photochemically reactive materials in this emissions unit, as defined in OAC rule 3745-21-01(C)(5).

II. Operational Restrictions

1. Particulate emissions from the sand mixer shall be vented to a fabric filter with a control efficiency of at least 99%.
2. A sand heater shall be employed at the inlet to the Laempe machine to keep the sand at the recommended temperature to maximize the reaction efficiency and minimize emissions.
3. A minimum gassing time shall be determined for each job type. This time will be adhered to when making molds to reduce methyl formate emissions.
4. Except during start-up and initial loading of the filters following a filter change, the pressure drop across the fabric filter serving the sand mixer associated with this emissions unit shall be maintained within the range of 2.0 to 7.0 inches of water while the emissions unit is in operation.

The manufacturer's recommended pressure drop range may be revised to more accurately reflect the fabric filter pressure drop range encountered during actual emissions unit(s) operating conditions that are in compliance with the applicable emission limitations. Any request to revise the pressure drop range shall be submitted in writing to the Canton City Health Department, Air Pollution Control Division. The request shall be accompanied by technical data that justifies the revision to the pressure drop range.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the fabric filter serving this emissions unit 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 fabric filter on a once-per-shift 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 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.

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

3. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive 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 minimize or eliminate the visible emissions.

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

4. Persons responsible for making the visible emission observations required in section A.III.2 shall be familiar with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.
5. The permittee shall keep the following daily records for all materials used in this emissions unit:
 - a. the company identification of each material employed, including bonding agents and core wash materials; and
 - 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).
6. The permittee shall properly operate and maintain equipment to continuously monitor the temperature of the sand at the inlet to the Laempe machine 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 inlet sand temperature once a shift when the emissions unit is in operation.
7. The permittee shall record the minimum and actual gassing times for each job type. The minimum gassing time shall be adhered to, for each casting, in the operation of this emissions unit.
8. The permittee shall record the amount of methyl formate used each hour and each month in this emissions unit, in pounds and tons, respectively.
9. The permittee shall maintain the following annual records:
 - a. the total number of hours the emissions unit was in operation;
 - b. the total amount of sand loaded into the day bin, in tons; and
 - c. the annual average hourly sand loading rate, in tons/hr.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that include the following information:
 - a. each day during which any photochemically reactive material was employed;
 - b. an identification of each hour during which the usage of methyl formate exceeded 16 lbs/hr, and the actual usage of methyl formate during each such hour;
 - c. an identification of each month during which the usage of methyl formate exceeded 2.6 tons, and the actual usage of methyl formate during each such month;
 - d. all periods of time when the pressure drop across the fabric filter serving the sand mixer associated with this emissions unit did not comply with the range specified above; and
 - e. all periods of time during which the sand temperature at the inlet to the Laempe machine did not comply with the recommended temperature necessary to maximize the reaction efficiency and minimize emissions.
2. The deviation reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition A.1.c.
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 Canton City Health Department, Air Pollution Control Division 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 the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible fugitive particulate emissions. These reports shall be submitted to the Canton City Health Department, Air Pollution Control Division by January 31 and July 31 of each year and shall cover the previous 6-month period.
5. The permittee shall also submit annual reports that specify the total usage of methyl formate (in tons), and the total particulate and methyl formate emissions from this emissions unit for the previous calendar year. The reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.

V. Testing Requirements

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

- 1.a Emission Limitation:

Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance shall be demonstrated by performing visible particulate emission observations in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9 and OAC rule 3745-17-03(B)(1).

V. Testing Requirements (continued)

1.b Emission Limitation:

Visible fugitive particulate emissions from this emissions unit shall not exceed 20% opacity as a 3-minute average.

Applicable Compliance Method:

If required, compliance shall be demonstrated by performing visible particulate emission observations in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9 and OAC rule 3745-17-03(B)(3).

1.c Emission Limitations:

Particulate emissions from the fabric filter controlling the sand mixer shall not exceed 0.01 lb/hr and 0.04 ton/yr.

Applicable Compliance Methods:

Compliance with the hourly emission limitation may be determined by multiplying the particulate emission factor of 0.29 lb/ton of sand by the average hourly sand loading rate, in tons/hr, and by the control efficiency of the fabric filter serving this emissions unit (1-.99). The AP-42 emission factor is from Table 11.12.2.

If required, compliance with the hourly emission limitation shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5.

Compliance with the annual emission limitation shall be calculated by multiplying the hourly emission limitation by the emissions unit's actual annual operating hours, and dividing by 2,000 lbs/ton.

1.d Emission Limitations:

Methyl formate emissions from this emissions unit shall not exceed 6.18 lbs/hr and 12.35 tons/yr.

Applicable Compliance Methods:

Compliance with the hourly emission limitation may be determined using the following equation and assumptions

$$E = PWR \times RF \times CRF \times (1-RE)$$

where:

(this is a typical example, permittee to use facility specific factors)

E = emissions of methyl formate

PWR = maximum process weight rate of sand, 5,880 lbs/hr sand;

RF = resin (Beta Set) fraction of sand, 0.025 resin;

CRF = co-reactant Beta Cure (methyl formate) fraction of resin, 0.50 methyl formate; and

RE = reaction efficiency of methyl formate, 90%.

Compliance with the hourly emission limitation shall be demonstrated based upon the emission testing requirements specified in section A.V.2.

Compliance with the annual emission limitation shall be determined by multiplying the average hourly emission rate (from the emission tests required pursuant to section A.V.2) by the emissions unit's actual annual operating hours, and dividing by 2,000 lbs/ton.

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 2 1/2 years after issuance of this permit.
 - b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for methyl formate emissions.
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for methyl formate, Methods 1 through 4 and Method 18 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.
 - d. The tests shall be conducted while the emissions unit is operating at or near its maximum production capacity or as close to the capacity as is physically possible, unless otherwise specified or approved by the Canton City Health Department, Air Pollution Control Division.
 - e. The following parameter shall also be monitored and recorded during the emission testing: the pressure differential across the fabric filter serving this emissions unit.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Canton City Health Department, Air Pollution Control Division. 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 Canton City Health Department, Air Pollution Control Division's refusal to accept the results of the emission test(s).

Personnel from the Canton City Health Department, Air Pollution Control Division 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 Canton City Health Department, Air Pollution Control Division within 30 days following completion of the test(s). The title page and the text of the report shall incorporate the Ohio EPA's identification (P018) for the emissions unit where applicable. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Canton City Health Department, Air Pollution Control Division.

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>
One piece cold box coremaking process (Laempe L-20) using a two part binder and catalyst system for the preparation of sand cores. The particulate emissions from the sand mixer are controlled with a fabric filter. There are no controls for the organic or particulate emissions from the coremaking machine.		See section B.III.1.

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 (P018) was evaluated based on the actual materials (typical coremaking materials) and the design parameters of the emission 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): 246,000

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 2,274

MAGLC (ug/m3): 5,857

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

2. Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:
 - a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV 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.).
3. 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 shows 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: Induction Furnace No. 2 (P022)

Activity Description: Raw material charging and melting; tapping of molten metal at 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>
4.0 tons/hr coreless electric induction furnace controlled by a fabric filter (baghouse #6).	OAC rule 3745-31-05(A)(3) (PTI 15-01402)	Particulate emissions shall not exceed 1.3 lbs/hr and 5.69 tons/yr.
		Fugitive particulate emissions shall not exceed 0.68 lb/hr and 2.96 tons/yr.
		PM10 stack emissions shall not exceed 1.3 lbs/hr and 5.69 tons/yr.
		PM10 fugitive emissions shall not exceed 0.65 lb/hr and 2.83 tons/yr.
		Lead stack emissions shall not exceed 0.06 lb/hr and 0.27 ton/yr.
		Lead fugitive emissions shall not exceed 0.01 lb/hr and 0.04 ton/yr.
		Compliance with this rule also includes compliance with OAC rules 3745-17-07(A), 3745-17-07(B), and 3745-17-08(B).
	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
	OAC rule 3745-17-07(B)(1)	Visible fugitive particulate emissions shall not exceed 20% opacity as a 3-minute average.
	OAC rule 3745-17-08(B)	See section A.1.2.c below.

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

2. Additional Terms and Conditions

- 2.a** The particulate emissions and/or PM10 emissions from the outlet of the fabric filter serving this emissions unit shall not exceed a concentration of 0.006 grain per dry standard cubic foot (gr/dscf). This emission limitation is applicable to this emissions unit pursuant to a provision in a Consent Order entered in September of 1999 (Case No. 1998CV02342, State of Ohio, ex rel. Montgomery v. Ohio Cast Products, Inc., in the Court of Commons Pleas, Stark County, Ohio). Incorporation of this emission limitation in the terms for this emissions unit, in part, allows the permittee to terminate the Consent Order.
- 2.b** The emissions units vented to baghouse #6 (emissions units P011 [Induction Furnace #1], P022 [Induction Furnace #2], and P023 [ductile inoculation operation]) shall not be disconnected from baghouse #6 without prior written approval of the Director. This requirement is applicable to this emissions unit pursuant to a provision in a Consent Order entered in September of 1999 (Case No. 1998CV02342, State of Ohio, ex rel. Montgomery v. Ohio Cast Products, Inc., in the Court of Commons Pleas, Stark County, Ohio). Incorporation of this requirement in the terms for this emissions unit, in part, allows the permittee to terminate the Consent Order.
- 2.c** The permittee shall minimize or eliminate visible fugitive emissions through the employment of reasonably available control measures (RACM). These measures shall include, but not be limited to, the following:
- the installation and use of hoods, fans, and other equipment to adequately enclose, contain, capture, and vent the fugitive dust; and
 - the collection efficiency shall be sufficient to minimize or eliminate visible particulate emissions of fugitive dust at the point(s) of capture to the extent possible with good engineering design.

II. Operational Restrictions

- Except during startup and initial loading of filters following filter change, the pressure drop across the fabric filter shall be maintained within the manufacturer's recommended range of 2 to 8 inches of water, while the emissions unit is in operation.

The manufacturer's recommended pressure drop range may be revised to more accurately reflect the fabric filter pressure drop range encountered during actual emissions unit(s) operating conditions that are in compliance with the applicable emission limitations. Any request to revise the pressure drop range shall be submitted in writing to the Canton City Health Department, Air Pollution Control Division. The request shall be accompanied by technical data that justifies the revision to the pressure drop range.

III. Monitoring and/or Record Keeping Requirements

- The permittee shall properly operate and maintain equipment to monitor the pressure drop across the fabric filter serving this emissions unit 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 fabric filter on a once-per-shift basis.

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

2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack and 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.
3. Persons responsible for making the visible emission observations required in section A.III.2 shall be familiar with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the pressure drop across the fabric filter did not comply with the allowable range specified in section A.II.1. The deviation reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition A.1.c.ii.
2. 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, (b) 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 (c) describe any corrective actions taken to eliminate the visible particulate and/or visible fugitive particulate emissions. These reports shall be submitted to the Canton City Health Department, Air Pollution Control Division by January 31 and July 31 of each year and shall cover the previous 6-month period.
3. The permittee shall also submit annual reports that specify the total stack and fugitive particulate/PM10 and stack and fugitive lead emissions from this emissions unit for the previous calendar year. The reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.

V. Testing Requirements

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

1.a Emission Limitation:

Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance shall be demonstrated by performing visible particulate emission observations in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

V. Testing Requirements (continued)

1.b Emission Limitation:

Visible fugitive particulate emissions shall not exceed 20% opacity as a 3-minute average.

Applicable Compliance Method:

If required, compliance shall be demonstrated by performing visible particulate emission observations in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(3).

1.c Emission Limitations:

Particulate emissions/PM10 stack emissions shall not exceed 0.006 gr/dscf, 1.3 lbs/hr (based on an airflow rate of 35,000 ACFM), and 5.69 tons/yr.

Applicable Compliance Methods:

Compliance with the gr/dscf and hourly emission limitations shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5. See section A.V.2.

The annual emission limitation was established by multiplying the hourly emission limitation by 8,760 hours/yr and dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation will also be demonstrated.

1.d Emission Limitations:

Fugitive particulate emissions shall not exceed 0.68 lb/hr and 2.96 tons/yr.

Applicable Compliance Methods:

Compliance with this emission limitation may be determined by multiplying the AP-42 emission factor of 0.9 lb of particulate emissions/ton of iron melted by the emissions unit's maximum process weight rate of 7.5 tons/hr and by the efficiency of the capture system serving this emissions unit (1 - 0.90).

The annual emission limitation was established by multiplying the hourly emission limitation by 8,760 hours/yr and dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation will also be demonstrated.

1.e Emission Limitations:

PM10 fugitive emissions shall not exceed 0.65 lb/hr and 2.83 tons/yr.

Applicable Compliance Methods:

Compliance with this emission limitation may be determined by multiplying the AP-42 emission factor of 0.86 lb of PM10/ton of iron melted by the emissions unit's maximum process weight rate of 7.5 tons/hr and by the efficiency of the capture system serving this emissions unit (1 - 0.90).

The annual emission limitation was established by multiplying the hourly emission limitation by 8,760 hours/yr and dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation will also be demonstrated.

V. Testing Requirements (continued)

1.f Emission Limitations:

Lead stack emissions shall not exceed 0.06 lb/hr and 0.27 ton/yr.

Applicable Compliance Methods:

Compliance with the hourly emission limitation may be determined by multiplying the lead emission factor of 0.05 by the allowable PE limitation (1.3 lbs/hr). The uncontrolled emission factor of 5% (0.05) for lead was derived from FIRE 6.01 SCC 3-04-003-03. Compliance with this emission limitation may also be determined by multiplying the lead emission factor of 0.05 by the results of the particulate emission tests required pursuant to section A.V.2.

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

The annual emission limitation was established by multiplying the hourly emission limitation by 8,760 hours/yr and dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation will also be demonstrated.

1.g Emission Limitations:

Lead fugitive emissions shall not exceed 0.01 lb/hr and 0.04 ton/yr.

Applicable Compliance Methods:

Compliance with this emission limitation may be determined by multiplying the lead emission factor of 0.009 lb/ton by the emissions unit's maximum process weight rate of 7.5 tons/hr and by the efficiency of the capture system serving this emissions unit (1 - 0.90). The uncontrolled emission factor of 0.009 lb/ton for lead was derived from FIRE 6.01 SCC3-04-003-03.

The annual emission limitation was established by multiplying the hourly emission limitation by 8,760 hours/yr and dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation will also be demonstrated.

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 no later than 6 months prior to permit expiration.
- b. The emission testing shall be conducted to determine whether the outlet of baghouse #6 is in compliance with the allowable particulate emission limitations of 0.006 gr/dscf and 1.3 lbs/hr and to determine the exhaust gas flow rate [dry standard cubic feet per minute (dscf/min)] from the outlet of baghouse #6.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for particulates, Methods 1 through 5 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.
- d. The tests shall be conducted while the emissions from emissions units P011, P022, and P023 are being vented to baghouse #6. The tests shall be conducted while the emissions units are operating at or near their maximum production capacities or as close to those capacities as is physically possible, unless otherwise specified or approved by the Canton City Health Department, Air Pollution Control Division.
- e. The following parameter shall also be monitored and recorded during the emission testing: the pressure differential across the fabric filter serving this emissions unit.

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 Canton City Health Department, Air Pollution Control Division. 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 Canton City Health Department, Air Pollution Control Division's refusal to accept the results of the emission test(s).

Personnel from the Canton City Health Department, Air Pollution Control Division 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 Canton City Health Department, Air Pollution Control Division within 30 days following completion of the test(s). The title page and the text of the report shall incorporate the Ohio EPA's identification (P022) for the emissions unit where applicable. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Canton City Health Department, Air Pollution Control Division.

VI. Miscellaneous Requirements

1. The permittee shall comply with the approved preventative maintenance and malfunction abatement plan developed for the fabric filter serving this emissions unit (baghouse #6).

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 Inoculation (P023)

Activity Description: Ladle inoculation of molten metal from the holding furnace; manual slag off

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 inoculation of iron controlled by a fabric filter (baghouse #6)	OAC rule 3745-31-05(A)(3) (PTI 15-01402)	Particulate emissions shall not exceed 0.56 lb/hr and 2.44 tons/yr.	
		Fugitive particulate emissions shall not exceed 6 lbs/hr and 9.18 tons/yr.	
		PM10 stack emissions shall not exceed 0.56 lb/hr and 2.44 tons/yr.	
		PM10 fugitive emissions shall not exceed 6 lbs/hr and 9.18 tons/yr.	
		Volatile organic compound (VOC) emissions shall not exceed 0.07 lb/hr and 0.11 ton/yr.	
		VOC fugitive emissions shall not exceed 0.01 lb/hr and 0.01 ton/yr.	
		Compliance with this rule also includes compliance with OAC rules 3745-17-07(A), 3745-17-07(B), and 3745-17-08(B).	
		OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
		OAC rule 3745-17-07(B)(1)	Visible fugitive particulate emissions shall not exceed 20% opacity as a 3-minute average.
		OAC rule 3745-17-08(B)	See section A.1.2.c below.

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

2. Additional Terms and Conditions

- 2.a** The particulate emissions and/or PM10 emissions from the outlet of the fabric filter serving this emissions unit shall not exceed a concentration of 0.006 grain per dry standard cubic foot (gr/dscf). This emission limitation is applicable to this emissions unit pursuant to a provision in a Consent Order entered in September of 1999 (Case No. 1998CV02342, State of Ohio, ex rel. Montgomery v. Ohio Cast Products, Inc., in the Court of Commons Pleas, Stark County, Ohio). Incorporation of this emission limitation in the terms for this emissions unit, in part, allows the permittee to terminate the Consent Order.
- 2.b** The emissions units vented to baghouse #6 (emissions units P011 [Induction Furnace #1], P022 [Induction Furnace #2], and P023 [ductile inoculation operation]) shall not be disconnected from baghouse #6 without prior written approval of the Director. This requirement is applicable to this emissions unit pursuant to a provision in a Consent Order entered in September of 1999 (Case No. 1998CV02342, State of Ohio, ex rel. Montgomery v. Ohio Cast Products, Inc., in the Court of Commons Pleas, Stark County, Ohio). Incorporation of this requirement in the terms for this emissions unit, in part, allows the permittee to terminate the Consent Order.
- 2.c** The permittee shall minimize or eliminate visible fugitive emissions through the employment of reasonably available control measures (RACM). These measures shall include, but not be limited to, the following:
- i. the installation and use of hoods, fans, and other equipment to adequately enclose, contain, capture, and vent the fugitive dust; and
 - ii. the collection efficiency shall be sufficient to minimize or eliminate visible particulate emissions of fugitive dust at the point(s) of capture to the extent possible with good engineering design.

II. Operational Restrictions

1. Except during startup and initial loading of filters following filter change, the pressure drop across the fabric filter shall be maintained within the manufacturer's recommended range of 2 to 8 inches of water, while the emissions unit is in operation.

The manufacturer's recommended pressure drop range may be revised to more accurately reflect the fabric filter pressure drop range encountered during actual emissions unit(s) operating conditions that are in compliance with the applicable emission limitations. Any request to revise the pressure drop range shall be submitted in writing to the Canton City Health Department, Air Pollution Control Division. The request shall be accompanied by technical data that justifies the revision to the pressure drop range.

2. The amount of iron inoculated in any month shall not exceed 3,825 tons.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the fabric filter serving this emissions unit 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 fabric filter on a once-per-shift basis.

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

2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible 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.
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 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 minimize or eliminate the visible emissions.

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

4. Persons responsible for making the visible emission observations required in sections A.III.2 and A.III.3 shall be familiar with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.
5. The permittee shall keep monthly records of the amount of iron inoculated, in tons.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - a. all periods of time during which the pressure drop across the fabric filter did not comply with the allowable range specified in section A.II.1; and
 - b. any month in which the amount of iron inoculated exceeded 3,825 tons.

The deviation reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition A.1.c.ii.

2. 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 Canton City Health Department, Air Pollution Control Division by January 31 and July 31 of each year and shall cover the previous 6-month period.

IV. Reporting Requirements (continued)

3. 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 minimize or eliminate the visible fugitive particulate emissions. These reports shall be submitted to the Canton City Health Department, Air Pollution Control Division by January 31 and July 31 of each year and shall cover the previous 6-month period.
4. The permittee shall also submit annual reports that specify the total stack and fugitive particulate/PM10 and stack and fugitive VOC emissions from this emissions unit for the previous calendar year. The reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.

V. Testing Requirements

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

- 1.a Emission Limitation:

Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance shall be demonstrated by performing visible particulate emission observations in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

- 1.b Emission Limitation:

Visible fugitive particulate emissions shall not exceed 20% opacity as a 3-minute average.

Applicable Compliance Method:

If required, compliance shall be demonstrated by performing visible particulate emission observations in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(3).

- 1.c Emission Limitations:

Particulate/PM10 emissions shall not exceed 0.006 gr/dscf, 0.56 lb/hr (based on an airflow rate of 15,000 acfm), and 2.44 tons/yr.

Applicable Compliance Methods:

Compliance with the gr/dscf and hourly emission limitations shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5. See section A.V.2.

The annual emission limitation was established by multiplying the hourly emission limitation by 8,760 hours/yr and dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation will also be demonstrated.

V. Testing Requirements (continued)

1.d Emission Limitations:

Fugitive particulate/PM10 fugitive emissions shall not exceed 6 lbs/hr and 9.18 tons/yr.

Applicable Compliance Methods:

Compliance with the hourly emission limitation may be determined by multiplying the AP-42 emission factor of 4 lbs of particulate/PM10/ton of iron inoculated by the emissions unit's maximum hourly iron inoculation rate (15 tons/hr), and by the efficiency of the capture system serving this emissions unit (1 - 0.90).

The annual emission limitation was established by multiplying the AP-42 emission factor of 4 lbs of particulate/PM10/ton of iron inoculated by the emission unit's restricted maximum monthly iron inoculation rate (3,825 tons), by the efficiency of the capture system serving this emissions unit (1 - 0.90), by 12 months/yr, and dividing by 2,000 lbs/ton.

1.e Emission Limitations:

VOC emissions shall not exceed 0.07 lb/hr and 0.11 ton/yr.

Applicable Compliance Methods:

Compliance with the hourly emission limitation may be determined by multiplying the Fire 6.23 SCC 3-04-003-10 emission factor of 0.005 lb of VOC/ton of iron inoculated by the emissions unit's maximum hourly inoculation rate (15 tons/hr), and by 0.9 (90% capture).

If required, the permittee shall demonstrate compliance with the hourly emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 25.

The annual emission limitation was established by multiplying the Fire 6.23 SCC 3-04-003-10 emission factor of 0.005 lb of VOC/ton of iron inoculated by the emission unit's restricted maximum monthly iron inoculation rate (3,825 tons), by 12 months/yr, and by 0.9 (90% capture), and then dividing by 2,000 lbs/ton.

1.f Emission Limitations:

Fugitive VOC emissions shall not exceed 0.01 lb/hr and 0.01 ton/yr.

Applicable Compliance Methods:

Compliance with the hourly emission limitation may be determined by multiplying the Fire 6.23 SCC 3-04-003-10 emission factor of 0.005 lb of VOC/ton of iron inoculated by the emissions unit's maximum hourly inoculation rate (15 tons/hr), and by the efficiency of the capture system serving this emissions unit (1 - 0.90).

The annual emission limitation was established by multiplying the Fire 6.23 SCC 3-04-003-10 emission factor of 0.005 lb of VOC/ton of iron inoculated by the emission unit's restricted maximum monthly iron inoculation rate (3,825 tons), by the efficiency of the capture system serving this emissions unit (1 - 0.90), by 12 months/yr, and then dividing by 2,000 lbs/ton.

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 no later than 6 months prior to permit expiration.
 - b. The emission testing shall be conducted to determine whether the outlet of baghouse #6 is in compliance with the allowable particulate emission limitations of 0.006 gr/dscf and 0.56 lb/hr and to determine the exhaust gas flow rate [dry standard cubic feet per minute (dscf/min)] from the outlet of baghouse #6.
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for particulates, Methods 1 through 5 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.
 - d. The tests shall be conducted while the emissions from emissions units P011, P022, and P023 are being vented to baghouse #6. The tests shall be conducted while the emissions units are operating at or near their maximum production capacities or as close to those capacities as is physically possible, unless otherwise specified or approved by the Canton City Health Department, Air Pollution Control Division.
 - e. The following parameter shall also be monitored and recorded during the emission testing: the pressure differential across the fabric filter serving this emissions unit.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Canton City Health Department, Air Pollution Control Division. 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 Canton City Health Department, Air Pollution Control Division's refusal to accept the results of the emission test(s).

Personnel from the Canton City Health Department, Air Pollution Control Division 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 Canton City Health Department, Air Pollution Control Division within 30 days following completion of the test(s). The title page and the text of the report shall incorporate the Ohio EPA's identification (P023) for the emissions unit where applicable. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Canton City Health Department, Air Pollution Control Division.

VI. Miscellaneous Requirements

1. The permittee shall comply with the approved preventative maintenance and malfunction abatement plan developed for the fabric filter serving this emissions unit (baghouse #6).

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-5) Isocure Coremaking Machine (P024)

Activity Description: Cold box coremaking using a two part binder and catalyst system for the preparation of sand cores

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>
Cold box Isocure coremaking process (Laempe L-5) using a two part binder and catalyst system for the preparation of sand cores. The particulate emissions from the sand mixer are controlled with a fabric filter. The organic and particulate emissions from the coremaking machine are controlled with a packed tower acid scrubber.	OAC rule 3745-31-05(A)(3) (PTI 15-1185)	Triethylamine emissions (includes both stack and fugitive emissions) shall not exceed 0.26 lb/hr and 0.54 ton/yr.
		Particulate emissions (includes both stack and fugitive emissions) shall not exceed 0.35 lb/hr and 0.15 ton/yr.
		Compliance with this rule also includes compliance with OAC rules 3745-17-07(A), 3745-17-07(B), 3745-17-08(B), and 3745-21-07(G).
		See sections A.I.2.a through A.I.2.e and A.II.1 through A.II.3 below.
	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
	OAC rule 3745-17-11(B)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-07(B)	Visible fugitive particulate emissions shall not exceed 20% opacity as a 3-minute average.
	OAC rule 3745-17-08(B)	See section A.I.2.f below.
	OAC rule 3745-21-07(G)(2)	See section A.I.2.c below.

2. Additional Terms and Conditions

- 2.a The packed tower acid scrubber must have a control efficiency of at least 95%.
- 2.b Particulate emissions generated from the sand mixer shall be vented to a fabric filter with a control efficiency of at least 90%.
- 2.c The emissions unit core box shall have sufficient purge cycle duration to minimize odors from the manufactured mold cores.
- 2.d No open containers of triethylamine catalyst are permitted on the premises unless the emissions are vented to the acid scrubber.
- 2.e Trained maintenance personnel shall be available, on each shift, to service the core machine and the acid scrubber.
- 2.f The permittee shall minimize or eliminate visible fugitive particulate emissions through the employment of reasonably available control measures (RACM).

At a minimum, the permittee's employment of RACM shall include the following: local hooding over the emissions unit.

The collection efficiency shall be sufficient to minimize or eliminate visible particulate emissions of fugitive dust at the point(s) of capture to the extent possible with good engineering design. (Also see A.I.2.b).

- 2.g The permittee shall not employ any photochemically reactive material in this emissions unit, as defined in OAC rule 3745-21-01(C)(5).

II. Operational Restrictions

- 1. No more than 9,984 lbs of triethylamine catalyst shall be used during any calendar year.
- 2. This emissions unit is limited to operating no more than 4,160 hours during any calendar year.
- 3. The stack serving this emissions unit shall have a minimum height of 50 feet above grade level.
- 4. The only liquid catalyst used in this emissions unit shall be triethylamine.
- 5. Except during start-up and initial loading of the filters following a filter change, the pressure drop across the fabric filter serving the sand mixer shall be maintained within the range of 2.0 to 7.0 inches water gauge while the emissions unit is in operation.

The manufacturer's recommended pressure drop range may be revised to more accurately reflect the fabric filter pressure drop range encountered during actual emissions unit operating conditions that are in compliance with the applicable emission limitations. Any request to revise the pressure drop range shall be submitted in writing to the Canton City Health Department, Air Pollution Control Division. The request shall be accompanied by technical data that justifies the revision to the pressure drop range.

- 6. The pressure drop across the packed tower acid scrubber shall not exceed 2.0 inches of water gauge while the emissions unit is in operation.

The manufacturer's recommended maximum pressure drop value may be revised to more accurately reflect the packed tower acid scrubber maximum pressure drop value encountered during actual emissions unit operating conditions that are in compliance with the applicable emission limitations. Any request to revise the maximum pressure drop value shall be submitted in writing to the Canton City Health Department, Air Pollution Control Division. The request shall be accompanied by technical data that justifies the revision to the maximum pressure drop value.

II. Operational Restrictions (continued)

7. The pH of the scrubbing liquor in the packed tower acid scrubber shall be maintained between 2.0 and 4.5 while the emissions unit is in operation.

The manufacturer's recommended pH range may be revised to more accurately reflect the packed tower acid scrubber pH range encountered during actual emissions unit operating conditions that are in compliance with the applicable emission limitations. Any request to revise the pH range shall be submitted in writing to the Canton City Health Department, Air Pollution Control Division. The request shall be accompanied by technical data that justifies the revision to the pH range.

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 particulate emissions from the stack and 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.
2. Persons responsible for making the visible emission observations required in sections A.III.1 and A.III.2 shall be familiar with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.
3. The permittee shall collect and record the following information each day for this emissions unit:
 - a. the pressure drop across the fabric filter, in inches of water;
 - b. the packed tower acid scrubber pressure drop, in inches of water; and
 - c. the pH of the scrubbing liquor in the packed tower acid scrubber.
4. The permittee shall collect and record the following information each day for this emissions unit:
 - a. the company identification of each material employed, including bonding agents and core wash materials and mold release agents; and
 - 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).
5. The permittee shall collect and record the following information each month for this emissions unit:
 - a. the total amount of triethylamine catalyst used, in lbs; and
 - b. the total number of hours the emissions unit was in operation.
6. The permittee shall operate and maintain equipment to monitor the pressure drop across the packed tower acid scrubber and the fabric filter serving this emissions unit. The monitoring devices shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendation, instructions and operating manuals.
7. The permittee shall operate and maintain equipment to monitor the pH of the scrubbing liquor in the packed tower acid scrubber. The monitoring device shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendation, instructions and operating manuals.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - a. each day during which any photochemically reactive material was employed;
 - b. all periods of time when the pressure drop across the fabric filter serving the sand mixer associated with this emissions unit did not comply with the range specified above;
 - c. all periods of time when the pressure drop across the packed tower acid scrubber exceeded the value specified above; and
 - d. all periods of time when the pH of the scrubber liquor in the packed tower acid scrubber did not comply with the range specified above.

The quarterly deviation reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition A.1.c.ii.

2. 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, (b) 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 (c) describe any corrective actions taken to eliminate the visible particulate and/or visible fugitive particulate emissions. These reports shall be submitted to the Canton City Health Department, Air Pollution Control Division by January 31 and July 31 of each year and shall cover the previous 6-month period.
3. The permittee shall also submit annual reports that specify the total amount of triethylamine catalyst used, the total number of operating hours, and the total triethylamine and particulate emissions for this emissions unit for the previous calendar year. The reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.

V. Testing Requirements

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

1.a Emission Limitation:

Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance shall be demonstrated by performing visible particulate emission observations in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

1.b Emission Limitation:

Visible fugitive particulate emissions from this emissions unit shall not exceed 20% opacity as a 3-minute average.

Applicable Compliance Method:

If required, compliance shall be demonstrated by performing visible particulate emission observations in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(3).

V. Testing Requirements (continued)

1.c Emission Limitations:

Particulate emissions (includes both stack and fugitive emissions) shall not exceed 0.35 lb/hr and 0.15 ton/yr.

Applicable Compliance Methods:

Compliance with the hourly emission limitation may be determined by summing the stack and fugitive particulate emissions for this emissions unit. The fugitive particulate component may be determined by multiplying the fugitive particulate emission factor of 0.35 lb of particulate emissions/ton of cores produced by the emissions unit's maximum hourly core production rate (1.00 ton of cores produced/hr - 1.0 ton equals the maximum amount of sand processed per hour) by the control system's capture efficiency (1-.99). The fugitive particulate emission factor is specified in Ohio EPA's RACM document, Section 2.8, Table 2.8-1. The stack particulate component may be determined by multiplying the fugitive particulate emission factor of 0.35 lb of particulate emissions/ton of cores produced by the emissions unit's maximum hourly core production rate (1.00 ton of cores produced/hr - 1.0 ton equals the maximum amount of sand processed per hour) by the percentage of the emissions vented to the control system (1-.01) and by the control efficiency of the fabric filter (1-.90).

If required, compliance with the hourly emission limitation shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the fugitive particulate component, as calculated above.

Compliance with the annual emission limitation shall be determined by multiplying the hourly emission rate by the emissions unit's actual annual operating hours, and dividing by 2,000 lbs/ton.

1.d Emission Limitations:

Triethylamine emissions (includes both stack and fugitive emissions) shall not exceed 0.26 lb/hr and 0.54 ton/yr.

Applicable Compliance Methods:

Compliance with the hourly emission limitation shall be demonstrated based upon the emission testing requirements specified in section A.V.2.

Compliance with the annual emission limitation shall be calculated by multiplying the hourly emission limitation or the average hourly emission rate from the most recent test that demonstrated that the emissions unit was in compliance by the emissions unit's actual annual operating hours, and dividing by 2,000 lbs/ton.

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 2 1/2 years after issuance of this permit.

b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for triethylamine emissions.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for triethylamine, Methods 1 through 4 and Method 18 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

d. The tests shall be conducted while the emissions unit is operating at or near its maximum production capacity or as close to the capacity as is physically possible, unless otherwise specified or approved by the Canton City Health Department, Air Pollution Control Division.

e. The following parameter shall also be monitored and recorded during the emission testing: the pressure differential across the fabric filter serving this emissions unit.

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 Canton City Health Department, Air Pollution Control Division. 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 Canton City Health Department, Air Pollution Control Division's refusal to accept the results of the emission test(s).

Personnel from the Canton City Health Department, Air Pollution Control Division 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 Canton City Health Department, Air Pollution Control Division within 30 days following completion of the test(s). The title page and the text of the report shall incorporate the Ohio EPA's identification (P024) for the emissions unit where applicable. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Canton City Health Department, Air Pollution Control Division.

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-20) Coremaking Machine #2 (P025)

Activity Description: Cold box coremaking using a binder and co-reactant system for the preparation of sand cores

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>
One piece cold box coremaking process (Laempe L-20) using a two part binder and catalyst system for the preparation of sand cores. The particulate emissions from the sand mixer are controlled with a fabric filter. There are no controls for the organic or particulate emissions from the coremaking machine.	OAC rule 3745-31-05(A)(3) (PTI 15-1228)	Methyl formate emissions from this emissions unit shall not exceed 6.3 lbs/hr and 13.1 tons/yr.
		Methyl formate usage in this emissions unit shall not exceed 15.75 lbs/hr, 2.37 tons/month, and 32.75 tons/yr.
		Particulate emissions from the fabric filter controlling the sand mixer shall not exceed 0.04 lb/hr and 0.16 ton/yr.
		See A.II.1 through A.II.3 below.
	OAC rule 3745-17-07(A)	Compliance with this rule also includes compliance with OAC rules 3745-17-07(A), 3745-17-07(B), and 3745-17-08(B).
	OAC rule 3745-17-07(B)	Visible particulate emissions from any stack serving this emissions unit shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
	OAC rule 3745-17-08(B)	Visible fugitive particulate emissions from this emissions unit shall not exceed 20% opacity as a 3-minute average.
	OAC rule 3745-17-11(B)	See A.I.2.a below.
	OAC rule 3745-21-07(G)(2)	See A.I.2.b below.
		See A.I.2.c below.

2. Additional Terms and Conditions

- 2.a** The permittee shall minimize or eliminate visible fugitive particulate emissions through the employment of reasonably available control measures (RACM).

At a minimum, the permittee's employment of RACM shall include the following: local hooding over the emissions unit.

The collection efficiency shall be sufficient to minimize or eliminate visible particulate emissions of fugitive dust at the point(s) of capture to the extent possible with good engineering design. (Also see A.II.1).

- 2.b** The particulate emissions limitation specified by OAC rule 3745-17-11 is less stringent than the particulate emissions limitation established pursuant to the best available technology determination under OAC rule 3745-31-05(A)(3).
- 2.c** The permittee shall not employ any photochemically reactive materials in this emissions unit, as defined in OAC rule 3745-21-01(C)(5).

II. Operational Restrictions

1. Particulate emissions from the sand mixer shall be vented to a fabric filter with a control efficiency of at least 99%.
2. A sand heater shall be employed at the inlet to the Laempe machine to keep the sand at the recommended temperature to maximize the reaction efficiency and minimize emissions.
3. A minimum gassing time shall be determined for each job type. This time will be adhered to when making molds to reduce methyl formate emissions.
4. Except during start-up and initial loading of the filters following a filter change, the pressure drop across the fabric filter serving the sand mixer associated with this emissions unit shall be maintained within the range of 2.0 to 7.0 inches of water while the emissions unit is in operation.

The manufacturer's recommended pressure drop range may be revised to more accurately reflect the fabric filter pressure drop range encountered during actual emissions unit(s) operating conditions that are in compliance with the applicable emission limitations. Any request to revise the pressure drop range shall be submitted in writing to the Canton City Health Department, Air Pollution Control Division. The request shall be accompanied by technical data that justifies the revision to the pressure drop range.

5. The stack serving this emissions unit shall have a minimum height of 40 feet above grade level.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the fabric filter serving this emissions unit 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 fabric filter on a once-per-shift 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 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.

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

3. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive 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 minimize or eliminate the visible emissions.

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

4. Persons responsible for making the visible emission observations required in sections A.III.2 and A.III.3 shall be familiar with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.
5. The permittee shall keep the following daily records for all materials used in this emissions unit:
 - a. the company identification of each material employed, including bonding agents and core wash materials; and
 - 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).
6. The permittee shall properly operate and maintain equipment to continuously monitor the temperature of the sand at the inlet to the Laempe machine 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 inlet sand temperature once a shift when the emissions unit is in operation.
7. The permittee shall record the minimum and actual gassing times for each job type. The minimum gassing time shall be adhered to, for each casting, in the operation of this emissions unit.
8. The permittee shall record the amount of methyl formate used each hour and each month in this emissions unit, in pounds and tons, respectively.
9. The permittee shall maintain the following annual records:
 - a. the total number of hours the emissions unit was in operation;
 - b. the total amount of sand loaded into the day bin, in tons; and
 - c. the annual average hourly sand loading rate, in tons/hr.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that include the following information:
 - a. each day during which any photochemically reactive material was employed;
 - b. an identification of each hour during which the usage of methyl formate exceeded 15.75 lbs/hr, and the actual usage of methyl formate during each such hour;
 - c. an identification of each month during which the usage of methyl formate exceeded 2.37 tons, and the actual usage of methyl formate during each such month;
 - d. all periods of time when the pressure drop across the fabric filter serving the sand mixer associated with this emissions unit did not comply with the range specified above; and
 - e. all periods of time during which the sand temperature at the inlet to the Laempe machine did not comply with the recommended temperature necessary to maximize the reaction efficiency and minimize emissions.
2. The deviation reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition A.1.c.ii.
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 Canton City Health Department, Air Pollution Control Division 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 the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible fugitive particulate emissions. These reports shall be submitted to the Canton City Health Department, Air Pollution Control Division by January 31 and July 31 of each year and shall cover the previous 6-month period.
5. The permittee shall also submit annual reports that specify the total usage of methyl formate (in tons), and the total particulate and methyl formate emissions from this emissions unit for the previous calendar year. The reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.

V. Testing Requirements

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

- 1.a Emission Limitation:

Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance shall be demonstrated by performing visible particulate emission observations in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9 and OAC rule 3745-17-03(B)(1).

V. Testing Requirements (continued)

1.b Emission Limitation:

Visible fugitive particulate emissions from this emissions unit shall not exceed 20% opacity as a 3-minute average.

Applicable Compliance Method:

If required, compliance shall be demonstrated by performing visible particulate emission observations in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9 and OAC rule 3745-17-03(B)(3).

1.c Emission Limitations:

Particulate emissions from the fabric filter controlling the sand mixer shall not exceed 0.04 lb/hr and 0.16 ton/yr.

Applicable Compliance Methods:

Compliance with the hourly emission limitation may be determined by multiplying the particulate emission factor of 0.29 lb/ton of sand by the average hourly sand loading rate, in tons/hr, and by the control efficiency of the fabric filter serving this emissions unit (1-.99). The AP-42 emission factor is from Table 11.12.2.

If required, compliance with the hourly emission limitation shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5.

Compliance with the annual emission limitation shall be calculated by multiplying the hourly emission limitation by the emissions unit's actual annual operating hours, and dividing by 2,000 lbs/ton.

1.d Emission Limitations:

Methyl formate emissions from this emissions unit shall not exceed 6.3 lbs/hr and 13.1 tons/yr.

Applicable Compliance Methods:

Compliance with the hourly emission limitation may be determined using the following equation and assumptions

$$E = PWR \times RF \times CRF \times (1-RE)$$

where:

(this is a typical example, permittee to use facility specific factors)

E = emissions of methyl formate

PWR = maximum process weight rate of sand, 5,880 lbs/hr sand;

RF = resin (Beta Set) fraction of sand, 0.025 resin;

CRF = co-reactant Beta Cure (methyl formate) fraction of resin, 0.50 methyl formate; and

RE = reaction efficiency of methyl formate, 90%.

Compliance with the hourly emission limitation shall be demonstrated based upon the emission testing requirements specified in section A.V.2.

Compliance with the annual emission limitation shall be determined by multiplying the average hourly emission rate (from the emission tests required pursuant to section A.V.2) by the emissions unit's actual annual operating hours, and dividing by 2,000 lbs/ton.

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 2 1/2 years after issuance of this permit.
 - b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for methyl formate emissions.
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for methyl formate, Methods 1 through 4 and Method 18 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.
 - d. The tests shall be conducted while the emissions unit is operating at or near its maximum production capacity or as close to the capacity as is physically possible, unless otherwise specified or approved by the Canton City Health Department, Air Pollution Control Division.
 - e. The following parameter shall also be monitored and recorded during the emission testing: the pressure differential across the fabric filter serving this emissions unit.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Canton City Health Department, Air Pollution Control Division. 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 Canton City Health Department, Air Pollution Control Division's refusal to accept the results of the emission test(s).

Personnel from the Canton City Health Department, Air Pollution Control Division 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 Canton City Health Department, Air Pollution Control Division within 30 days following completion of the test(s). The title page and the text of the report shall incorporate the Ohio EPA's identification (P025) for the emissions unit where applicable. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Canton City Health Department, Air Pollution Control Division.

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>
One piece cold box coremaking process (Laempe L-20) using a two part binder and catalyst system for the preparation of sand cores. The particulate emissions from the sand mixer are controlled with a fabric filter. There are no controls for the organic or particulate emissions from the coremaking machine.		See section B.III.1.

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

1. The Permit To Install for this emissions unit (P025) was evaluated based on the actual materials (typical coremaking materials) and the design parameters of the emission 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): 246,000

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 2,252

MAGLC (ug/m3): 5,857

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

2. Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:
 - a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV 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.).
3. 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 shows 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: Internal Quench and Draw Furnaces #1 (P026)

Activity Description: Heat treatment of malleable iron castings. The parts washer previously permitted with this emissions unit is included as an insignificant source (Z013) since the unit can be used by the other draw furnaces and it meets the exemption listed in 3745-31-03(z)(aa).

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>
1.2 MMBtu/hr natural gas-fired heat treat internal oil quench furnace	OAC rule 3745-31-05(A)(3) (PTI 15-1271)	Particulate emissions shall not exceed 0.024 lb/hr and 0.11 ton/yr.
		Carbon monoxide (CO) emissions shall not exceed 0.04 lb/hr and 0.18 ton/yr.
		Nitrogen oxides (NOx) emissions shall not exceed 0.18 lb/hr and 0.79 ton/yr.
		Organic compound (OC) emissions shall not exceed 1.75 lbs/hr and 7.67 tons/yr.
		Compliance with this rule also includes compliance with OAC rules 3745-18-06(E)(1), 3745-21-08(B), and 3745-23-06(B).
	OAC rule 3745-17-07(A)	See section A.I.2.a below.
	OAC rule 3745-17-11(B)	See section A.I.2.b below.
	OAC rule 3745-18-06(E)(1)	Sulfur dioxide (SO ₂) emissions shall not exceed 13.1 lbs/hr.
OAC rule 3745-21-08(B)	See section A.I.2.c below.	
OAC rule 3745-23-06(B)	See section A.I.2.d below.	

2. Additional Terms and Conditions

- This emissions unit is exempt from the visible particulate emission limitation specified in OAC rule 3745-17-07(A) pursuant to OAC rule 3745-17-07(A)(3)(h) because the emissions unit is not subject to the requirements of OAC rule 3745-17-11.

2. Additional Terms and Conditions (continued)

- 2.b** The uncontrolled mass rate of particulate emissions* from this emissions unit is less than 10 pounds/hour. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. In addition, Table I of OAC rule 3745-17-11 does not apply because the process weight rate is equal to zero. "Process weight" is defined in OAC rule 3745-17-01(B)(14).

* The burning of natural gas is the only source of particulate emissions from this emissions unit.

- 2.c** The permittee has satisfied the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 15-1271.

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

- 2.d** The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3) in Permit to Install 15-1271.

II. Operational Restrictions

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

III. Monitoring and/or Record Keeping Requirements

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

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day that a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
2. The permittee shall also submit annual reports that specify the total particulate, CO, NO_x, and OC emissions, in tons, from this emissions unit for the previous calendar year. The reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.

V. Testing Requirements

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

V. Testing Requirements (continued)

1.a Emission Limitations:

Particulate emissions shall not exceed 0.024 lb/hr and 0.11 ton/yr.

Applicable Compliance Methods:

Until the emission testing in section A.V.2 is completed, the permittee may determine compliance with the lb/hr emission limitation by multiplying the emission factor of 1.9 lbs of PE/mm³cu. ft. by the emissions unit's maximum hourly fuel consumption rate (1,787 cu. ft./hr). The emission factor is specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

Compliance with the lb/hr emission limitation shall be determined through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5. (See section A.V.2.)

The ton/yr emission limitation was established by multiplying the lb/hr emission limitation by the emissions unit's maximum operating schedule of 8,760 hours/year and dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation will also be demonstrated.

Once the emission testing specified in section A.V.2 is completed, the permittee shall use the emissions unit-specific particulate emission factor established during the emission testing in lieu of the particulate emission factor specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors.

1.b Emission Limitations:

CO emissions shall not exceed 0.04 lb/hr and 0.18 ton/yr.

Applicable Compliance Methods:

Until the emission testing in section A.V.2 is completed, the permittee may determine compliance with the lb/hr emission limitation by multiplying the emission factor of 84 lbs of CO/mm³cu.ft. by the emissions unit's maximum hourly fuel consumption rate (1,787 cu. ft./hr). The emission factor is specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-1 (7/98).

Compliance with the lb/hr emission limitation shall be determined through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 10. (See section A.V.2.)

The ton/yr emission limitation was established by multiplying the lb/hr emission limitation by the emissions unit's maximum operating schedule of 8,760 hours/year and dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation will also be demonstrated.

Once the emission testing specified in section A.V.2 is completed, the permittee shall use the emissions unit-specific CO emission factor established during the emission testing in lieu of the CO emission factor specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors.

V. Testing Requirements (continued)

1.c Emission Limitations:

NO_x emissions shall not exceed 0.18 lb/hr and 0.79 ton/yr.

Applicable Compliance Methods:

Until the emission testing in section A.V.2 is completed, the permittee may determine compliance with the lb/hr emission limitation by multiplying the emission factor of 100 lbs of NO_x/mmcu.ft. by the emissions unit's maximum hourly fuel consumption rate (1,787 cu. ft./hr). The emission factor is specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-1 (7/98).

Compliance with the lb/hr emission limitation shall be determined through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 7. (See section A.V.2.)

The ton/yr emission limitation was established by multiplying the lb/hr emission limitation by the emissions unit's maximum operating schedule of 8,760 hours/year and dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation will also be demonstrated.

Once the emission testing specified in section A.V.2 is completed, the permittee shall use the emissions unit-specific NO_x emission factor established during the emission testing in lieu of the NO_x emission factor specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors.

1.d Emission Limitations:

OC emissions shall not exceed 1.75 lbs/hr and 7.67 tons/yr.

Applicable Compliance Methods:

Until the emission testing in section A.V.2 is completed, the permittee may determine compliance with the lb/hr emission limitation by multiplying the emission factor of 11.0 lbs of OC/mmcu.ft. by the emissions unit's maximum hourly fuel consumption rate (1,787 cu. ft./hr). The emission factor is specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 1.4, Table 1.4-2 (7/98).

Compliance with the lb/hr emission limitation shall be determined through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 25. (See section A.V.2.)

The ton/yr emission limitation was established by multiplying the lb/hr emission limitation by the emissions unit's maximum operating schedule of 8,760 hours/year and dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation will also be demonstrated.

Once the emission testing specified in section A.V.2 is completed, the permittee shall use the emissions unit-specific OC emission factor established during the emission testing in lieu of the OC emission factor specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors.

V. Testing Requirements (continued)

1.e Emission Limitation:

SO₂ emissions shall not exceed 13.1 lbs/hr.

Applicable Compliance Method:

The SO₂ emissions generated by this emissions unit are due solely to the combustion of natural gas. The process materials (iron castings) employed in this emissions unit do not generate SO₂ emissions during the heating process.

Compliance with this limitation will be assumed due to the negligible percent sulfur, by weight, in the fuel.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6.

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 2 1/2 years after issuance of this permit.
- b. The emission testing shall be conducted to demonstrate compliance with the lb/MMBtu and hourly particulate, CO, NO_x, and OC emission limitations.
- c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate(s): for particulates, Methods 1 through 5 of 40 CFR Part 60, Appendix A; for NO_x, Methods 1 through 4 and Method 7 of 40 CFR Part 60, Appendix A; for CO, Methods 1 through 4 and Method 10 of 40 CFR Part 60, Appendix A; and for OC, Methods 1 through 4 and Method 25 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.
- d. The tests shall be conducted while this emissions unit is operating at or near its maximum production capacity or as close to that capacity as is physically possible, unless otherwise specified or approved by the Canton City Health Department, Air Pollution Control Division.
- e. The following parameter shall also be monitored and recorded during the emission testing: the emissions unit's natural gas firing rate.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Canton City Health Department, Air Pollution Control Division. 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 Canton City Health Department, Air Pollution Control Division's refusal to accept the results of the emission test(s).

Personnel from the Canton City Health Department, Air Pollution Control Division 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 Canton City Health Department, Air Pollution Control Division within 30 days following completion of the test(s). The title page and the text of the report shall incorporate the Ohio EPA's identification (P026) for the emissions unit where applicable. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Canton City Health Department, Air Pollution Control Division.

Facility Name: **OHIO CAST PRODUCTS, INC.**
Facility ID: **15-76-05-0200**
Emissions Unit: **Internal Quench and Draw Furnaces #1 (P026)**

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-20) Coremaking Machine #3 (P027)

Activity Description: Cold box coremaking using a binder and co-reactant system for the preparation of sand cores

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>
One piece cold box coremaking process (Laempe L-20) using a two part binder and catalyst system for the preparation of sand cores. The particulate emissions from the sand mixer are controlled with a fabric filter. There are no controls for the organic or particulate emissions from the coremaking machine.	OAC rule 3745-31-05(A)(3) (PTI 15-1274)	<p>Methyl formate emissions from this emissions unit shall not exceed 13.0 lbs/hr and 37.44 tons/yr.</p> <p>Methyl formate usage in this emissions unit shall not exceed 32.5 lbs/hr, 7.8 tons/month, and 93.6 tons/yr.</p> <p>Particulate emissions from the fabric filter controlling the sand mixer shall not exceed 0.01 lb/hr.</p> <p>Particulate emissions from the coremaking machine (including both stack and fugitive emissions) shall not exceed 0.44 lb/hr.</p> <p>Total particulate emissions from this emissions unit shall not exceed 1.29 tons/yr.</p> <p>Visible particulate emissions from any stack serving this emissions unit shall not exceed 10% opacity, as a 6-minute average.</p> <p>See A.II.1 through A.II.3 below.</p> <p>Compliance with this rule also includes compliance with OAC rules 3745-17-07(B) and 3745-17-08(B).</p>

<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 emission limitations specified in this rule are less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-07(B)	Visible fugitive particulate emissions from this emissions unit shall not exceed 20% opacity as a 3-minute average.
	OAC rule 3745-17-08(B)	See A.I.2.a below.
	OAC rule 3745-17-11(B)	See A.I.2.b below.
	OAC rule 3745-21-07(G)(2)	See A.I.2.c below.

2. Additional Terms and Conditions

2.a The permittee shall minimize or eliminate visible fugitive particulate emissions through the employment of reasonably available control measures (RACM).

At a minimum, the permittee's employment of RACM shall include the following: local hooding over the emissions unit.

The collection efficiency shall be sufficient to minimize or eliminate visible particulate emissions of fugitive dust at the point(s) of capture to the extent possible with good engineering design. (Also see A.II.1).

2.b The particulate emission limitation specified by OAC rule 3745-17-11 is less stringent than the particulate emission limitation established pursuant to the best available technology determination under OAC rule 3745-31-05(A)(3).

2.c The permittee shall not employ any photochemically reactive materials in this emissions unit, as defined in OAC rule 3745-21-01(C)(5).

II. Operational Restrictions

1. Particulate emissions from the sand mixer shall be vented to a fabric filter with a control efficiency of at least 98%.
2. A sand heater shall be employed at the inlet to the Laempe machine to keep the sand at the recommended temperature to maximize the reaction efficiency and minimize emissions.
3. A minimum gassing time shall be determined for each job type. This time will be adhered to when making molds to reduce methyl formate emissions.
4. Except during start-up and initial loading of the filters following a filter change, the pressure drop across the fabric filter serving the sand mixer associated with this emissions unit shall be maintained within the range of 2.0 to 7.0 inches of water while the emissions unit is in operation.

The manufacturer's recommended pressure drop range may be revised to more accurately reflect the fabric filter pressure drop range encountered during actual emissions unit(s) operating conditions that are in compliance with the applicable emission limitations. Any request to revise the pressure drop range shall be submitted in writing to the Canton City Health Department, Air Pollution Control Division. The request shall be accompanied by technical data that justifies the revision to the pressure drop range.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the fabric filter serving this emissions unit 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 fabric filter on a once-per-shift 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 stack and 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.
3. Persons responsible for making the visible emission observations required in section A.III.2 shall be familiar with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.
4. The permittee shall keep the following daily records for all materials used in this emissions unit:
 - a. the company identification of each material employed, including bonding agents and core wash materials; and
 - 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).
5. The permittee shall properly operate and maintain equipment to continuously monitor the temperature of the sand at the inlet to the Laempe machine 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 inlet sand temperature once a shift when the emissions unit is in operation.
6. The permittee shall record the minimum and actual gassing times for each job type. The minimum gassing time shall be adhered to, for each casting, in the operation of this emissions unit.
7. The permittee shall record the amount of methyl formate used each hour and each month in this emissions unit, in pounds and tons, respectively.
8. The permittee shall maintain the following annual records:
 - a. the total number of hours the emissions unit was in operation;
 - b. the total amount of sand loaded into the day bin, in tons; and
 - c. the annual average hourly sand loading rate, in tons/hr.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that include the following information:
 - a. each day during which any photochemically reactive material was employed;
 - b. an identification of each hour during which the usage of methyl formate exceeded 32.5 lbs/hr, and the actual usage of methyl formate during each such hour;
 - c. an identification of each month during which the usage of methyl formate exceeded 7.8 tons, and the actual usage of methyl formate during each such month;
 - d. all periods of time when the pressure drop across the fabric filter serving the sand mixer associated with this emissions unit did not comply with the range specified above; and
 - e. all periods of time during which the sand temperature at the inlet to the Laempe machine did not comply with the recommended temperature necessary to maximize the reaction efficiency and minimize emissions.
2. The deviation reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition A.1.c.ii.
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, (b) 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 (c) describe any corrective actions taken to eliminate the visible particulate and/or visible fugitive particulate emissions. These reports shall be submitted to the Canton City Health Department, Air Pollution Control Division by January 31 and July 31 of each year and shall cover the previous 6-month period.
4. The permittee shall also submit annual reports that specify the total usage of methyl formate (in tons), and the total particulate and methyl formate emissions from this emissions unit for the previous calendar year. The reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.

V. Testing Requirements

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

1.a Emission Limitation:

Visible particulate emissions from any stack shall not exceed 10% opacity as a 6-minute average.

Applicable Compliance Method:

If required, compliance shall be demonstrated by performing visible particulate emission observations in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

1.b Emission Limitation:

Visible fugitive particulate emissions from this emissions unit shall not exceed 20% opacity as a 3-minute average.

Applicable Compliance Method:

If required, compliance shall be demonstrated by performing visible particulate emission observations in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9 and OAC rule 3745-17-03(B)(3).

V. Testing Requirements (continued)

1.c Emission Limitation:

Particulate emissions from the fabric filter controlling the sand mixer shall not exceed 0.01 lb/hr.

Applicable Compliance Methods:

Compliance with the hourly emission limitation may be determined by multiplying the particulate emission factor of 0.29 lb/ton of sand by the average hourly sand loading rate, in tons/hr, and by the control efficiency of the fabric filter serving this emissions unit (1-.98). The AP-42 emission factor is from Table 11.12.2.

If required, compliance with the hourly emission limitation shall be demonstrated through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5.

1.d Emission Limitation:

Particulate emissions from the coremaking machine (including both stack and fugitive emissions) shall not exceed 0.44 lb/hr.

Applicable Compliance Method:

Compliance with the hourly emission limitation may be determined by multiplying the fugitive particulate emission factor of 0.35 lb of particulate emissions/ton of cores produced by the emissions unit's maximum hourly core production rate (1.25 tons of cores produced/hr - 1.25 tons equals the maximum amount of sand processed per hour).

1.e Emission Limitation:

Total particulate emissions from this emissions unit shall not exceed 1.29 tons/yr.

Applicable Compliance Method:

Compliance with the annual emission limitation shall be calculated by multiplying the hourly emission limitations by the emissions unit's actual annual operating hours, and dividing by 2,000 lbs/ton.

V. Testing Requirements (continued)

1.f Emission Limitations:

Methyl formate emissions from this emissions unit shall not exceed 13.0 lbs/hr and 37.44 tons/yr.

Applicable Compliance Methods:

Compliance with the hourly emission limitation may be determined using the following equation and assumptions

$$E = PWR \times RF \times CRF \times (1-RE)$$

where:

(this is a typical example, permittee to use facility specific factors)

E = emissions of methyl formate

PWR = maximum process weight rate of sand, 5,880 lbs/hr sand;

RF = resin (Beta Set) fraction of sand, 0.025 resin;

CRF = co-reactant Beta Cure (methyl formate) fraction of resin, 0.50 methyl formate; and

RE = reaction efficiency of methyl formate, 90%.

Compliance with the hourly emission limitation shall be demonstrated based upon the emission testing requirements specified in section A.V.2.

Compliance with the annual emission limitation shall be determined by multiplying the average hourly emission rate (from the emission tests required pursuant to section A.V.2) by the emissions unit's actual annual operating hours, and dividing by 2,000 lbs/ton.

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 2 1/2 years after issuance of this permit.
 - b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for methyl formate emissions.
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for methyl formate, Methods 1 through 4 and Method 18 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.
 - d. The tests shall be conducted while the emissions unit is operating at or near its maximum production capacity or as close to the capacity as is physically possible, unless otherwise specified or approved by the Canton City Health Department, Air Pollution Control Division.
 - e. The following parameter shall also be monitored and recorded during the emission testing: the pressure differential across the fabric filter serving this emissions unit.

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 Canton City Health Department, Air Pollution Control Division. 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 Canton City Health Department, Air Pollution Control Division's refusal to accept the results of the emission test(s).

Personnel from the Canton City Health Department, Air Pollution Control Division 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 Canton City Health Department, Air Pollution Control Division within 30 days following completion of the test(s). The title page and the text of the report shall incorporate the Ohio EPA's identification (P027) for the emissions unit where applicable. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Canton City Health Department, Air Pollution Control Division.

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>
One piece cold box coremaking process (Laempe L-20) using a two part binder and catalyst system for the preparation of sand cores. The particulate emissions from the sand mixer are controlled with a fabric filter. There are no controls for the organic or particulate emissions from the coremaking machine.		See section B.III.1.

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 (P027) was evaluated based on the actual materials (typical coremaking materials) and the design parameters of the emission 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): 246,000

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 2,252

MAGLC (ug/m3): 5,857

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

2. Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:
 - a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
 - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
 - c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).
3. 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 shows 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: Laempe (L-20) Coremaking Machine #5 (P030)

Activity Description: Cold box coremaking using a binder and co-reactant system for the preparation of sand cores

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Laempe Core Making Machine L-20 Core Making Operation #5.	OAC rule 3745-31-05(A)(3) (PTI 15-1495) Issued 04/04/02	Methyl formate emissions from this emissions unit shall not exceed 7.31 lbs/hr and 32.01 tons/yr.
There are no stacks or control equipment for this emissions unit.		The volatile organic compound (VOC) emissions shall not exceed 7.71 lbs/hr and 33.77 tons/yr.
		Particulate emissions shall not exceed 0.34 lb/hr and 1.49 tons/yr.
		See A.I.2.a and A.I.2.b below.
		The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(B)(1), 3745-17-08(B), and 3745-21-07(G)(2).
	OAC rule 3745-17-07(B)(1)	See A.I.2.c below.
	OAC rule 3745-17-08(B)	See A.I.2.d below.
	OAC rule 3745-21-07(G)(2)	See A.I.2.e below.

2. Additional Terms and Conditions

- 2.a Methyl formate usage shall not exceed the following limits:
 - i. 7.85 tons/month
 - ii. 94 tons/year

2. Additional Terms and Conditions (continued)

- 2.b** Resin usage shall not exceed the following limits:
- i. 15.7 tons/month
 - ii. 188 tons/year
- 2.c** Visible particulate emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average.
- 2.d** The permittee shall minimize or eliminate visible fugitive particulate emissions through the employment of reasonably available control measures (RACM). RACM has been determined to be no controls.
- 2.e** The permittee shall not employ any photochemically reactive materials in this emissions unit, as defined in OAC rule 3745-21-01(C)(5).
- 2.f** The 7.31 lbs/hr of methyl formate and 7.71 lbs/hr of VOC emission limitations for this emissions unit were established to reflect the hourly potentials to emit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with these limits.

II. Operational Restrictions

1. A sand heater shall be employed at the inlet to the Laempe machine to keep the sand at the recommended temperature to maximize the reaction efficiency and minimize emissions.
2. A minimum gassing time shall be determined for each job type. This time will be adhered to when making molds to reduce methyl formate emissions.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall keep a daily record of the amount, in pounds, of any photochemically reactive material employed in this emissions unit, as defined in OAC rule 3745-21-01(C)(5).
2. The permittee shall properly operate and maintain equipment to continuously monitor the temperature of the sand at the inlet to the Laempe machine 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 inlet sand temperature once a shift when the emissions unit is in operation.
3. The permittee shall record the minimum and actual gassing times for each job type. The minimum gassing time shall be adhered to, for each casting, in the operation of this emissions unit.
4. The permittee shall record the amount of methyl formate and resin used each month in this emissions unit.

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 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 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 any photochemically reactive material(s) was (were) employed.
2. The permittee shall submit quarterly deviation (excursion) reports that include the following information:
 - a. an identification of each month during which the usage of methyl formate exceeds 7.85 tons, and the actual usage of methyl formate during each such month; and
 - b. an identification of each month during which the usage of resin exceeds 15.7 tons, and the actual usage of resin during each such month.
3. The permittee shall submit quarterly temperature deviation (excursion) reports that identify all periods of time during which the Laempe inlet temperature did not comply with the allowable range specified above.
4. The deviation reports shall be submitted in accordance with the requirements specified in Part I - General Term and Condition A.1.c.
5. The permittee shall also submit annual reports that specify the total usage of methyl formate (in pounds), and the total particulate, VOC, and methyl formate 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 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 minimize or eliminate the visible fugitive particulate emissions. These reports shall be submitted to the Canton City Health Department, Air Pollution Control Division 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.1 of these terms and conditions shall be determined in accordance with the following methods:

V. Testing Requirements (continued)

1.a Emission Limitations:

The particulate emissions shall not exceed 0.34 lb/hr and 1.49 tons/yr.

Applicable Compliance Method:

Emissions of particulates from core and mold sand unloading and storage may be calculated using the particulate emission factor of 0.03 lb PM/ton of cores X 1.65 tons/hr of sand = 0.05 lb/hr of particulate emissions.

Emissions of particulates from core sand and binder mixing may be calculated using the particulate emission factor of 0.3 lb PM/ton of cores X 1.65 tons/hr of sand = 0.5 lb/hr of particulate emissions.

Emissions of particulates from core making may be calculated using the particulate emission factor of 0.35 lb PM/ton of cores X 1.65 tons/hr of sand = 0.58 lb/hr of particulate emissions.

$0.05 + 0.5 + 0.58 = 1.13 \text{ lbs/hr} \times 0.3 \text{ (70\% building capture)} = 0.34 \text{ lb PM/hr}$
 $0.34 \text{ lb PM/hr} \times 8,760 \text{ hrs/yr} \times 1 \text{ ton}/2,000 \text{ lbs} = 1.49 \text{ tons PM/yr}$

1.b Emission Limitations:

The VOC emissions shall not exceed 7.71 lbs/hr and 33.77 tons/yr.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the monitoring and record keeping requirements for the resin and methyl formate usage specified in section A.III.4 and the following calculations.

Emission factor is 0.00766 lb VOC/lb of resin [based on vendor (Borden) testing information for Beta Set/Beta Cure]. Maximum resin usage is 43 lbs/hr.

$0.00766 \text{ lb VOC/lb of resin} \times 43 \text{ lbs resin/hr} = 0.33 \text{ lb VOC/hr}$

Emission factor is 0.34 lb VOC/lb of methyl formate [based on vendor (Borden) testing information for Beta Set/Beta Cure]. Maximum methyl formate usage is 21.5 lbs/hr.

$0.34 \text{ lb VOC/lb of methyl formate} \times 21.5 \text{ lbs methyl formate/hr} = 7.31 \text{ lbs VOC/hr}$

Core release = 0.07 lb VOC/hr

$0.33 \text{ lb/hr} + 7.31 \text{ lbs VOC/hr} + 0.07 \text{ lb VOC/hr} = 7.71 \text{ lbs VOC/hr}$

$7.71 \text{ lbs VOC/hr} \times 8,760 \text{ hrs/yr} \times 1 \text{ ton}/2,000 \text{ lbs} = 33.77 \text{ tons VOC/yr}$

V. Testing Requirements (continued)

1.c Emission Limitations:

The methyl formate emissions shall not exceed 7.31 lbs/hr and 32.01 tons/yr.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the monitoring and record keeping requirements for the amount of methyl formate usage specified in section A.III.4 and the following calculations.

Emission factor is 0.34 lb methyl formate/lb of methyl formate [based on vendor (Borden) testing information for Betaset/Beatcure]. Maximum methyl formate usage is 21.5 lbs/hr.

$0.34 \text{ lb methyl formate/lb of methyl formate used} \times 21.5 \text{ lbs methyl formate/hr} = 7.31 \text{ lbs methyl formate/hr.}$

$7.31 \text{ lbs methyl formate/hr} \times 8,760 \text{ hrs/yr} \times 1 \text{ ton}/2,000 \text{ lbs} = 32.01 \text{ tons methyl formate/yr.}$

1.d Emission Limitation:

Visible particulate emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average.

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon the visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the methods and procedures specified in OAC rule 3745-17-03(B)(3).

2. Compliance with the usage restrictions and operational limitations in section A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

2.a Usage Restriction:

Methyl formate usage shall not exceed the following limits:

7.85 tons/month and 94 tons/yr

Applicable Compliance Method:

Compliance shall be demonstrated based upon the monitoring and record keeping requirements specified in section A.III.4.

2.b Usage Restriction:

Resin usage shall not exceed the following limits:

15.7 tons/month and 188 tons/yr.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the monitoring and record keeping requirements specified in section A.III.4.

VI. Miscellaneous Requirements

1. Revised OC/VOC Emissions Estimates:

The Ohio EPA reserves the right to: (a) update the emissions factors used to estimate Organic Compound (OC) and Volatile Organic Compound (VOC) emissions and/or (b) redefine the actual and allowable OC/VOC emissions in this permit for the core and/or mold making process(es) at the facility.

Upon written notification from the Ohio EPA concerning the identification and availability of updated and more representative OC/VOC emissions factors, the permittee may be required to reevaluate the estimated OC/VOC emissions from the core and/or mold making operation(s) using the updated emission factors. Should the updated emission factors indicate an increase in estimated OC and/or VOC emissions, the permittee shall submit the following (one copy to the Canton local air agency and one copy to the Ohio EPA, Division of Air Pollution Control, Engineering Section):

Within sixty (60) days of receipt of the written notification from Ohio EPA, the permittee shall submit updated OC/VOC emissions estimates (maximum rate in lbs/hr and tons/yr) for each core and/or mold making operation covered under this permit, using the updated emission factors.

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>
Laempe Core Making Machine L-20 Core Making Operation #5.		See B.III.1 below.

There are no stacks nor control equipment for this emissions unit.

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 (P030) was evaluated based on the actual materials (binders) 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): 266,000

Maximum Hourly Emission Rate (lbs/hr): 7.31

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1,885

MAGLC (ug/m3): 6,333

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

2. Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:
 - a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV 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.).
3. 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 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 shows 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: Didion Drum and Sprue Conveyor (P901)
Activity Description: Removal and separation of sand from 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>
sand shakeout includes Didion Drum and Sprue Conveyor controlled by baghouse # 5.	OAC rule 3745-31-05(A)(3) (PTI 15-1259)	Particulate stack emissions (PE/PM10) shall not exceed 2.11 lbs/hr and 6.07 tons/yr.
		Fugitive particulate emissions shall not exceed 3.38 lbs/hr and 8.61 tons/yr.
		PM10 fugitive emissions shall not exceed 2.37 lbs/hr and 6.03 tons/yr.
		Volatile organic compound (VOC) emissions shall not exceed 9.06 lbs/hr and 23.1 tons/yr.
		See A.I.2.c, A.II.1, and A.II.2 below.
		Compliance with this rule also includes compliance with OAC rules 3745-17-07(A), 3745-17-07(B), and 3745-17-08(B).
	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
	OAC rule 3745-17-07(B)	Visible fugitive particulate emissions shall not exceed 20% opacity as a 3-minute average.
	OAC rule 3745-17-08(B)	See A.I.2.d below.
	OAC rule 3745-17-11(B)	The particulate emission limitation specified by this rule is less stringent than the particulate emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- 2.a** The particulate emissions and/or PM10 emissions from the outlet of the fabric filter serving this emissions unit shall not exceed a concentration of 0.006 grain per dry standard cubic foot (gr/dscf). This emission limitation is applicable to this emissions unit pursuant to a provision in a Consent Order entered in September of 1999 (Case No. 1998CV02342, State of Ohio, ex rel. Montgomery v. Ohio Cast Products, Inc., in the Court of Commons Pleas, Stark County, Ohio). Incorporation of this emission limitation in the terms for this emissions unit, in part, allows the permittee to terminate the Consent Order.
- 2.b** The emissions units vented to the BACT fabric filter - Collector #5 (emissions units P012 [Hunter pouring and cooling line], P901 [Didion drum and Spruce conveyor], and P902 [Hunter sand system and moldmaking]) shall not be disconnected from the BACT fabric filter - Collector #5 without prior written approval of the Director. This requirement is applicable to this emissions unit pursuant to a provision in a Consent Order entered in September of 1999 (Case No. 1998CV02342, State of Ohio, ex rel. Montgomery v. Ohio Cast Products, Inc., in the Court of Commons Pleas, Stark County, Ohio). Incorporation of this requirement in the terms for this emissions unit, in part, allows the permittee to terminate the Consent Order.
- 2.c** The permittee shall minimize or eliminate visible fugitive particulate emissions through the employment of reasonably available control measures (RACM).

At a minimum, the permittee's employment of RACM shall include the following:

- i. the installation and use of hoods, fans, and other equipment to adequately enclose, contain, and vent the fugitive dust; and
- ii. the collection efficiency shall be sufficient to minimize or eliminate visible particulate emissions of fugitive dust at the point(s) of capture to the extent possible with good engineering design.

The RACM requirements specified by this rule are less stringent than the control requirements established pursuant to OAC rule 3745-31-05(A)(3).

- 2.d** This emissions unit shall be equipped with overhead duct hoods at the inlet and outlet of the shakeout drum. The PE/PM10 emissions from the conveyor section of this emissions unit need not be controlled (from PTI).

II. Operational Restrictions

1. The maximum annual operating time for this emissions unit shall not exceed 5,750 hours per rolling, 12-month period.
2. The maximum annual weight of castings processed in this emissions unit shall not exceed 76,500 tons per rolling, 12-month period.
3. Except during startup and initial loading of filters following filter change, the pressure drop across the fabric filter shall be maintained within the range of 2.0 to 7.0 inches of water, while the emissions unit is in operation.

The manufacturer's recommended pressure drop range may be revised to more accurately reflect the fabric filter pressure drop range encountered during actual emissions unit(s) operating conditions that are in compliance with the applicable emission limitations. Any request to revise the pressure drop range shall be submitted in writing to the Canton City Health Department, Air Pollution Control Division. The request shall be accompanied by technical data that justifies the revision to the pressure drop range.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the fabric filter 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 fabric filter on a once-per-shift basis.

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

2. The permittee shall maintain monthly records of the following information for this emissions unit:
 - a. the weight of metal castings processed, in tons;
 - b. the total operating hours;
 - c. the rolling, 12-month summation of the weight of metal castings processed;
 - d. the rolling, 12-month summation of the hours of operation; and
 - e. a log or record of downtime for the control device and monitoring equipment when the associated emissions unit is in operation.
3. The permittee shall maintain daily records of the average hourly metal tonnage shaken out each day.
4. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack and 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.
5. Persons responsible for making the visible emission observations required in section A.III.4 shall be familiar with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify the following:
 - a. all exceedances of the rolling, 12-month operating hours limitation;
 - b. all exceedances of the rolling, 12-month weight of castings processed limitation; and
 - c. all periods of time during which the pressure drop across the fabric filter did not fall within the range specified above.

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

2. 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, (b) 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 (c) describe any corrective actions taken to eliminate the visible particulate and/or visible fugitive particulate emissions. These reports shall be submitted to the Canton City Health Department, Air Pollution Control Division by January 31 and July 31 of each year and shall cover the previous 6-month period.
3. The permittee shall also submit annual reports that specify the total particulate (stack and fugitive), total PM10 stack, and total VOC emissions from this emissions unit for the previous calendar year. The reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.

V. Testing Requirements

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

1.a Emission Limitations:

Particulate emissions and/or PM10 emissions shall not exceed 0.006 gr/dscf, PE/PM10 shall not exceed 2.11 lbs/hr and 6.07 tons/yr.

Applicable Compliance Methods:

Compliance with the gr/dscf and hourly emission limitations shall be demonstrated based upon the emission testing requirements specified in section A.V.2.

Compliance with the annual emission limitation shall be calculated by multiplying the hourly emission limitation or the average hourly emission rate from the most recent test that demonstrated that the emissions unit was in compliance by the emissions unit's actual annual operating hours and dividing by 2,000 lbs/ton.

1.b Emission Limitations:

Fugitive particulate emissions shall not exceed 3.38 lbs/hr and 8.61 tons/yr.

Applicable Compliance Methods:

Compliance with the hourly emission limitation may be determined by multiplying the emissions unit's maximum hourly process weight rate (15 tons metal/hr) by the fugitive particulate emission factor of 45 lbs/ton of metal by the efficiency of the capture system serving this emissions unit (1-.995).

Compliance with the annual emission limitation shall be calculated by multiplying the hourly emission limitation by the emissions unit's actual annual operating hours and dividing by 2,000 lbs/ton.

1.c Emission Limitations:

PM10 fugitive emissions shall not exceed 2.37 lbs/hr and 6.03 tons/yr.

Applicable Compliance Method:

Compliance with the hourly emission limitation may be demonstrated by multiplying the emissions unit's maximum hourly process weight rate (15 tons metal/hr) by the fugitive emission factor of 45 lbs PM10/ton of metal by the efficiency of the capture system serving this emissions unit (1-0.995) by the fraction of particulate matter less than 10 microns in diameter (0.7).

Compliance with the annual emission limitation shall be demonstrated by multiplying the restricted maximum annual process weight rate (76,500 tons metal/yr) by the uncontrolled emission factor of 45 lbs of particulate/ton of metal by the efficiency of the capture system serving this emissions unit (1-0.995) by the fraction of particulate matter less than 10 microns in diameter (0.7) and dividing the product by 2,000 lbs/ton.

V. Testing Requirements (continued)

1.d Emission Limitations:

VOC emissions shall not exceed 9.06 lbs/hr and 23.1 tons/yr.

Applicable Compliance Methods:

Compliance with the hourly emission limitation shall be demonstrated based upon the emission testing requirements specified in section A.V.2.

Compliance with the annual emission limitation shall be calculated by multiplying the hourly emission limitation by the emissions unit's actual annual operating hours and dividing by 2,000 lbs/ton.

1.e Emission Limitation:

Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance shall be demonstrated by performing visible particulate emission observations in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9 and OAC rule 3745-17-03(B)(1).

1.f Emission Limitation:

Visible fugitive particulate emissions shall not exceed 20% opacity as a 3-minute average.

Applicable Compliance Method:

If required, compliance shall be demonstrated by performing visible particulate emission observations in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9 and OAC rule 3745-17-03(B)(3).

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 2 1/2 years after issuance of this permit.
- b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for particulates (gr/dscf and lbs/hr) and VOC (lbs/hr).
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for particulates, Methods 1 through 5 of 40 CFR Part 60, Appendix A, and for VOC, Methods 1 through 4 and Method 25 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.
- d. The tests shall be conducted while emissions units P012, P901, and P902 are operating at or near their maximum production capacities or as close to the capacities as is physically possible, unless otherwise specified or approved by the Canton City Health Department, Air Pollution Control Division.
- e. The following parameter shall also be monitored and recorded during the emission testing: the pressure differential across the fabric filter serving this emissions unit.

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 Canton City Health Department, Air Pollution Control Division. 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 Canton City Health Department, Air Pollution Control Division's refusal to accept the results of the emission test(s).

Personnel from the Canton City Health Department, Air Pollution Control Division 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 Canton City Health Department, Air Pollution Control Division within 30 days following completion of the test(s). The title page and the text of the report shall incorporate the Ohio EPA's identification (P901) for the emissions unit where applicable. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Canton City Health Department, Air Pollution Control Division.

VI. Miscellaneous Requirements

1. The permittee shall comply with the approved preventative maintenance and malfunction abatement plan developed for the fabric filter serving this emissions unit (the BACT fabric filter - Collector #5).

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 Sand System and Moldmaking (P902)

Activity Description: Sand and bond unloading from trucks; storage and bond of sand in silos; mixing of sand, bond and water in a mullor; green sand processing to moldmaking; collection, transport and reprocessing of used sand and bond, and moldmaking.

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>
Hunter sand system (formerly F003) and moldmaking (formerly Z002) controlled by baghouse #5 and a wet scrubber.	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
	OAC rule 3745-17-07(B)	Visible fugitive particulate emissions shall not exceed 20% opacity as a 3-minute average.
	OAC rule 3745-17-08(B)	See A.I.2.c below.
	OAC rule 3745-17-11(B)	Particulate emissions shall not exceed 53.13 lbs/hr.

2. Additional Terms and Conditions

- 2.a The particulate emissions and/or PM10 emissions from the outlet of the fabric filter serving this emissions unit shall not exceed a concentration of 0.006 grain per dry standard cubic foot (gr/dscf). This emission limitation is applicable to this emissions unit pursuant to a provision in a Consent Order entered in September of 1999 (Case No. 1998CV02342, State of Ohio, ex rel. Montgomery v. Ohio Cast Products, Inc., in the Court of Commons Pleas, Stark County, Ohio). Incorporation of this emission limitation in the terms for this emissions unit, in part, allows the permittee to terminate the Consent Order.
- 2.b The emissions units vented to the BACT fabric filter - Collector #5 (emissions units P012 [Hunter pouring and cooling line], P901 [Didion drum and Sprue conveyor], and P902 [Hunter sand system and moldmaking]) shall not be disconnected from the BACT fabric filter - Collector #5 without prior written approval of the Director. This requirement is applicable to this emissions unit pursuant to a provision in a Consent Order entered in September of 1999 (Case No. 1998CV02342, State of Ohio, ex rel. Montgomery v. Ohio Cast Products, Inc., in the Court of Commons Pleas, Stark County, Ohio). Incorporation of this requirement in the terms for this emissions unit, in part, allows the permittee to terminate the Consent Order.

2. Additional Terms and Conditions (continued)

- 2.c** The permittee shall minimize or eliminate visible fugitive particulate emissions through the employment of reasonably available control measures (RACM).

At a minimum, the permittee's employment of RACM shall include the following:

- i. the installation and use of hoods, fans, and other equipment to adequately enclose, contain, and vent the fugitive dust; and
- ii. the collection efficiency shall be sufficient to minimize or eliminate visible particulate emissions of fugitive dust at the point(s) of capture to the extent possible with good engineering design.

- 2.d** The efficiency of the particulate capture system serving this emissions unit shall not be less than 90.0%.

II. Operational Restrictions

- 1.** Except during startup and initial loading of filters following filter change, the pressure drop across the fabric filter shall be maintained within the range of 2.0 to 7.0 inches of water, while the emissions unit is in operation.

The manufacturer's recommended pressure drop range may be revised to more accurately reflect the fabric filter pressure drop range encountered during actual emissions unit(s) operating conditions that are in compliance with the applicable emission limitations. Any request to revise the pressure drop range shall be submitted in writing to the Canton City Health Department, Air Pollution Control Division. The request shall be accompanied by technical data that justifies the revision to the pressure drop range.

- 2.** Except during startup, the wet scrubber water supply pressure shall be maintained at a value not less than 30 pounds per square inch gauge (psig) while the emissions unit is in operation.

Except during startup, the wet scrubber water flow rate shall be continuously maintained at a value of not less than 350 gallons per minute (gpm) while the emissions unit is in operation.

Except during startup, the differential pressure drop across the wet scrubber (flange to flange) shall be maintained within the range of 5.5 to 7.0 inches of water while the emissions unit is in operation.

The wet scrubber manufacturer's recommended minimum water supply pressure value, minimum water flow rate value, and pressure drop range across the wet scrubber may be revised to more accurately reflect the minimum water supply pressure, minimum water flow rate, and pressure drop range across the wet scrubber encountered during actual emissions unit(s) operating conditions that are in compliance with the applicable emission limitations. Any request to revise the minimum water supply pressure, minimum water flow rate, and/or pressure drop range across the wet scrubber shall be submitted in writing to the Canton City Health Department, Air Pollution Control Division. The request shall be accompanied by technical data that justifies the revision to the minimum water supply pressure, minimum water flow rate, and/or pressure drop range across the wet scrubber.

III. Monitoring and/or Record Keeping Requirements

- 1.** The permittee shall properly operate and maintain equipment to monitor the pressure drop across the fabric filter 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 fabric filter on a once-per-shift basis.
- 2.** The permittee shall properly operate and maintain equipment to monitor the water supply pressure, water flow rate, and differential pressure drop across the wet scrubber while the emissions unit is in operation. The monitoring devices shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

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

3. The permittee shall collect and record the following information each shift:
 - a. the wet scrubber water supply pressure, in psig;
 - b. the wet scrubber water flow rate, in gpm;
 - c. the differential pressure drop across the wet scrubber, in inches of water; and
 - d. a log or record of the downtime for the capture (collection) system, control devices, and monitoring equipment when the associated emissions unit was in operation.
4. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack and 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 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.

5. Persons responsible for making the visible emission observations required in section A.III.4 shall be familiar with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - a. all periods of time during which the pressure drop across the fabric filter did not fall within the range specified above;
 - b. all periods of time during which the wet scrubber water flow rate was not maintained at or above the level specified above;
 - c. all periods of time during which the wet scrubber water supply pressure was not maintained at or above the level specified above; and
 - d. all periods of time during which the pressure drop across the wet scrubber did not fall within the range specified above.

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

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 stack serving this emissions unit, (b) 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 (c) describe any corrective actions taken to minimize or eliminate the visible particulate and/or visible fugitive particulate emissions. These reports shall be submitted to the Canton City Health Department, Air Pollution Control Division 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 sections A.I.1 and A.I.2 of these terms and conditions shall be determined in accordance with the following methods:

- 1.a Emission Limitations:

Particulate emissions and/or PM10 emissions shall not exceed 0.006 gr/dscf.
Particulate emissions shall not exceed 53.13 lbs/hr.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the emission testing requirements specified in section A.V.2.

- 1.b Emission Limitation:

Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance shall be demonstrated by performing visible particulate emission observations in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9 and OAC rule 3745-17-03(B)(1).

- 1.c Emission Limitation:

Visible fugitive particulate emissions shall not exceed 20% opacity as a 3-minute average.

Applicable Compliance Method:

If required, compliance shall be demonstrated by performing visible particulate emission observations in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9 and OAC rule 3745-17-03(B)(3).

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 2 1/2 years after issuance of this permit.
 - b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for particulates (gr/dscf and lbs/hr).
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for particulates, Methods 1 through 5 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.
 - d. The tests shall be conducted while emissions units P012, P901, and P902 are operating at or near their maximum production capacities or as close to the capacities as is physically possible, unless otherwise specified or approved by the Canton City Health Department, Air Pollution Control Division.
 - e. The following parameters shall also be monitored and recorded during the emission testing: the pressure differential across the fabric filter and the wet scrubber serving this emissions unit, the wet scrubber water supply pressure, in psig, and the wet scrubber water flow rate, in gpm.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Canton City Health Department, Air Pollution Control Division. 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 Canton City Health Department, Air Pollution Control Division's refusal to accept the results of the emission test(s).

Personnel from the Canton City Health Department, Air Pollution Control Division 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 Canton City Health Department, Air Pollution Control Division within 30 days following completion of the test(s). The title page and the text of the report shall incorporate the Ohio EPA's identification (P902) for the emissions unit where applicable. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Canton City Health Department, Air Pollution Control Division.

VI. Miscellaneous Requirements

1. The permittee shall comply with the approved preventative maintenance and malfunction abatement plan developed for the fabric filter serving this emissions unit (the BACT fabric filter - Collector #5).

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 Wash Operations (Z015)
Activity Description: Cores are dipped in the wash to reduce porosity

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
core wash operations	OAC rule 3745-21-07(G)	See A.I.2.a below.

2. Additional Terms and Conditions

- 2.a The permittee shall not employ any photochemically reactive materials in this emissions unit, 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 collect and record the following information each month:
 - a. the company identification of each liquid organic material employed in this emissions unit, and
 - b. whether or not each liquid organic material employed is a photochemically reactive material.

IV. Reporting Requirements

1. The permittee shall submit deviation reports that identify the days during which photochemically reactive materials were employed in this emissions unit. Each report shall identify the cause for the use of the photochemically reactive material(s) and the estimated total quantity of material(s) emitted during each such day, in pounds. Each report shall be submitted to the Canton City Health Department, Air Pollution Control Division within 30 days of the deviation.

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

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